Proceedings of the 2ⁿᵈ International Conference
of the Journal Scuola Democratica

REINVENTING EDUCATION

VOLUME   III

Pandemic and Post-Pandemic
Space and Time

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VOLUME III
Pandemic and Post-Pandemic Space and Time

Edited by

The Organizing Committee the 2nd International Conference of the Journal Scuola Democratica

https://www.rivisteweb.it/issn/1129-731X

How to cite a proceeding from this Volume. APA citation system:

Author, N., Author, S., (2021). Title, in *Proceedings of the 2nd International Conference of the Journal Scuola Democratica "Reinventing Education",* VOL. 3, *Pandemic and Post-Pandemic Space and Time,* pp-pp

Title **Proceedings of the Second International Conference of the Journal "Scuola Democratica" – Reinventing Education VOLUME III Pandemic and Post-Pandemic Space and Time**

This volume contains papers presented in the 2nd International Conference of the Journal "Scuola Democratica" which took place online on 2-5 June 2021. The Conference was devoted to the needs and prospects of Reinventing Education.

The challenges posed by the contemporary world have long required a rethinking of educational concepts, policies and practices. The question about education 'for what' as well as 'how' and 'for whom' has become unavoidable and yet it largely

remained elusive due to a tenacious attachment to the ideas and routines of the past which are now far off the radical transformations required of educational systems.

Scenarios, reflections and practices fostering the possibility of change towards the reinvention of the educational field as a driver of more general and global changes have been centerstage topics at the Conference. Multidisciplinary approach from experts from different disciplinary communities, including sociology, pedagogy, psychology, economics, architecture, political science has brought together researchers, decision makers and educators from all around the world to investigate constraints and opportunities for reinventing education.

The Conference has been an opportunity to present and discuss empirical and theoretical works from a variety of disciplines and fields covering education and thus promoting a trans- and inter-disciplinary discussion on urgent topics; to foster debates among experts and professionals; to diffuse research findings all over international scientific networks and practitioners' mainstreams; to launch further strategies and networking alliances on local, national and international scale; to provide a new space for debate and evidences to educational policies. In this framework, more than 800 participants, including academics, educators, university students, had the opportunity to engage in a productive and fruitful dialogue based on research, analyses and critics, most of which have been published in this volume in their full version.

Pandemic and Post-Pandemic Space and Time
A Premise

Papers in this third volume deals with the Covid-19 pandemic which is having an enormous impact on education systems worldwide. Policy makers, teachers, school managers, parents and students have been called to the reinvent their way of 'doing school'. At the same time, the governance of the education system and schools' organizations have been exposed to unprecedented tensions.

Within a short period of time, radical changes had to be introduced, simultaneously, at various levels of the school system. At national and regional level, there has been the need to rethink the way in which teachers are recruited, engaged and managed. National assessment and evaluation systems have been suspended or redefined in their uses by school actors The ways through which institutes were managed and organized had to be rethought, passing in a very short time through an on and off of dematerialization and hyper-normativity of time and space. Within schools, managers and teachers have been called to redefine the role of digital technologies in their didactic, as well as in their relationships with families and students. In some cases, these set of changes led to experience novel and unexpected daily proximities, in other prevailed a context characterized by distance and unsatisfactory relationships. Managers and teachers have been asked to re-invent their professionality to rethink their organizational, didactic and relational competences. Students and families, on their side, have been called to rebuild and reimagine new way of being at school, re-inventing the spaces and time of schooling and the way in which they relate among each other and with teachers.

The pandemic emergency has been a lens revealing intersections and structural tensions among various level and actors of the education system, but also allowing opportunities of changes thanks to the exogenous shock. At the same time, it must be considered that the emergency is interacting on pre-existing inequalities and contradictions. The pandemic clearly revealed the deep disparities of educational opportunities associated to students' life and housing conditions, beyond their access and uses of technological devices. Remote teaching and the enactment of an 'emergency didactic' has exacerbated learning difficulties for underprivileged students (children facing material deprivation, students with migratory background, students with special needs or disable, etc.). The interaction between the pandemic and pre-existing inequalities created different contextual conditions for actors' agency, orienting

toward different directions the pandemic's transformational potential.

Higher education systems have been affected too: in constant evolution due to constant transformations of society and changed functions of knowledge, universities have undergone a structural change along with pandemic times. Simultaneously, the growing relevance of knowledge for the economic development of the capitalistic system has profoundly affected higher education systems, characterized by the neo-liberal approach which his subject of increasing critical analysis.

However, Higher education systems are starting to be affected by other somewhat inevitable changing processes due to the evolution of knowledge and the consequent forms of its transmission. These forms have to be necessarily new both because of the availability of new instruments and the increased need to develop interpretative models of a constant and often unpredictable change. In this juncture the university might assume a renewed central role. At Higher Education System level, the growing use of digital instruments is envisaged in order to cope with the rising of the management rates of the training offer as well as to answer to the growing differentiation of user categories. A feasible consequence could be the increasing of the already pressure for the differentiation among the universities, with the related social implications.

At individual university level, it is foreseeable the demand for university involvement in tackling the problems of society and the economy will increase. And this at global, national and local level. From an organizational point of view the most significant feature is represented by the accumulation of traditional and new tasks that do not seem to be possible to manage. Whatever form the higher education systems will come to take, it remains that a central point to be clarified concerns the management of change. It will be the market that will impose its rules and the universities will organize themselves individually within the invisible enclosures that will guide their policies (with predictable growing social and territorial differences), or instead the State will choose incentive policies to direct its training system. It remains that in a condition of uncertainty and constant change the university's roles multiply and become – at least potentially – more and more central. It can therefore be argued that the university is not only called upon to respond to the demands of society but by elaborating answers and solutions to the problems it progressively affects the functioning of society.

We are fully aware that each educational experience produces specific results and definitions of teaching-learning practices. The well-established model of the magister teacher, based on a one-to-many transmission of knowledge, is complemented by new configurations of teaching-learning practices. There are

teaching practices that cultivate the ambition to combine the technological innovation with the psychological and pedagogical issues. Educational technologies, such as the Interactive Whiteboard, incorporate a new grammar and pragmatic in which the emphasis is placed on the involvement and the participation of the student, as well as on a "reverse teaching", compared to the traditional one. The diffusion of online educational platforms, based on algorithmic architectures and data-driven approaches, also draws attention to a personalized way of learning and a datafication of teaching. Digital technologies are therefore stimulating a series of transformations in the socio-material order of the class affecting the spatial and temporal configuration of teaching. At the same time, they are embedded in the complexity of the educational contexts that rework their practical and symbolic value.

In the European framework of strengthening the relations between the labour market and education, we also witness the implementation of teaching practices associated with the idea of knowledge as an economic and social investment. Recently, a large field of critical investigation has highlighted how teaching aimed at improving the employment prospects of students is deeply affecting public values in education. At the same time, different points of view in the educational field claim to postpone the transmission of skills related to the labour market to broader educational objectives of social inclusion and civic participation.

The new proxemics imposed by the current pandemic challenge traditional spatial configuration, from the arrangement of desks to the mobile use of chairs, from the forms of communication in virtual environments to the interaction in the classroom. Therefore, this is to register the need to re-elaborate the ecology of the educational practices, starting from the socio-material space of learning.

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Reinventing Experiential Learning Activities in Primary School

Reinventing Experiential Learning. *La Gazzetta Olimpica*, the Newspaper of the School and the Neighbourhood

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ABSTRACT: *La Gazzetta Olimpica – the newspaper of the school and the neighbourhood's project – was born to support the editorial board of the newspaper La Gazzetta Olimpica made by the teachers and pupils of the 'Villaggio Olimpico' primary school in Rome during COVID-19 lockdown. The observation of the educational activities (through digital platforms), the interviews and the analysis of children's laboratory products were the principal tools that we used to evaluate children's ability to represent reality and translate it into communication products. Compared to previous years school projects, the production of the actual copy of Gazzetta Olimpica suffered from a lower possibility of social interaction within the community. However, the school paper has offered a privileged perspective (that of the children) to reflect on how the global health emergency has changed our interactions, starting from the educational context par excellence – the 'primary school'.*

KEYWORDS: *Active learning, Digital education, Social and territorial impact, Digital School, Fieldwork*

Introduction

The global pandemic has forced people from all over the world to redefine several aspects of everyday life unexpectedly and suddenly, starting from questioning the dynamics of the relationships. Even the school has been forced to think differently about some of the already considered work tools by adopting the emerging digital education methods (Giancola *et al.,* 2019; Gui, 2019; Falcinelli, 2005).

The COVID-19 emergency has sparked a wide-ranging and controversial debate on the limits and potential of remote learning and on the ability of schools of all types and levels to guarantee effective training for pupils during the suspension of activities in presence. In the middle of the lockdown, digital technologies made it possible to continue ordinary teaching activities through the main tool of the remote learning, thus guaranteeing the right to study. Remote learning is not absolutely a new practice in Italian training contexts (Lo Presti, Celardi, 2019). Indeed, the technological evolution in the last decade and the use of Information

and Communication Technologies (ICT) in training contexts affect two aspects at the basis of any didactic action, such as access to knowledge and communication (Revoltella; 2014).

The *La Gazzetta Olimpica, the newspaper of the school and neighbourhood* project was launched in order to support and monitor the editing of the newspaper *La Gazzetta Olimpica*, as part of the educational activities conducted by the teachers of the 'Olympic Village' elementary school in Rome following the spread of COVID-19.

As an object of observation for the research team from the Department of Communication and Social Research (CORIS) – Sapienza University of Rome, the journalism laboratory was reworked in 2020 into a digital version to adapt to children's lifestyles. Those who were experimenting with their teachers in remote learning and of their families engaged in smart working and management of domestic life during lockdown (Lo Presti, Celardi, 2019).

The editing of the school paper considered two moments: the first one for choosing the topics to be discussed and the second for sharing and reviewing the articles prepared by the children independently or with the support of their parents. An online meeting was held with each of them involving teachers, classes that are part of the project and the evaluators.

It must be observed that the organizational phase of the school paper was preceded by activities which, although not directly linked to the project, prepared the children for the creation of the school paper. In particular, the children of the fifth grade had already been prepared with respect to how a journalistic article is written, which was particularly evident in the phase of sharing the works. These were small tricks that the children understood well and that (with some exercises) they were perfectly able to put into practice. For the fourth grade, writing themes on the children's daily life was essential (readings, pets, etc.), which allowed the teacher to suggest to them some topics to be treated, taking into account their inclinations. The observation of laboratory activities, the analysis of the articles written by the children, and the dialogue with the teachers helped to reach two scopes. On the one hand, they allowed focusing on the 'World' seen and represented by the children during the lockdown. On the other hand, they enabled evaluating, from a training perspective, enhancing children's abilities to represent reality and translate it into communication products aimed at external disclosure.

Using the Positive Thinking evaluation approach as a research framework, we tried to shed light on the positive aspects that, despite the critical issues of the historical moment, could be drawn from this experience and, more generally, from distance learning

1. The Olympic gazette during the lockdown: our observation

During the first meeting, right after phase 1 – ethnographic – (Aureli, 2002) of 'access to the field' (necessary to begin to be involved in the

situation), through the digital platform used by teachers to conduct the activity, usually online teaching, in which the evaluators introduced themselves and explained the reason for their presence. Then, the second phase of observation was initiated, conducted with the screen off. This observing process allowed the evaluators to be aware of the school routines in their digital version, the habits of the children, the complexity of their exchanges and the interactions between them and the teachers. The observation with the screen off allowed children and teachers to express themselves freely. However, the same children and teachers asked, from time to time, the Sapienza team to intervene with exchanges of opinions and advice.

During the observation, descriptive notes were drawn up, which allowed reconstructing the interactive episode, that is the unit of analysis, defined as «mutual activity among children» (Corsaro, 1985, 23) and between them and the teachers; «An interaction based on a shared meaning of what the participants did or planned to do» (Aureli, 2002, 120). After the observation with the screen off, generally, there was a silent exchange of reflections and suggestions on the most positive aspects. The evaluators interacted (in a participatory way) with the children and teachers in double-loop learning (Stame, 2016).

By framing these reflections within the framework of the Positive Thinking Approach, the focus was on the opportunities that could possibly be drawn from the emergency to give a different cut to the school paper.

1.1 The choice of articles
The choice of the articles to be discussed was preceded by an introduction by a journalist - Alessandro Cisilin - who is the focal point of the association promoting the *Children's Village* project and the father of a school child. This journalist reminded the two classes of the purpose of the project, namely to 'give a voice to the children' on issues and facts concerning the Olympic district of Rome. He also explained to the children how to overcome the shyness encountered when writing an article and gave them some practical indications on developing the chosen topics best. There was great children's excitement regarding the choice of topics to be treated in the articles in both classes. The intervention of the masters was fundamental, who were able to mediate children's ideas and orient them concerning their inclinations and the actual possibilities of carrying out specific jobs.

Fifth-grade children were asked to reflect at home on the topic to be addressed in the school paper, think about a title (which represented the content synthetically), and then share it with classmates and teachers.

Several fifth-grade children expressed their willingness to deal with reasonably challenging issues, such as environmental issues or those relating to the history of the neighbourhood. For instance, two children decided to interview all the traders in the area to understand how they would face the restart after the containment measures of the COVID-19

contagion; someone instead thought of telling experiences that he has seen or experienced personally, such as that of an accident involving a lady on a scooter and a driver or even the story of a domestic pig and its owner.

In general, the observation showed a great desire from the children to tell stories (present and past) of the neighbourhood, its history, its identity and the community that populates it and to give a voice to those places (the statues of the village Olympic, the park following redevelopment, etc.) and people (traders, neighbours, etc.).

The children of the fourth grade, unlike the fifth-grade classmates, reflected in class with the teacher about the topics to be treated. In this case, the choice immediately leaned more towards minor aspects or dimensions of daily life: how the time was spent in lockdown, friendships at a distance, the relationship with pets and the video games with which they spent time.

The role of the teacher was decisive since he divided the children by organizing groups based on common themes (e.g. having spent the lockdown in a suburban area or outside the city, the presence of pets in the house, etc.) or based on friendships between peers (children who have played together at a distance with a given video game).

In general, for both classes, there was an excellent organizational capacity for the activities and interaction between teachers and pupils and between classmates. The choice of the topic to be treated did not mean for the children only to implement a specific creative capacity in the selection of original issues but also the ability to argue their choices, explain them to their classmates to make them understandable to everyone and above all to put them into practice. Discussion and find possible alternative solutions.

2.2. Sharing articles

The second phase of the project concerned the sharing in the class of the topics treated and elaborated at home by the children independently or in groups. Fifth-grade children were asked to first write the articles in the Italian notebook and then transcribe them on a word sheet with the help of their parents. The teachers gave the possibility to the children to associate a coloured drawing to the article to be inserted in a separate white sheet. Still, they did not ensure that all the drawings could be selected to give space to children of the first classes who have not yet acquired high writing properties and would have contributed to the project solely through the drawings. Two fifth-grade children also presented together with the articles some puzzle games they developed (a crossword puzzle and a game consisting of connecting a series of dots to obtain a figure).

Compared to the initial proposals, a trend change emerged for the focus of some articles, which in many cases moved from general, news or current issues within the neighbourhood to more introspective themes

that contain the school curriculum revised in view of the remote learning experience.

In this painting, for example, a little girl wrote an article in which she described her schooling starting from the first grade. In her story, the little girl described a path that was not too simple due to the continuous succession of different teachers, which led to a certain instability until the arrival of two teachers who became an essential point of reference for her and her classmates. The little girl recalled the most significant moments of elementary school for her, such as the school trip and the moments spent together with her classmates, expressing a certain bitterness for having interacted with them 'through a screen' in the final phase of the journey.

Another child dedicated her article about her to laboratory projects she would have liked to take part in during the school year but which have been cancelled or postponed due to the pandemic ('the failed projects) such as those of physical education or theatre.

Two other children described how the school has changed in its 'remote' version.

The children, focusing on their perception of remote learning, perfectly described how the school interacted with moments of daily life that previously remained outside the lessons and didactics: 'there are those who eat, those who drink and those who play basketball on the wall '.

Even in the friendly description of the children, a certain nostalgia emerges for the direct contact that characterized the 'face to face' teaching.

In general, all the articles, from the more introspective ones to those that looked at the events in the neighbourhood from a broader perspective, were written with precision and mastery of the language and creativity. The positive results of the previous work on writing journalistic texts done with the teacher in the lessons that preceded the laboratory activities were evident in the works carried out by the children independently.

Fourth-grade children also developed some very creative products. Some children took up the previously written themes and synthesized and integrated them with the work of their peers. A group of comrades did a very original job which included an investigation into the favourite pastimes of the comrades. The work involved a descriptive part, a part of data collection and their representation through a histogram. Among the most original contributions, there was one on the language and terms of video games. The teacher offered other inputs, who, depending on the themes previously developed by the children, pointed out some of the most interesting, including, for example, the story of the novels read in the period of isolation.

2. The hidden challenges, opportunities and blessings of remote learning during the lockdown

2.1. The difficulties

The teachers were required to make a great effort to keep alive the attention of children who, in front of a screen, in their homes, were led to be distracted and to intertwine moments and spaces dedicated to learning with moments and areas dedicated to daily life (the mother who passed behind the door, the snack at hand, the laundry hanging a little farther on, the siblings who passed a few meters away from them or engaged in other lessons, etc.). The study in physical coexistence is a specific social situation characterized by an asymmetry between teachers and students, in which each of them enjoys 'conventional rights' (Paoletti, Fele, 2004): students must ask to speak, and when they have obtained it, they can ask a question relevant to the whole class; teachers carry out continuous repair work (Gui, 2019), essential for learning because it ensures a constant adaptation of the interaction to the rhythms and needs of the two communicating parties (Ciliberti, 1995). The situation of physical co-presence represents a sort of 'gentle push (nudging) (Billson, 1986) to face the cognitive effort necessary to listen to an explanation.

Two months after the beginning of the lockdown, the children, who saw several laboratories and interactive activities cancelled, reduced their motivation towards teaching. Therefore, the teachers had to find ways to make the lessons more stimulating despite the lack of interactivity that characterizes the online classes. All this has been made more complicated by the usual fatigue that involves conducting teaching activities online even if live (also think simply of the visual effort due to prolonged exposure in front of a screen).

The teachers who have followed several training courses and updates on new online teaching methods (they had never tested or put them into practice) during their professional careers have now been forced to use the skills learned and have to adapt them concretely and suddenly to the specifics of the case. The difficulties encountered by teachers also concerned the possibility of equipping themselves quickly with tools suitable for assessing the impact of new teaching methods on children's performance. On the other hand, what the attentive gaze of the teachers (who have followed their students over time and are well aware of their potential, fragility and personal paths) managed to grasp was the fact that children who were not already before the COVID-19 emergency very autonomous have had a drop in motivation, while the others have learned to independently manage the new ways of digital interaction and to cope with technical and logistical problems deriving from the use of the new tools.

2.2. Hidden opportunities and blessings

The redefinition of didactics in a digital way has also brought a series of opportunities and 'hidden blessings' behind the immediately observable

difficulties, from which the school and families and, more generally, the community (understood as an educating community) can draw some lessons.

In the first place, as explained earlier, the fact that the teachers had to act quickly to answer their students who otherwise would have had to interrupt (for an indefinite period) the didactic activity made them learn the use of new digital tools and equip themselves (sometimes with the support of their families) to put them into practice immediately. These are skills that can be used to expand and enrich traditional teaching methods.

Appropriately used digital technology can indeed represent a powerful complement to the repertoire of teachers' instruments (Selwyn, 2019). The school under observation, in the emergency, has assumed a fundamental role as a 'relational connector' and as a shock absorber for the isolation resulting from the measures of social distancing: even if in a digital version it has put the children in connection with each other and with the teachers and the latter with families and the local community. As emerged from the observations from the field, the teachers, through their efforts in re-adapting teaching to the emergency context, also pushed the children to think about the historical moment they were experiencing, leading them to reflect on their daily lives and the changes to face.

One of the significant positive aspects related to remote learning has concerned the greater involvement between the school and the children's families. Parents have become (partly) participating observers of school dynamics and have actively supported their children in using new learning tools. School and families have been called to collaborate to respond to the sudden digitization of training due to the health emergency, balancing the didactic use of technology (education technology) with the critical use of the media (media education) (Calvani, 2001; Rivoltella, Rossi, 2019; Gui 2019).

On the other side, the daily commitment of parents between smart working and home life management in the lockdown has been mitigated by the remote learning.

Conclusion

The *La Gazzetta Olimpica* project represented an opportunity to put the remote learning and the consequent digitization processes of training due to the health emergency in the spotlight of evaluative research. It seems clear that the COVID-19 experience was challenging both for teaching and research. However, even the most tortuous paths can favour a peculiar learning process when they can help focus on problems (Meldolesi, 1994) and can stimulate action strategies and positive replicable solutions in other circumstances (Celardi, 2019).

For this case, the project's context does not represent the physical space in which the actors typically interact (the school, the

neighbourhood and so on), but it is a 'digital' space. However, in this experience, this condition did not imply an increase in the distances between 'observers' and 'observed'. On the contrary, it allowed the evaluators to understand better (and in a participatory way) the observation context. The observers and the observed are not in the same physical space but share similar areas, made up of fragments of everyday life.

In the background, there were no longer offices, school desks and so on, but a bed, a kitchen, a small bedroom desk. The researcher's problems (the connection is lost, the audio is disturbed, etc.) were also the problems that the people he observed had to face.

The *Gazzetta Olimpica, neighbourhood newspaper* project in the 2019-2020 school year took place in a context that changed from previous years due to the COVID-19 emergency, which forced the redefinition of the broader educational and workshops that were previously carried out in the presence.

The drafting of the magazine and the observation by the Department of Communication and Social Research of the Sapienza University of Rome (CORIS) in particular took place in May, two months after introducing the containment measures of the contagion and the consequent closure of schools. Therefore, it was a specific period, not only due to the commitment of teachers and children to adapt to new methods of teaching/learning (distance learning) but also because the end of the school year was approaching.

In particular, one of the two classes observed was the fifth grade; therefore, the children were preparing to undertake an essential change in their educational relational path. During the observation, some of the children expressed a certain sadness at having to end the school year without seeing their classmates and teachers and without being able to interact with them.

From the observations, it would seem that in an initial phase, the idea of staying at home may have been frowned upon by the children (who have perceived, in some cases, the lockdown as a sort of vacation). Still, at a later stage, all the children lacked direct contact with others (both with the teachers and with their peers).

The journalistic workshop created by the masters of the Olympic Village school in Rome, also in its remote form, allowed children to develop a personal reflection on the external environment and (after filtering it through a unique lens) to share it with others. Compared to previous years in which the interaction with the neighbourhood and the community was central in the preparation of the magazine, in 2020, it was limited due to the measures to contain the infection.

In some cases, the teachers themselves had to curb the children's enthusiasm, recalling that the health emergency that was going through required the observance of rules of social distancing and strict but necessary precautions. This somewhat reduced the initial enthusiasm of the children and, in some cases, shifted the focus of the articles towards

more personal and introspective stories (such as the end of distance learning).

Despite this, all the articles were particularly interesting because they offer a privileged perspective (that of children) to reflect on how the global health emergency has changed our interactions, starting from the educational context par excellence 'primary school'.

The observations of the children push the school and the families to reflect on the implications that the remote learning, and generally, the digital interaction modalities might have on the relational level and to ask themselves what alternative modalities can be activated to create 'trauma' in the relationship with the other should similar emergencies arise.

The COVID-19 emergency has moved the spotlight from the streets, parks and squares of the two-pole district centre.

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A Village in a Metropolis: Sociological Issues Around a Children's Editorial Initiative in a Suburban Area

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ABSTRACT: *An anthropological analysis of a 'real world' behind a pupils' editorial work, as regards to its social background. The Gazzetta Olimpica project – a periodical paper magazine entirely written by primary school children in a suburban area of Rome – filled in and unveiled a sum of paradoxes: the existence of a sort of 'village society' in a district ('Villaggio Olimpico') within a metropolitan city, Rome; its homogenous and well-defined urbanistic context, which facilitates social interaction but, at the same time, tends to raise sensitive issues of 'neighbourhood'; the efforts to create and restore an 'identity' and an 'all-involving' representation within it, and their failure, following also the attempts of manipulation by party politics; the difficulty of local 'formal' groupings in cementing individuals' sense of belonging and collective action; the tendency to 'fragmentation' within the so-called 'civil society', even in the steps of successful stories of social aggregation. The positive social impact of the Gazzetta Olimpica largely stems from on the fact that children – as well as their public school – stand out of those dividing categories and, as such, have a major potential in 'reconstructing' the territory and its social interaction. 'Neutrality' and 'externality' are recognized as decisive factors behind such achievements, involving both the position of its actors and their editorial narrative.*

KEYWORDS: *Village studies, Civil society, Social identity, Children and media, public education*

Introduction and Methodological Note

This is a 'village study', in the context of an editorial initiative taking place within a primary school in a suburban area of Rome. A local paper magazine, named *Gazzetta Olimpica*, has been integrally written, for the last five years, by pupils themselves, with the support and supervision of their teachers and a professional journalist, but also involved the active participation of the whole territory and its 'institutions', including cafes, newsstands, shops, typographies, local associations, parish, sport, cultural and academic establishments.

The focus hereby is thus not on the project as such (which is being analysed by other scholars within this Conference), but on the socio-anthropological background of its territory and community. This urban

district has a 'social system', involving a set of relationships, hierarchies of values, ecological and urbanistic variables, historical factors and changes, as well as persisting challenges and setbacks. The analysis of this context, beyond its sociological interest in itself, may contribute to the understanding of the impact of such a project and, more importantly, of the strategic role and potential of a public educational institution on its surrounding community.

An 'outside eye' is usually a top priority in any successful research fieldwork, as it emancipates scholar's insights from his daily and personal involvement in the routine of the observed social relationships. Unfortunately, this was not the case, as the author, though not a 'native' of this area, was an active participant, as a former resident and president of a local association of social promotion, journalist, father of two pupils of this school, promoter of the project. However, the original purpose was just a 'militancy' and enthusiasm for this socio-editorial initiative, without any 'research intention'. The latter came later, in the context of this Conference, which allowed to safeguard some 'external distance', in time and space, between the involvement in this project and the subsequent sociological analysis of its context.

1. 'Villaggio Olimpico', the Essentials of a Real 'Village' within a Modern City

The territorial scenario of this 'village' is particularly relevant. Not far from the heart of Rome, it stems from a recent project, built on a swamp area to host the athletes of 1960's Olympic Games. Despite its 'wild origin', the territory is rich of historical references, as the main Northern entrance to ancient Rome by traders, soldiers and pilgrims, the tradition of Saint Valentine (which is highly debated, but has several references here, as reminded by today's local church and icons), the setting, on the Eastern-river side, of the 'battle of Ponte Milvio' in the 4th century between the armies of Costantino and Massenzio which led to the 'Christian' conversion of the Empire, affecting of the whole religious and political history of the Old Continent, and, more recently, in the Western bordering park of 'Villa Glori', the 19th century clash between Garibaldi's soldiers, in support of the 'Repubblica Romana', and the winning Pope's 'Swiss Carabinieri'.

The 20th century project was signed by relevant architects and is widely considered (and analysed by today's scholars) as an urbanistic 'success story' (Fabrizi, 2000; Fogli, 2016), thanks to a simple-but-homogeneous urbanistic structure, the abundance of greenery, low population density, proximity with many sport facilities on the North as well as with the centre of Rome (few kilometers of distance, relatively well connected by the public transport).

After the Games, apartments were allocated as 'public housing', establishing its current 'popular' origin, in contrast with both the middle-

class of Flaminio's neighbouring area on the riverside, and even more with the hilly Parioli's district (starting from Villa Glori), hosting today's wealthiest society in contemporary Rome.

Nevertheless, its social composition dramatically changed over the decades. Since the seventies, the majority of flats were sold in the free market, attracting lots of 'newcomers' from different geographical and professional origins. Furthermore, the district was importantly redeveloped by the establishment of important arts institutions. We quoted 'sport' on the North, the river (Tevere) on the East, hills on the West, with their different stories. From the beginning of this century a new relevant 'border' was set in the South too, and it's about culture, with the building of relevant entities (*Auditorium Parco della Musica* and, later, *Maxxi*, consecrated to contemporary arts).

However, social change was gradual and not traumatic. Local real estate prices strongly grew up, also in comparison with the rest of Rome, and gradually inhibited the coming of the weakest social classes, but a part of the 'original proletarian inhabitants' are still there, and the structure of local buildings (hosting apartments of no more than 120 square meters) never attracted the wealthiest section of society. It rather growingly hosted a sort of complex 'middle class', made up by different kinds of professionals, many architects, craftsmen, writers, journalists, public employees.

A quite heterogeneous but-not-unbalanced society is thus still characterizing this area, which is actually perceived and claimed as a real 'village' by its residents and users, with the strong identity factors of its small dimension (a little more than a 1.000 square meters, less than 3.000 inhabitants) and its well-defined urbanistic and geographical peculiarity, with an unusual abundance (for a metropolitan city) of green areas, squares, possibilities of social, sport and cultural interaction.

2. In Search of 'Village Studies', and their Shortcomings

In today's perspective, the strongest (and largely neglected) legacy of 'village studies' probably lays in their contribution to the structural understanding of some historical changes. It is namely the case of modern revolutions in European societies. Few historians (Fournier, 1999, Godechot, 1972) have highlighted that the French Revolution had the preamble, in the *Ancien Régime*, of a class of small landowners and municipalities which previously experimented the organisational and power tool of locally elected assemblies in rural areas. Even more neglected, few Western scholars noticed the land 'defensive systems', under Russia's Tzars, made up by communal methods of territorial management at a village level, which widely developed well before the Soviet Revolution (Barlett, 1990; Tschuprow, 1912).

The quest for 'village studies' is therefore not just an academic training exercise nor an ideological option in accordance with the 'Small is

Beautiful' concept (Schumacher, 1973), but rather aims, through the understanding of small-scale and peripheral dynamics, at a deeper and more substantial comprehension of wide social systems and changes.

In social anthropology, this branch raised widespread interest among post-war scholars, but largely declined in the last decades, following a set of relevant methodological challenges. These studies can be grouped in three main categories:

- Post-colonial village studies: they largely developed in the sixties in former colonial dominions, and namely in India, and constituted a fertile breakthrough as regards with the previous century of 'colonial anthropology' which scheduled and divided the population according to cultural, ethnic, economic and religious factors while downgrading the fluent interplay of their social and territorial interaction (Srinivas, 1978). The 'village' became the icon of 'society' and its 'revenge' against the previous representation of a rigid system of segregated castes. This 'redemption', however, remained uncomplete, as it became rapidly clear that the 'village', as such, could not be recognized as an autonomous, self-sustaining unit, without an understanding of its wider geographical relationships, hierarchies and social cleavages (Dumont, 1966).

- Urban sociology: curiously, both its development and decline followed a similar chronological path, and for akin reasons. Urban 'communities' rose a big interest, as a highly-recognized source of social response, especially in peripheral areas, to the dominant socio-economic and cultural challenges in the growing post-war cities. The 'district', however, was later downgraded as a part of a more complex story of social and geographical interactions (Castells, 1983), where 'neighbourhood' is only identified as one of several aggregating factors, and rarely the most relevant.

- Cultural ethno-history of territorial identities: it's especially the case of the study of 'nations', through the analysis of their local perceptions and challenges. This is particularly interesting in the heterogenous context of Italy, whose 'unifying identity' seems particularly fragile due to a number of historical and geographical reasons, which affect not only the 'national' level, but also its regional instances. A set of relevant and self-reliant factors of social integration and identity can be rather recognized at the level of the 'municipality' (Cisilin, 2000) but, again, it is about a wider social and geographical dimension than the space of a 'village', either within or outside the urbanized area. A 'village' may claim an identity but can hardly bear in itself any sort of 'complete' social system or represent a dominant unifying variable within it.

Those setbacks are widely (though quite implicitly) recognized by contemporary sociologists. However, the space of a 'village' maintains a strong methodological potential. While it is quite clear that it cannot generally represent an autonomous unit and needs to be analysed by considering both its external relationships and its internal sociological

factors of integration and separation, on the other hand it may represent a relevant observation point as regards to wider social phenomena. 'Village studies' tend to fail when they expect to find some strong 'self-reliance' in a small territory, but can still avoid the return to a 'segmented' sociology of single cultural, religious, family or class categories and allow a holistic gaze, though in a small space, on the logic and dynamics of their interplay, conflict and interdependence.

3. The Case Study: Village's 'appearances', Stronger Sociological Forces

The short history of the 'Olympic Village', as synthetized in the first chapter, saw a further relevant development in the last decade, with the launch of an 'associative process' aiming to foster social integration and promote the welfare of the district. A number of 'associations', 'movements' and 'committees' have formed since then, but the most visible results are to be recognized to one of them, called 'Villaggio dei Bambini'. 'Children' weren't meant by this NGO to constitute the exclusive target of its collective action, but rather represented the broad objective of uniting the elder villagers with the newcomers and setting an 'intergenerational cooperation' for the future development of the district.

Several, and quite spectacular, initiatives were hereby implemented in the course of years: neighbourhood cleaning actions, public assemblies, workshops and meeting events on art, music and sport, mobilizations for the renovation of a park and for the reconstruction of a school canteen, carnival parties, bartering markets, the establishment of a musical band. It has definitively been a relevant 'success story' for the district, at least in the first years of this association (involving also the launch of the *Gazzetta Olimpica* project by one of its members), but what is sociologically most relevant here is the understanding of some challenges and shortcomings.

3.1. Dividing factors: the paradoxical role of political parties

A fact became clear very soon among the promoters of this associative process, in the follow up of the first public assemblies and smaller meetings to set up formally the statute of the association: the objective of establishing a sort of 'all-involving' democratic institution representing the 'Village' as a whole had to be given up, owing to at least two blatant reasons. The first was that a big 'assembly institution' would mainly form the theatre of conflict, among different opinion and interests, rather than of collective action. The existence of potential conflicting 'interests' is being confirmed even in such a small territory, as shown also by the different reaction to a recent controversial urbanistic project sponsored by the local Municipality: beyond different personal and 'political opinions' on it, the project triggered opposite views and fears, due to its unbalanced nature, between the South-Eastern inhabitants and those living in the North and West.

The second, concurrent, inhibiting factor was the immediate effort, by some political parties, to 'manipulate' the social mobilisation in the district to enhance their own consensus and territorial power. An example stems from another, older project, sustained by a previous local government: in that case, it was a small-scale plan oriented only to renovate a central but abandoned park. No relevant 'opposing interests' among 'villagers' were involved at that time, but the project was nevertheless abandoned following a voiceful protest organized by opposition parties, fearing to leave an electoral advantage to the ruling majority.

Interestingly, the role of political parties in those and other social instances is rarely explicit. Their declining reputation and number of militants, as well as the weakness of their ideological references, suggests them the following strategy, which constitutes a widespread paradox: maximizing the dialogue (even more than in the past) with spontaneous local movements to compensate their own absence in the territory, and at the same time wholly renouncing to put an explicit 'party banner' to their activities. There are several examples in movements and NGOs which have been activated in the Olympic Village in the last years, a well as in social media referring to it. The mechanics is invariably that of establishing 'open groups' with a label of 'independence', though being a tool to activate surreptitiously some consensus to the promoting party.

3.2. Aggregation and exclusion: kinship and the example of football

A further paradox is involved in the described phenomenon. Political parties, though actively trying to approach local movements and associations, hardly succeed in forming a relevant social actor. Nowadays, political 'belongings' and orientations do not constitute vehicles to both integration and exclusion. Political debate is largely avoided, both in informal contexts of interaction and in official meetings of NGOs. 'Independence from party affiliations' actually represents a statutory duty in an 'association of social promotion', as it is, conversely, its obligation to interact with local authorities, but the dominant tendency is to keep away any ideological discussion, being considered as 'divisive' and anyhow 'not very relevant'.

The most effective forces which drive integration can rather be resumed in the concept of 'kinship'. Its definition is actually wide and ambiguous in social anthropology (Barnard, Spencer, 2003), and tends to involve individuals' most closest ties both within and outside their family-biological relationships. In our observation, it may include neighbourhood, professional belonging, friendship or even just the memory of some common, ancient personal knowledge or shared interests.

A relevant 'common interest' is definitively, in our times, sport, and football in particular. That is why the association '*Villaggio dei Bambini*' decided to promote a weekly friendly match (five-a-side football) among

its (male) inhabitants. It was another story of great success, both for the breadth of its participants and the non-exclusive rules which were established. No 'hierarchy' was admitted in the choice of players for the weekly match, either on the basis of 'quality' of footballers or on their participation in previous games. The only criterion to 'select' players was the speed in adhering to an open digital platform ('doodle'): who booked first would play, the latecomers had to wait for the next time. This simple-but-open system relevantly fostered new social relationships as well as strengthened old friendships. Furthermore, no serious conflicts (which are quite common on a football pitch, even in very friendly contexts) were ever involved, and the initiative hat the sequel of a number of district 'leagues' – uniting parents and children – and the participation to an 'international tournament' which involved several parishes and nationalities, and the so-formed 'Village group' was meant to 'represent the district'.

However, the most relevant aspect of this phenomenon, from a sociological point of view, was his later failure, despite its unanimous appreciation and sympathy among its participants and within the village. A sub-group consolidated its internal relations over the years, and finally decided to 'boycott' the open method of 'selection' and to decide, himself, who could play and who could not, according to its own criteria (friendship, individual sympathy, sport performance). That was obviously the end of the experiment, as some inhabitants begun to be excluded and others didn't enjoy it, while the new smaller group is still taking on characteristics of most informal sport groups based on 'kinship'. In other words, 'kinship' prevailed over 'village', as the decisive factor of aggregation. The example of sport is highly significant as regards a widespread tendency, which could be observed in all social contexts, from politics to chats for parents, from neighbourhood to active citizenship. A common and wider ground of relationship and action can be established, at a unifying territorial level, but never downgrades the search for stronger and smaller-scale personal ties and interests. Instead, the former paradoxically tends to encourage the development of latter, up to the point of scarifying its own original wider objectives. It is direct relationship, tough contradictory in its contents. The effectiveness in the building of a new factor of social mobilisation and identity, such as the 'village', leads to its own 'implosion', as it fosters integration and relationships which, over time, create new 'kinship' alliances with the final result of subduing the sense of belonging to a wider community.

4. Conclusions: School and Children, Neutrality and Externality

From that experience it emerged quite clearly that 'village' can hardly represent a primary source of integration. 'Social promotion', either by the NGO or other mobilisations of 'active citizenship', can reach some

results only through the activation of small groups and with the tools of single initiatives and well-specified objectives, in contents and time.

The *Gazzetta Olimpica* project is one them, and among the most successful. Its 'yearly' issue protects its nature of a '*single event*' which, as such, can claim and reach an 'all-involving' nature within its whole territorial target, the 'village', without encountering the observed dividing factors of kinship and fragmentation.

Nevertheless, the active mobilisation of all main local actors has proven here quite extraordinary and suggests more explanatory factors. The typography published the magazine for free, most of the shops (newsstands, bookshops, cafés) were keen on 'selling' it (under the formula of a 'free offer') and leave all the proceeds to the school, many villagers proved glad to 'buy' it, and everybody was happy to be 'interviewed' by pupils and share his own stories and views on the district. The enthusiasm aroused by the magazine was clearly strengthened by the position and reputation of its main actors, the school and its pupils. They both hold the specific variables of 'neutrality' and 'externality'. Children, by their formal and sociological definition, stand outside adults' dividing social and political categories. Moreover, they develop their own relationships, friendships as well as antipathies, which do not necessarily match with the ones taking place among their parents. And the space where those relationships are developed outside (and sometimes against) family's social networks is primarily that of the school itself.

The educational institution, in turn (especially as a 'public school'), is obviously neutral, classes are randomly organised against all sort of individuals' preferences, exclusion or risks of discrimination. Furthermore, its 'neutrality' is enforced by its 'externality'. Curiously, it is geographically located at the external (Western) edge of the district, and, though being open to dialogue with local institutions, does not officially engage in their activities and public debate.

'Externality' is thus the necessary vehicle to 'neutrality', and these variables showed the capacity to aggregate the whole 'village' and hierarchically overtake, at least in the short term and on specific and periodical 'issues', the fragmenting factor of kinship. Significantly, the educational institution, as blatantly shown by this editorial project, has the potential to 'build the territory' at the village level – as well as its community, personal relationships, collective sense of belonging – precisely as long as it holds at its margins, and without an explicit, direct involvement, which would conversely trigger itself in villagers' world of dividing categories.

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Who Gets the Right to Go to School? The Italian Critical Workers' Affair

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ABSTRACT: *This paper aims to provide a map of the public debate that unfolded in Italy following the decision to close all schools and education facilities in medium to high-risk areas for COVID-19 during the spring 2021 breakout. By analyzing news media accounts and institutional communications of that period, it will be argued that the lack of a socially shared agreement and of a proper institutional definition of whom and what should be considered 'essential' in the COVID-19 pandemic, initiated a fierce controversy over who should be entitled to the right to in-person education. In particular, this paper will examine three relevant aspects of what has been here defined as the Italian critical workers' affair (Boltanski, 2012): 1) the use of the institutional crisis done by the movements against distant learning in the attempt to defuse the effects of the closure; 2) the debate surrounding the right to education vs. the right for work-life balance policies; and 3) the role of school in mitigating social inequalities. Results suggest that in Italy, school access emerges as one of the central battlegrounds around which civil rights are currently socially reclaimed and renegotiated amid the state of precariousness dictated by the pandemic.*

KEYWORDS: *In-person education, Social justice, Work-life balance, Coronavirus*

Introduction: The Affair Unfolds

In late February 2021, several Italian governors decided to close all schools and educational facilities after facing an alarming increase in COVID-19 case numbers and hospitalizations. In particular, on February 26th, 2021, Stefano Bonaccini, the president of the Regione Emilia-Romagna, decided to establish the 'dark amber' color code, unilaterally changing the 'traffic light system' that classified Italian regions according to their epidemiological situation. The new color served *de facto* to close all schools in Bologna, the capital of the Emilia-Romagna region, while keeping most businesses and economic activities open. This represented a significant shift to the approach set in place at the national level since the previous September over school closures in relation to the pandemic.

As a matter of fact, when school resumed after the initial lockdown, the Italian government committed to guaranteeing in-person learning for all pupils attending nurseries, kindergartens, elementary schools, and the first year of lower secondary schools, also in the territories classified at

'high risk' of coronavirus transmission (or 'red zones'). Unsurprisingly the decision taken by Bonaccini immediately trigged the protests of the movement for in-person education and of the families affected by the measure. In a dramatic change of scenario, on March 2nd, 2021, the newly appointed Italian prime minister Mario Draghi backed up the Emilia-Romagna initiative. On that day, Mr. Draghi signed his first ministerial decree. The act ordered for all schools in the 'red zones' to switch to distance learning while giving local authorities the power to autonomously decide for school closure in specific areas of high contagion, even if the region as a whole was not being classified at high risk (Giannoli, 2021).

Albeit disposing of all school activities to be held remotely, the ministerial initiative did not address or modify the so-called 'Piano Scuola', a policy document regulating how schools needed to be managed during the COVID-19 health crisis. Accordingly to the 'Piano Scuola', schools and educational facilities had to remain open for all special needs pupils and/or for the children of key workers in case of closure. As such, the 'Piano Scuola' established a clear connection between essential workers and access to the school system during the pandemic period.

Following the ministerial decree, on March 3d, 2021, Stefano Bonaccini sent an official request to the government to clarify how the law needed to be enforced when it came to schools' attendance for the children of key workers. The following day, the director of the Department of Education answered the governor's interrogation clarifying that, according to the 'Piano Scuola', all the children of essential workers had the right to be admitted for in-person learning. However, the legislator lacked a proper definition of what categories of workers needed to be considered essential, leaving unanswered the question of whose children had the right to apply for in-person learning (Gieri, 2021). As a result, while waiting for a more strict classification, local administrators and school principals started creating public lists where families could certify their children's right to be considered for in-person education.

At the same time, movements opposing digital teaching tried to exploit the ambiguity in the definition as a trojan horse to hack the system. In particular, they urged all families who had at least one of the parents working in one of the many sectors considered essential at the early stage of the health crisis to apply for in-person education, aiming to vanish the closure effects (Boratto, 2020). Finally, pressured by the local governors, on the 6th of March, 2021, the government released a ministerial memorandum (note AOODPIT, 4 March 2021), establishing that the right of in-person education could only be extended to pupils with special needs, officially closing the dispute.

1. Exposing the Affair: Methodology and Theoretical Framework

This contribution aims to provide a map of the public debate that ensued after the initial decision of the Regione Emilia-Romagna to establish the 'dark amber' color and close all schools during the third wave of the coronavirus crisis. To do so, the study draws on a corpus that included newspaper articles, policy documents, field notes, and other selected primary evidence collected in February and March 2021.

It should be pointed out that who writes has followed the activities of 'Priorità alla Scuola', the Italian movement for in-person learning, since its foundation in early April 2020. As a mother of two and as an academic, my participation in the movement resulted from a double urgency. On the one hand, I wanted to push the legislator to find suitable solutions to restore all children's right to formal education. On the other, my support of the movement resulted from the frustration of realizing the negative impact that the school closure had on my career (Minello *et al.,* 2020). As such, this research moves from a very specific situated knowledge (Haraway, 1988) on the debate over in-person learning.

As a result of my participation in the movement, I have often been granted early access to official documents; I am among the recipients of a reserved daily press review service; I have had the opportunity to discuss the events with local journalists and members of the institutions, and, since the early protests, I have been part of the WhatsApp chats of the movement both at the national and at the local level. Albeit I will not use any informal communication that occurred between me or other actors participating in the movement for the scope of this study, I am aware that my experience in the movement has played a relevant role in my interest in the subject matter, as well as in the way I have framed my research questions. As such, a central part of the research process was to conduct my analysis considering my insider/outsider (Bourke, 2014) position regarding the movement and the issues discussed. The corpus gathered was analyzed using an interpretative approach to reach that 'thick description' capable of unveiling the «stratified hierarchy of meaningful structures» (Geertz, 1973, 6).

The use of an interpretative analysis appears of particular importance as the research originated from an interest in what could be referred to as a 'sociology of justice', as proposed by the French sociologist Luc Boltanski (2012). In particular, Boltanski affirms that sociology should be interested in the 'question of justice' not just to investigate how the material or immaterial goods are partitioned by individuals in a given society, but also, by proxy, as a way of establishing the worth of people and things in that specific society.

What has been said about the denunciation of injustice produced by ordinary persons it's just as valid for sociologists. Bringing to light an injustice – that is, a division of material or immaterial goods that do not respect the legitimate order of worth among persons – cold entail making explicit the principle of justice to which the critique is linked and clarifying

the definition – of what constitutes the value of things and people. (Boltanski, 2012)

The interest in the question of justice has become of particular relevance in contemporary societies as the COVID-19 pandemic has prompted an unprecedented reflection over which goods, services, and workers are to be considered essential to avoid societal breakdown (Weis, Magnin, 2021). More specifically, the necessity to define what types of productions should be preserved, who should be allowed in the public space, and what is at stake if some are excluded from public life, have probably been some of the most challenging questions opened by the COVID-19 health crisis.

However, at least in Italy, while institutions avoided finding a proper definition of what and whom should be considered essential, the disposition of the people towards restrictive measures, as well as the conditions under which the various periods of lockdown or quarantines had been organized, changed over time. In particular, after the initial lockdown in spring 2020, many people started growing wary of all the restrictions set in place by the central government, considering their right to able to go back to their previous lives, whatever their occupation or position in society.

Hence, the March 2021 school crisis should be read as part of a situation of growing discontent, exposing a profound juxtaposition: on the one side, the local governors, who tried to protect public health while safeguarding business and economic activities over schools and educational facilities, on the other, the protestors of these decisions, primarily parents and other components of civil society (intellectuals, members of the unions, teachers, activists), who required in-person access to education to be considered a fundamental priority for the country.

The analytical tool used to investigate how the collective cause for in-person education has been linked to the idea of justice, was that of the 'affair' (Boltanski, 2012). As Boltanski wrote: «in affairs, justice is always at issue […]. In affairs, the persons who protest do so because their sense of justice has been offended» (2012, 6). Affairs are usually constructed around a denunciation, a public assertion of injustice aimed at mobilizing support in favor of a claim, possibly calling for a restorative solutions:

> To construct these problematics, I shall take denunciation as my object, and more precisely public denunciation, playing on the variations that affect the meaning of the term – for the word denunciation can designate, at one extreme, a social critique that points out injustice in its most general aspect without necessarily calling for reparations of a repressive order and, at the other extreme, an individual critique that targets an individual, in the sense of denouncing someone to the authorities for the purpose of having a sanction applied. (Boltanski, 2012, 169).

2. Terms of Denunciation

Three pivotal acts of denunciations appear to be at play in the public thematization of the affair just outlined: the economy's first solution to the crisis, the right to in-person education associated with the right to work, and the importance of in-person learning in mitigating social inequalities.

2.1. The economy first solution to the crisis

The central point of this denunciation is the idea that the political management of the coronavirus crisis favored the economy over the rights and the necessities of the people, in general, and over the right of pupils to get in-person education, in particular, as Gianna Fregonara and Monica Guerzoni (2021) wrote in the *Corriere della Sera:*

> Closing schools is more straightforward than reopening them, as it is for bars, restaurants, swimming pools, or gyms. But if the economic establishments are (rightly) compensated, families are told to fend for themselves. Among political parties and local administrators, there is also who, looking at the GDP, would like to keep schools closed while leaving open business. Several ministers gave battle in the latest government meeting to link the stop of in-person education to the closure of shops and other economic activities.

The fiercest denouncers of this injustice have been all the different components of the in-person learning movement. For example, the most notorious slogan of 'Priorità alla Scuola', possibly the most prominent, organization promoting in-person education in the country, is: «the last to close, the first to reopen». Central to this denunciation is the state of neglect and insufficient funding that characterizes the educational system in Italy and the request for a restorative solution through the allocation of a large number of institutional and financial resources to public education.

> The government won't change its course because schools are always the first to close. The situation is getting even worst than before because schools are being closed without applying any distinction. «Closing schools is still being used as a way to compensate the fact that all the rest is being left open» – said Costanza Margiotta, a professor of philosophy of law at the University of Padua and activist of the movement 'Priorità alla Scuola'. «The issue here is to consider school as an essential service, meet the requirements of protocols, organize public transportation and provide everyone with a vaccine. All things that are not happening. […] The virus still circulates if schools are closed, but all the rest remains open» (Ciccarelli, 2021).

The pupils are the central victims of this denunciation, although the decision to close schools and educational facilities before other segments of the economy is perceived as a failure of society as a whole, as Chiara Saraceno, one the most prominent sociologist of the family of the

country, well points out in an editorial article published on the newspaper *La Stampa*:

> Indeed, it is unclear what type of essential needs is satisfied by the opportunity to buy a bottle of wine or have access to a takeout meal in the face of the apparent secondary importance of educational needs I am not questioning the need, in a context where contagion is rising, of avoiding pupils sharing the same spaces for several hours, nor the necessity to prevent large gatherings at schools' entrances or on public transit – even if little has been done to make these places safe. Several other countries are adopting restrictive measures. But they are doing so with much more coherence: if closures are needed, then everything should be closed to avoid having schools becoming the only place unsafe, while youngsters and children could joyfully meet in the takeout facilities, in the parks, or in private homes despite official bans.

2.2 The right to in-person education/the right to work

The second act of denunciation has the issue of work-life balance at its core. Among all the condemnations originating from the affair under consideration, this is the one in which the necessity to clarify who and what should be considered essential in the management of the COVID-19 health crisis emerges as being more crucial. Central in this denunciation is the idea that attending school in presence does not just offer an unmatchable way for pupils to get educated: it also allows their parents to go to work to meet the end's means.

To decide whose children have the right to access to in-person education opens up to two significant injustices: the first one is to deny children their right to have access to in-person education based on their parents' profession, the second is to refuse to their parents the possibility to go to work. In this denunciation, school is intended as a societal responsibility and, especially for families with younger children, as a fundamental part of the welfare system, as Chiara Saraceno once again points out:

> [Closing] nurseries and probably all kindergartens mean to leave once again on the shoulders of families, and in particular of mothers, the tasks of taking care of all the educational needs of their children, of their socialization and of the development of their autonomies. All processes that, especially in early childhood, need to be taken care of in spaces and relationships outside of the family. That without addressing the life-work balance problems that this situation generates, putting in jeopardy the work of those women who had been 'so lucky' not to have lost their job in the past few months.

The denouncers of this injustice were to the largest extent the parents of the children in the areas where schools were closing, who were often required to organize themselves to accommodate the consequences of the closures in a very short time:

> In the social media accounts of the [Lombardy] region, many have reported their disdain: «they [the government, ed] forgot to renew the possibility to access parental leave, and Fontana [the governor of Lombardy, ed] decides to close the school after having claimed for weeks that we deserved to be considered a yellow area» writes Stefania. «They complained of the central government, but they are as well making decisions on their own», Giuliana comments. And again, «if parents are at work, the children must stay with their grandparents? We should have been given the time to get organized» or «the rising of COVID-19 cases should be put under control, but couldn't they have acted sooner?». (Roberto Maggioni, *Il Manifesto*)

The children left at home and their families are identified as the principal victims of this denunciation. However, in particular, among the parents, women are addressed as victims of this situation. With the children at home, women often took up more family and domestic work than their male counterparts, reducing their professional working hours to support and take care of their home-schooled children (Alon *et al.,* 2020; Cook, Grimshaw, 2021; Minello *et al.,* 2020) as Rita Querzè well explains on the pages of the *Corriere della sera:*

> In January, the special parental leave connected to the health crisis has ceased to exist. Mothers are forced to use their vacations to stay at home with their kids if they are quarantined, or if schools are being closed. A condition that will become more and more common in the next few weeks due to the targeted lockdowns that will be registered all over Italy. Men should also take this problem seriously, at least in theory. What happens, in reality, is that women take over 75% of care work. Of the 101 thousand jobs that have been lost since the beginning of the crisis, 99 thousand were performed by women in the most affected part of the economy. Now the risk is that the mothers that are still working will have problems in keeping their jobs.

2.3 The importance of in-person learning in mitigating social inequalities
Central for the third denunciation is the idea that education is a fundamental right of children. Besides providing knowledge, opportunities for socialization, and autonomy to the pupils, schools and educational facilities also work as social equalizer. As such, reinstating distant learning means harming the most fragile sectors of the student body: those with fewer resources and without a solid network, thus reinforcing social inequalities. This denunciation makes wide use of data on the impact of education on social mobility, and finds its central claim in the idea that closing the schools enhances the danger of widening the school dropout rate, in a country that is already struggling to keep its students in school, as Raffaella Milano, the director of the Italian programs of Save the Children reminds in a public note:

> We are at risk of seeing a solid increase in educational poverty, an already relevant problem in our country. Besides losing learning opportunities, the difficulties faced in accessing online learning for children and teenagers living in the least-favored contexts could lead to a loss of motivation and in growing isolation that could easily lead to school drop-out, an issue that today in Italy already affects the 14.5% of the population in school age.

The denouncers of this injustice have been the members of civil society, led by those organizations specialized in children's rights advocating against the inequalities perpetuated by the digital divide. As for the victims, the pupils are the principal victims of this denunciation: stripped away of their rights and of all the opportunities that in-person education could offer to them, left alone to confront their problems with access, connectivity, and loneliness. However, also in this denunciation society appears to be on the losing side: dropping the battle over in-person education and school drop-out is a sign of a deep social and cultural impoverishment.

> We need to face the type of culture that emerges behind certain declarations, almost pleased on what appears to be a defeat for society as a whole. We also need to face the misestimation that pervades the social function accorded to school and the tendency to consider instruction something of aleatory value, a bargaining chip for the political market. Closing schools is not considered a last resort that should be defended at every cost, as it happens in other countries, where in-person education is considered a question of principle. […] The consequences and the inequalities produced by this situation over our children are there for all to see (Marco Imarisio, *Corriere della Sera*).

Conclusions

The critical workers' affair follows several acts of public denunciation that were carried out in the early days of March 2021 by different members of the Italian civil society. The affair lies in a definition «politically negotiated and reflective of power, relations between capital and labor mediated by the state» (Stevano *et al.,* 2020), identifies several victims, and mobilized different resources at the private at the institutional level. More in general, the affair unveils a profound institutional crisis that has the request of justice at its core. In this scenario, access to in-person education has emerged as one of the central battlegrounds in Italy in the negotiation of civil rights during the pandemic. As a matter of fact, around the access to in person education civil rights have been socially reclaimed and renegotiated amid the state of precariouness dictated by the pandemic.

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School, Family and Distance Learning at the Time of COVID-19: The Case of the *Gazzetta Olimpica*

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ABSTRACT: *The project La Gazzetta Olimpica is part of the more general context of distance learning activities of the 'Olympic Village 'elementary school. In the past years the school had organized the project in person through the involvement of the children of all the primary school classes of the plexus (from I to V) in a journalism laboratory. The aim of the project is to make pupils live an educational experience in which to experiment with a division of roles, tasks, responsibilities and collaboration aimed at achieving a common goal, a result that is the fruit of everyone's work. The main objective of the magazine was to encourage children to reflect and share the experiences that had remained most etched in their minds during the school year, in order to enhance the daily life of the neighborhood community and therefore encourage, in the long term, also the local development of all the realities active in the area (primarily the school). The project was therefore not new, but the situation that occurred with the health emergency had caused a necessary readjustment to the 'remote' school context and a general restructuring of the project's activities.*

KEYWORDS: *Distance Learning, Educational Community, Digital School, Social Impact Evaluation.*

Introduction

The constant and widespread emergency situation in Italy after COVID-19 has made the context of the planning and implementation of educational policies even more complex, which were immediately influenced by the effects of the pandemic and the need to stem the emergency and counteract the negative effects of the virus on a number of levels not only in terms of health, but also psychological and social.

The school has certainly been one of the areas in which the social distancing imposed by the virus has produced some changes on the didactic, educational and management of training projects normally used by teachers according to well-established work patterns. The pandemic has catapulted school teachers of all levels into the world of distance learning, producing positive and negative effects with respect to the management of educational processes through the use of digital technology and the experimentation of innovative teaching methods. The

specific case of the *Gazzetta Olimpica. Newspaper of the school and neighborhood* in which the Department of Communication and Social Research (CORIS) of the University La Sapienza in Rome was involved to support, monitor and evaluate the 'remote' design and editing of the magazine *The Gazzetta Olimpica*, in the more general context of the distance learning activities put in place by the teachers of the 'Olympic Village' elementary school following the COVID-19 emergency.

In this article, particular emphasis is placed on exploring the limits and potentials of the work of teachers and researchers in the field in the school environment at the time of COVID-19, taking as an example the evaluation of the project *Gazzetta Olimpica, newspaper of school and neighborhood*.

1. *Gazzetta Olimpica*: before and during COVID-19

Since 2017 the school had organized the *Gazzetta Olimpica* project with the participation 'in person' of the children of all the elementary classes. The project was implemented with the support of a journalist father, who introduced the children to the concepts and basic activities of journalism as well as to writing/editing of text based on the children's own experiences and on starting points supplied by the social promotion association involved in the project (*The children's Village*).

The main goal of the *Gazzetta Olimpica* was to encourage children to reflect on and to share the experiences that had remained most etched in their minds during the school year, and to tell about their neighbourhood by means of research and interviews with residents and commercial operators.

The CORIS Department of Rome University had already participated in the preparation of the 2019 issue, helping in the editing and graphic layout phases, in full respect of the originality of the texts proposed and written by the children.

Thus the *Gazzetta Olimpica* 2019 was the product of these collaborations and sharing of experiences. The journal was presented during the end-of-the-school-year party to the entire neighbourhood, involving citizens, families, teachers, creating an opportunity for a wide participation of the local context. On this occasion, the role of the school as a promotion hub for the neighbourhood activities appeared as central, almost like a 'civic centre' capable of activating the energies of the teaching community (Lo Presti *et al.,* 2018).

Three issues of the *Gazzetta Olimpica* had been successfully published when the pandemic struck (March 2020), obliging teachers and students to readjust to the 'remote' school context and to a general restructuring of the project's activities.

Therefore, teachers and children had to make a real experiment of the 'Digital School'[1] albeit in a general context of confusion caused by the disruption of daily life, as families had to find a new balance between smart working and the management of home activities.

During preparation of the fourth issue of the *Gazzetta Olimpica* the CORIS Department participated to the editorial staff meetings via video-conference, so as to be able to monitor and assess the laboratory activities performed by the children. The fourth issue of the *Gazzetta Olimpica* differs from the previous ones especially as regards the contents. The lockdown made it impossible to gather interviews, or to tell about open-air events such as school visits, school trips, films, concerts, etc. In the new situation, however, the children speak about their interior world and re-discover formerly abandoned activities and games. They put down on paper personal thoughts and feelings linked to a very difficult period, they tell how their daily routine has changed, no longer full of tens of tasks (full-time classes, sports, music, theatre, etc.) but with a school that reaches them at home and tries to keep the relationship with the students well alive.

2. Evaluation and complex programs

The period of forced closure in the children's homes following the emergency led to a creative review of the project and a group of researchers from the CORIS department was involved in monitoring and evaluating this situation of ongoing project change. 'Opera. Evaluation research was therefore configured from the beginning as a real challenge for the evaluation of a project undergoing transformation, which can be defined as 'complex' (Rogers, 2008) as it is characterized by the uncertainty of the general situation and by the involvement of a series of different stakeholders but all united by experiencing a difficult and delicate moment. The first protagonists of the project were the children, closed in the world of their own homes and therefore with a spectrum of activities so reduced compared to the past, as to make it difficult to activate positive memories and the liberation of creativity that could be pulled out thanks to the writing of the stories in the newspaper. Protagonists of the project were also the teachers, already tried by the sudden adaptation of their professional activities to the procedures

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[1] In Italy, the Ministry of Education has acknowledged the importance of ICT and digital competence with a series of initiatives that have resulted in the PNSD – National Digital School Plan within the 107/2015 law on La Buona Scuola. The PNSD was created with the aim of formally initiating the digital revolution in schools. However, a review of practices and experiences from 2015 to today (Fasanella et al., 2020) shows that the Plan has had the effect of promoting projects and experiments on the sidelines of ordinary teaching at school desks, despite the enormous institutional investment in the Plan.

required by distance teaching which had imposed a reorientation not only of the didactic programs, but also of a whole series of interaction and I work with class groups unable to interact face to face as usual.

The Gazzetta Olimpica project there for required an evaluation research design that was suitable for the evaluation of a 'complex' type program (Rogers, 2008), intended as a multi-objective and multi-stakeholder program implemented in a context of uncertainty and transition.

The construction of the design of the evaluative research therefore entailed the need to keep these initial difficulties in mind and to adapt to the general emergency situation from COVID-19, asking the researchers to make an effort to identify 'tailor-made' evaluation methods (Stame, 2016) of a project being adapted due to the unexpected emergency situation.

The design of the evaluation research of the Gazzetta Olimpica project was, therefore, contextualized in the school scenario designed by the COVID-19 emergency characterized by the conversion of all training activities in presence into online activities.

The COVID-19 emergency has sparked a wide and controversial debate on the media and on social networks on the potential of Distance Learning (DaD) and on the ability of schools to guarantee effective training for school pupils of all types and degree in the phase of suspension of all activities in presence. Faced with the national emergency linked to the spread of COVID-19 in Italy, digital technologies have made it possible to continue the ordinary activities of schools and universities through the main tool of the DDA, thus guaranteeing the right to study. However, distance teaching is not a completely new practice in Italian educational contexts. The technological evolution of the last decade and the use of information and communication technologies (ICT) in training contexts affect, in fact, two aspects at the basis of any didactic action, such as access to knowledge and communication (Rivoltella, 2014). The use of ICT in teaching allows the pupil to be placed at the center of the training action who, thanks to digital tools, can become the builder of his own knowledge path, with the guidance of an adequately trained teacher (Falcinelli, 2005).

In our country, the Ministry of Education has acknowledged the importance of ICT and digital competence for citizenship, promoting a series of initiatives that have resulted in the PNSD – National Digital School Plan within the 107/2015 law on 'La Buona Scuola'. However, digital experimentation does not seem to have produced the system of an ordinary online teaching model in classrooms (Giancola *et al.,* 2019), with the exception of training activities conducted in internal and isolated areas of the country. Therefore, Italian schools of all types and levels found themselves in the emergency of preparing online teaching solutions in a very short time and in order to allow the smooth running of the school for all.

This general situation made the work of the evaluation team more difficult and required a preliminary phase of background research aimed at the shared definition of the evaluation mandate that put at the center the needs and difficulties of the school teachers committed to putting in practice teaching and educational methods of non-ordinary and customary use.

The evaluation should take on different and specific forms and characteristics and adapt to the type of program to be evaluated, the implementation phase, the number of stakeholders involved, the objectives envisaged and, therefore, in the specific case of this Evaluation research was envisaged as an undertaking for the researcher who found himself in the condition of following an orientation map for evaluation that followed the unpredictable aspects that the project could have assumed.

3. The map of an 'online evaluation': positive thinking and 'hidden blessings'

The first step of the research therefore required the teachers to participate in a brainstorming together with the team of experts involved in the project (evaluators, graphic designers, journalists, communicators) to focus on the difficulties and potentials experienced from the beginning of the lockdown. with distance learning. The main result of the brainstorming can refer to the emergence of a great desire of teachers and children to engage in experiential and laboratory activities (in the face of the compulsion to see each other on digital screens every day), difficult to implement in the context of closure to the outside and physical distance from school desks. In this perspective, the project of the school newspaper could take on an extra value compared to past years and, specifically, that of trying to find contact, at least mental and imaginative, with one's own context of daily life and neighborhood, reinterpreted by the voices of people heard over the phone, seen on touch screens or greeted from the windows of houses in the lockdown. A magazine therefore that, even if built with online teaching methods, could have been a way to bring children closer to school and the neighborhood by recalling the positive experiences and stories lived in a period that was not particularly serene and carefree as other precedents.

In this context, the research evaluation question coincided with the main question expressed by the school teachers, that is to bring out the changes that the school was going through in this special situation, taking into account the needs of pupils and teachers.

In particular, it was considered interesting to investigate the changes that have taken place with respect to the way children interact with their peers and distance teachers and the changes also in terms of general learning skills in a school context that has changed from normal and characterized by distance. and the constant use of digital tools for

teaching. The goal of the research would have been to try to bring out what positive could be enhanced by the experience of distance learning, with a focus on the laboratory experience of the school newspaper. On the basis of these considerations, the evaluators felt ready to adopt an innovative framework open to the exploitation of the positive results for the evaluation of the project, in which the very conceptualization of the objects and terms of the evaluation has changed.

First of all, the evaluators proceeded to reconceptualize the 'project' together with the teachers in a broader sense, meaning it as strictly linked to the specific context of its implementation, a context that connotes the program and makes it something strictly linked to the situation in which it is implemented (Berman, 1978).

Secondly, the evaluators found themselves in the need to understand the roles of the various stakeholders in the project as broadly as possible, considering the characteristics and needs of all the actors who are part of the implementation context of the *Olympic Gazette*, including those who rotated on the sidelines of the program (such as the association in the territory) and who, although not directly involved in the editing of the magazine with a participatory and active role as in previous years, could still have an influence on its implementation. So we opted for a research approach focused mainly on the results of the project, but in a broader perspective, in which the effects are not only those deductible from the characteristics of the evaluator, but are all the possible changes that this can solicit, even outside its perimeter.

Based on these reflections, the need arose to share with the teachers an innovative proposal for the evaluation of the school newspaper project, inspired by a 'positive' orientation, considered particularly suitable for a situation with uncertain outlines and in continuous change such as that of the post COVID-19 emergency.

The 'positive thinking' approach overturn the mainstream perspective of evaluation inspired by problem solving (Lo Presti, 2020) starting from the identification and analysis of 'what has been done well', 'what has worked well', giving an important role to the shared definition and co-construction of 'successes' and consequently leaving considerable space for evaluation, understood 'positively' as a tool for improving the effectiveness of interventions.

It is therefore argued that a useful way to foster positive and innovative responses through the design of development interventions is to start the analysis from 'what has been done well', because you learn more from successes than from failures and successes are incentive factors that motivate action. Taking up the suggestions of J. Tendler (1993), the research design focused on bringing out what was not foreseen a priori, proposing to investigate in the specific context those cases in which the problem addressed does not occur or is fixed. This way of proceeding can have an added value compared to traditional and preordained methods of intervention, that is to mobilize resources that are not recognized or not explicit but useful to produce the desired change,

meaning the change as recognition of a success that serves to make understand what to aspire to, how to change, where to aim.

This solution was considered particularly suitable for the changed context of the *Gazzetta Olimpica* project, orienting all the phases of the evaluation research and the methodological choices for the evaluation of the project.

In the framework of Positive Thinking Research (Lo Presti, 2020) an evaluation plan has been structured which, after the background analysis and negotiation of the evaluation mandate by conducting a brainstorming with all the stakeholders of the project, has the centrality of observation in the field of online teaching is envisaged,

The main method for analyzing remote teaching practices and bringing out the positive changes during the implementation of the school newspaper project was the observation of the teaching activity by the evaluators who built diaries of the laboratory lessons, listening to the voices and looking at the faces of children and teachers during the didactic interaction. The research design then included interviews focused on the project activities conducted remotely with the teachers and experts involved in the project and the analysis of the children's laboratory products, in particular the final newspaper. Through these tools we tried to identify similarities and differences between the contents, the themes and the expressive modalities of the magazines created 'in presence' and the one made 'at a distance' in a comparative perspective with respect to previous years.

The evaluation plan also envisaged the objective of understanding the 'world' seen and represented by children in the months of lockdown and of evaluating, from a training and improvement perspective, the development of children's abilities to represent reality and translate it into communication products also aimed at external disclosure in a broader perspective of social impact. At the center of the analysis there is, in fact, the theme of the impact that the digitization of teaching has had in the relationships between children and between them and teachers but also in the relationship between the school and the rest of the community, understood as 'Educating community' (Lo Presti *et al.,* 2018).

Conclusions

At the end of the 2020 experience it seems fit to underscore the changes brought about the COVID-19 pandemic in the school system, even if is too soon to evaluate the real effects and repercussions on our children.

The school's physical spaces have changed. Some classes or groups of classes were halved and placed in different classrooms. This entailed doubling of the teachers (with an infusion of additional 'COVID-19 teachers') and a different distribution of the subjects among the teachers.

Many laboratories were cancelled, as it was not possible to guarantee adequate spacing between students. The gymnasium and the library were converted into classrooms. Also, the classroom configuration was changed in order to create more room and to distance the forms. All cupboards and bookshelves were removed; the children were not allowed to leave any of their materials/belongings, so as to permit daily hygienization of the rooms. The teacher's desk was placed next to the door, so that the teacher would be able to keep an adequate distancing without having to walk near the children.

In the Rome region kindergarten and all classes up to 8th grade were kept constantly open, except for occasional quarantines. Work was therefore normal, 'in presence'.

From the viewpoint of teaching, the rejuvenating of traditional teaching methods, centered on 'frontal teaching', had begun some years ago, and received a strong impulse from the pandemic, with the introduction of distance learning.

During video-classes new Information and Communication Technologies were applied. The use of video-presentations became indispensable, both for producing and benefiting of the contents (YouTube). The teacher loads the exercise onto a platform, and later on the students must load onto 'classroom' or 'notice board' the screenshots of their exercise book showing the working out of the subject. The students were often required to show the results of their work using video presentations and/or text accompanied by images.

More and more the 'flipped classroom' method is being used, consisting of supplying materials that encourage the students to approach new subjects. The teachers indicate links to videos and/or digital resources, presentations, tutorials, which the students are able to use in full autonomy.

Among the new methods adopted to respond to the challenges posed by COVID-19 19, a very useful tool was represented by 'cooperative learning'. This is more than teamwork, as it is directed to an entire class of students considered as a whole, formed of smaller groups that collaborate with each other in order to obtain a common result.

For all the issues of the *Gazzetta Olimpica*, and particularly for the June 2020 issue, the cooperative learning method has been used with fully satisfactory results.

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The Role of Journalism in an Experiential Learning Session in Primary School

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ABSTRACT: *This work aims to analyse the activities of 'distance' design and editing held in April-May 2020 by the teachers and pupils of the 'Villaggio Olimpico' primary school in Rome to realize La Gazzetta Olimpica. The project, now in its fourth year, aims at introducing the children to decode the basic concepts of journalism and, in the same time, at involving them in a journalism workshop, drafting of a newspaper based on their personal experiences, life at school and in the 'Villaggio Olimpico' neighbourhood. Because of the COVID-19 pandemic, the workshop needed to adapt this 'experiential learning' activity to the distance learning methods. As an unexpected and interesting result, this has made the final product a way to observe the months of lockdown from the pupils' direct point of view. The research involves two phases, linked to the participant observation of the journalism workshop and to the analysis of the children's final products in a comparative perspective with the previous issues, in order to identify similarities and differences between what has been produced in the traditional teaching mode and in the distance learning mode.*

KEYWORDS: *Experiential learning, Distance Learning, Journalism, Primary School.*

Introduction

The *Gazzetta Olimpica* project was launched at the end of 2016, as a result of the dialogue between the 'Villaggio Olimpico' primary school – which was interested in hosting parents-professionals so that they could illustrate their trades to the children – and the 'Villaggio dei Bambini' social promotion association, dedicated to the development, redevelopment and aggregation of the district of the same name.

Alessandro Cisilin (a professional journalist, employed by the national radio news agency Area, and a member of the 'Villaggio dei Bambini' association) agreed on a path with the coordinator of the plexus, Maddalena Gattinara, establishing a couple of meetings to introduce journalism to the pupils and, through the association itself and the daily life of the community, providing ideas and contacts between the institutions, the characters and the problems of the neighbourhood.

The actual drafting of the newspaper took place in the following way: it was decided that the entire construction of the texts would be done independently by the young journalists, without any substantial, if not marginal, corrections by the teachers. It was decided that there would be no real 'editorial direction', except for a few directives, in terms of content and format, provided primarily by the teachers themselves, with the consultation of the journalist and in some cases the stimulus of other parents. The work is therefore entirely and essentially carried out by the children, so that the function of 'direction', albeit brief, is recognised by the teachers in their daily work, and in particular by the coordinator.

The page layout was completed by Cisilin himself, together with a professional graphic designer in the first two editions; starting from the third (2019), the availability of the Department of Communication and Social Research of Sapienza University of Rome was added.

The spin-off and dissemination are constituted, again, by the active involvement of the school and the realities of the neighbourhood. The newspaper is in fact printed (about 200 copies) and presented at a school event at the end of the year, as well as being 'sold', coordinated by the parents themselves, according to the established formula of a 'free offer'. The remaining copies are then distributed among the neighbourhood's shopkeepers (newsagents, bars, even the Auditorium bookshop), always recording a 'sell-out', demonstrating the high level of local collective interest in the initiative and its contents.

This article frames the experience of *La Gazzetta Olimpica* as an example of 'experiential learning' (Kolb, 1984; Beard, 2010) with multiple aspects of interest: the virtuous networking that is created between the school and the neighbourhood; the active involvement of fourth- and fifth-grade children in an activity, that of journalism, normally included in media education projects in the (passive) formula of reading the newspaper in class; the persistence of the project, which chooses to continue in its fourth and fifth edition despite the limits imposed by the pandemic condition.

1. Applying the experiential learning formula to journalism

Experiential learning is a sense-making process involving significant experiences that actively immerse and reflectively engage the learner, creating a bridge between his/her inner world and the outer world, with its social and cultural milieu (Beard, 2010). It is important to emphasise its nature as a process: in line with Kolb's theory, it's something in which «knowledge results from the combination of grasping and transforming experience» (1984, 41).

The theoretical foundations of this practice can be traced back to the thinking of John Dewey (1925), who contrasted an 'empirical experience' that was conservative, tradition bound, and prone to conformity and dogmatism with the need for a reflective process on the experience itself,

aimed at drawing out the meaning in it and to use that meaning as a guide in future experiences. Since the early seventies (Kolb, 1971; Kolb *et al.,* 1971), the theory of experiential learning has provided insights for research and application in educational contexts in the fields of management, information sciences, psychology, medicine, and law. A wealth of experiential learning has further multiplied since the year 2000 (Kolb, Kolb, 2013).

Pursuing 'a framework for examining and strengthening the critical linkages among education, work, and personal development' (Kolb, 1984, 3-4), experiential learning theory lends itself well to scientific reflection on life-long learning in the field of social and cognitive psychology, and is embodied in the curricula of undergraduate and professional programs by means of the following instruments: internship, field placements, work/study assignments, structured exercises and role plays, gaming simulations.

What does this kind of process have to do with the journalistic profession? Why apply it to the primary school context? And why, among the many possible types of experience, link it to that of a newsroom? This study attempts to answer these questions through two considerations.

The first concerns the usefulness of introducing the experience of journalism, and the process of reflection on it, into a primary school. Reading a newspaper in class is a privileged way to learn to recognise the nature of a text, identify its functions, critically evaluate the communicative structures used, recognise the specifics of a message, and predict possible effects on the target audience. These assumptions have guided media education projects, the innovative value of which lies in the implementation of didactic paths that explore the coding and production phase of messages, which ideally anticipates that of decoding the news described above (Panarese, Tumolo, 2005). This contribution intends to be in continuity with this type of project. A mission that is even more important in a context in which the multiplication of sources, the fragmentation of audiences, the abundance of devices makes it all the more crucial to familiarise children with the media, that is to teach future adults to orient themselves in the abundance of sources and information that characterise the media environment.

The second consideration concerns the picture of the workplace as a learning environment that can enhance and supplement formal education given by experiential learning. We think it could be interesting to draw a parallelism between this picture and the concept of 'community of practice' as a way of enacting the communicative nature of knowing through the elements of mutual engagement, negotiation of a joint enterprise, and shared repertoire (Iverson, MvPhee, 2008), that has been applied to a specific workplace: the newsroom. It is our opinion that a context in which journalistic dynamics are presented and reproduced in their 'minimum form', accessible to primary school pupils, is in fact a privileged observatory for verifying the extent to which the concept of 'community of practice' can represent «a useful framework for thinking

about journalism as a cooperative endeavour guided by a sense of moral purpose» (Borden, 2007, 21).

Starting from these assumptions, this work aims to analyse the activities of 'distance' design and editing held in April-May 2020 by the teachers and pupils of the 'Villaggio Olimpico' primary school in Rome to realize *La Gazzetta Olimpica*. The project, now in its fourth year, aims at introducing the children to decode the basic concepts of journalism and, in the same time, at involving them in a journalism workshop, drafting of a newspaper based on their personal experiences, life at school and in the 'Villaggio Olimpico' neighbourhood. Because of the COVID-19 pandemic, the workshop needed to adapt this 'experiential learning' activity to the distance learning methods. As an unexpected and interesting result, this has made the final product a way to observe the months of lockdown from the pupils' direct point of view.

The research involves two phases. The first is linked to the participant observation of the journalism workshop, to analyse the pupils' reactions to this first approach to the world of information and the relational dynamics between children and teachers. The second phase involves the analysis of the children's final products in a comparative perspective with the previous magazines, in order to identify similarities and differences between the contents, themes, methods of representation and presentation of the magazines produced in the traditional teaching mode and in the distance learning mode.

2. Notes from a journalism workshop in a primary school

The realization of the 2020 edition of *La Gazzetta Olimpica* involved the entire primary school 'Villaggio Olimpico', with particular reference to the fourth and fifth classes. In these classes, as in previous years, sessions were organised to present and organise the work, in which the Sapienza researchers participated as observers. As with the other school activities, these sessions took place via Zoom, which allowed the researchers to be present in a particularly discreet manner, disabling both webcams and microphones so as not to disturb the normal course of the activities in any way. At the same time, the very structure of the platform allowed for a particularly articulate experience of participant observation, having the faces of all the participants on a single screen, thanks to the 'checkerboard' display.

The most fruitful session in terms of observing the editorial dynamics concerned the fifth class, which had already participated in the realization of the magazine and had received specific tasks from the teachers to be carried out as homework, in particular: the presentation of the '5W' rule; a request to identify, during the weekend preceding the lesson, a topic that they would like to discuss, according to the '5Ws' (McQuail, 1983).

The first meeting with the fifth class, which lasted about two hours, was organised as follows:
- presentation of the initiative and introduction to journalism: 24 minutes;
- question and answer: 32 minutes;
- presentation of proposals: 37 minutes;
- organisation of work: 30 minutes.

Twelve pupils were present, six boys and six girls, and two teachers, one of whom was in charge of managing the discussion. He interrupted the presentation by Alessandro Cisilin to remind the pupils that he had already talked about the '5W' rule, and asked them to repeat what they were and what they meant, in English and in Italian. Moreover, he framed the activities within the consolidated modes of interactive classroom teaching, as well as managing turns to speak and calling the pupils to order in the event of inattention.

Cislin's presentation consisted of three parts:
- presentation of the initiative, in the context of the neighbourhood association and the school's activities;
- explanation of the 'basics' of the job of journalist, with particular reference to content (5W rule) and style (clarity and brevity);
- the pros and cons of the previous editions of *La Gazzetta Olimpica*, with particular reference to the organisational dimension (using parents and relatives as sources of information, not as substitutes for writing the articles), and the content (attention also being paid to the ordinary news, not just to the institutional dimension of telling the story of the neighbourhood)

The children's first questions were of an eminently practical nature. Can an article be done in two? Has an article on the origins of the Village already been done? Showing that he had done his homework, one of the children stated that he already had his grandparents' testimony on the lighting ceremony of the 'original Olympic torch' and that he could produce a copy of a photograph of it.

The teacher/moderator immediately intervened to steer the discussion: he reminded the children of past projects for which materials had been sent to a class email address, but above all of the working method, which saw the sending of the material as the end of a process of defining the idea and only afterwards writing a text and/or making a drawing. Taking up Cisilin's presentation, he reiterated the need to draft articles following the '5W' rule and to be inspired by criteria of brevity and clarity.

Having entered the phase of presenting ideas for articles, the actual editorial meeting, Cisilin chose to leave the meeting so as not to influence the pupils' choices. The articles proposed were categorised as follows:
- 'institutional' dimension, history and current affairs of the Olympic Village: enhancement of neighbourhood parks for social activities; a project to pedestrianise part of the neighbourhood; the origins of the Olympic Village and interviews with the protagonists of the inauguration; history of the statues in the Olympic Village;

- chronicle of the neighbourhood: an accident involving an inhabitant of the neighbourhood who was travelling by push scooter; a neighbourhood resident's decision to take a piglet as a pet; story of a found kitten; the impact of the lockdown on school activities; the difficulties of life and teaching in lockdown; the impossibility of continuing projects related to history and drama.

The presentation phase of the article proposals was particularly contentious, as hardly any of the pupils had made a final choice or identified a title. It was therefore an opportunity, under the guidance of the teacher/moderator, to reflect on some key dimensions of journalistic practice.

First of all, the substantive profile. One of the girls showed a certain reluctance in presenting the chosen theme, linked to a personal experience that she was not sure she wanted to reveal to her classmates; reluctance has become denial when she realized that once the event had been translated into an article anyone could read it – that is a superficial but substantial reflection on the publicity of the journalistic product. Another circumstance shows a certain familiarity with the editorial product, evidently linked to the family dimension: one child proposed to introduce an additional element to the text and images, by creating a crossword puzzle.

A second area of reflection concerned the organisational point of view. One of the proposals, to carry out interviews with shopkeepers who were about to reopen their businesses after the lockdown, was shelved because of the difficulty, not initially considered by the children, of getting out and about to the shops for the interviews; this is particularly interesting in that the proposal came from the 'real time' exchange between two of the children (evidently by means other than the 'official' Zoom room).

A third area of reflection concerned the technical point of view. The web came into play both in the *ex-ante* verification of the information (in particular that relating to the district pedestrianisation project) and *in progress*, as an alternative to taking original photographs (in the case of the statues in the Olympic Village). A demonstration of the usefulness of digital skills for the younger generation with regard to their possible applications in the future work environment of children, and the importance of encouraging a process of reflection on this as soon as possible.

The subsequent stages were defined, again by the teacher/moderator, in three steps:
- writing the chosen article in each child's Italian exercise book and, if necessary, making a drawing on a blank A4 sheet of paper;
- reading the article in class, scheduled for the morning of the following Thursday;
- writing the article in Word, to be done by the evening of the same Thursday, so that the finished product can be sent by e-mail.

The second meeting, where the articles were read and corrected, if necessary, involved much less intervention, limited to some formal aspects of the title or content of the pieces.

More interactivity characterised the second meeting of the fourth class: since the part of preparation preceding Cisilin's intervention in class was missing, the definition of the themes on which to write the articles could not take place in class, but was left to a subsequent group work by the children (between three and six members). During the second meeting, some of these groups had produced material from the shared 'chats' that could be shared with the teacher present, while others had to reorganise the composition of the group and the organisation of the work. The composition of the articles from the texts drafted by each member of the group, only in some cases presented to the teacher and the whole class, was deferred to a later meeting, which was not monitored.

3. Three years of *Gazzetta Olimpica* (despite the COVID-19 pandemic)

3.1. Comparing three editions

The next phase of the research focused on comparing three different editions of *La Gazzetta Olimpica*, those realizes from 2019 to 2021. These were analysed from a comparative perspective with the aim of observing any changes in structure and format; identifying the topics and actors that were most prominent in the three editions; analysing the journalistic formats used; and monitoring the development of students' journalistic skills. Specific attention was paid to the coverage of the COVID-19 issue. The aim was to observe how primary school children represented their own daily experience using journalistic means and if and how the pandemic has altered this representation.

The first area on which the analysis focused was the structure of the three editions, to compare whether the realization of the magazine in distance learning mode led children and teachers to make significant changes in terms of design and production. An initial observation reveals a significant increase in the foliation and number of articles: while the 2019 edition counted 16 pages and 20 articles, the following reached 20 pages and 25 articles. This variation is reflected in the number of sections into which the magazines have been divided: five in 2019, six in 2020 and 2021 (Fig. 1). It is interesting to look at the titles of these sections and the way they have been categorised using a technique, that of thematisation, typical of journalism (Marletti, 1985). In 2019, the sections are named 'Primo Piano' ('Close Up'); 'Il Villaggio', a space dedicated to places, characters and events the Villaggio Olimpico district; 'Il Caso', which focuses on in-depth journalistic investigation into a case of presumed food poisoning at the school cafeteria; 'Scuola ed Escursioni' and 'Tempo Libero', dedicated to outdoor and leisure time activities. Some of them were maintained in the 2020 edition ('Tempo Libero', 'Il Villaggio ieri oggi

and domani'), and there is also a section named 'Scuola', that represent children's link with the lockdown, demonstrating how in their perception the difficulties related to the coronavirus are connected to the distance from school, classmates and teachers. 'Scuola and Lockdown' section is given a rich in-depth report of 7 pages in the beginning of the magazine, that shows how children have learned the mechanisms of newsworthiness, newsmaking and agenda building. It is interesting the presence of a space dedicated to local news ('Cronaca'), as is traditional in the press, in which the story of events in the neighbourhood, considered interesting and significant by the pupils alternates with personal experiences related to lockdown. The only section that is common to the three editions is 'Il Villaggio': it is placed at the opening of the 2021 edition and replaces the one dedicated to the 'Lockdown', which does not even appear in the titles of the other sections. In the 2021 edition new sections are added, such as 'Sport' and, above all, 'Recensioni' ('Reviews') and 'Ricette' ('Recipes'), formats less linked to the direct experience of the pupils.

FIG. 1. *Gazzetta Olimpica structural elements: comparison between 2019, 2020, 2021 editions*

MAGAZINES STRUCTURAL ELEMENTS' COMPARISON

	No. of pages	Sections	Total News Items
2019	16	5	20
2020	20	6	26
2021	20	6	25
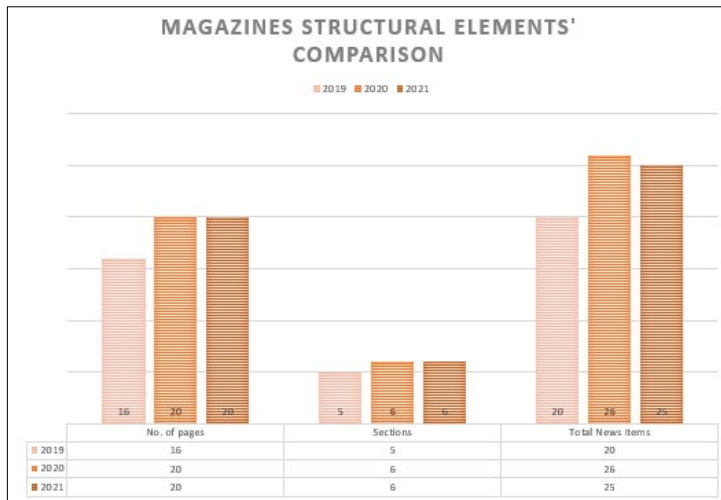
FIG. 2. *News Formats comparison between 2019, 2020, 2021 Gazzetta Olimpica*

NEWS FORMATS

	In depht and Comments	Interviews	Chronichle News	Poetry and Drawings	Tales and Short stories	Reviews	Recipes
2019	7	5	2	2	8	0	0
2020	7	0	2	8	9	0	0
2021	6	6	0	2	8	2	1
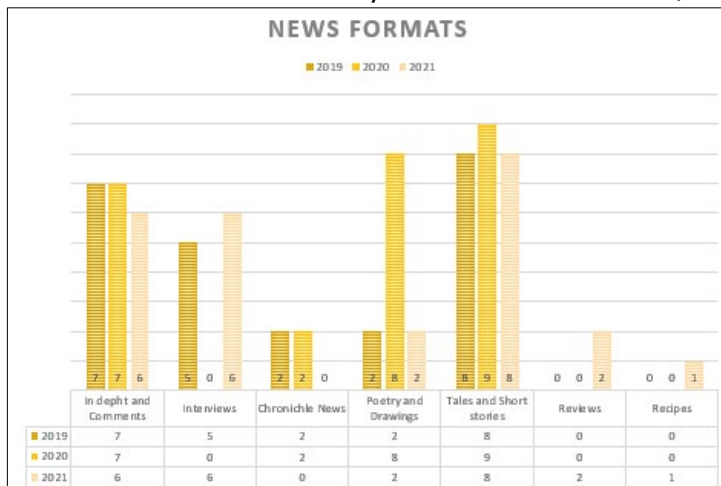
FIG. 3. *News Themes comparison between 2019, 2020, 2021 - Gazzetta Olimpica*

NEWS THEMES

	Environment and Ecology	Arts and Hobbies	Personal Experiences	School experiences	School	Sport and Leisure	Villaggio e Villaggini
2019	5	0	2	5	2	1	4
2020	0	3	6	6	1	2	7
2021	2	4	3	9	2	1	4
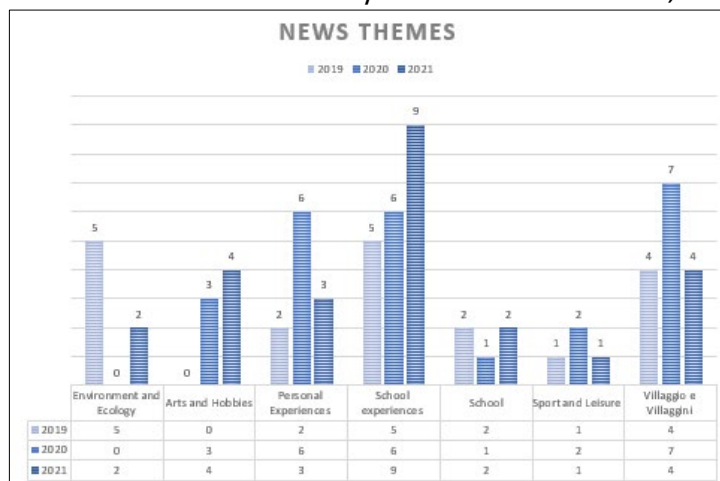
The positioning and organisation of the articles follows the logic of 'newsworthiness' and 'thematisation'; the subdivision into sections follows, although with exceptions linked to the school and personal experiences of the young journalists, the typical structure of a newspaper. Moreover, a real 'agenda' (Shaw, 1979) could be established, as the result of processes of news selection and hierarchization, for each of the three editions of *La Gazzetta Olimpica*. This evidence was also found during the observation of the April-May 2020 lessons.

Other variables based on which the three editions of the magazine were compared are the *News Format* and the *Main Themes* on which they focus. The three editions have in common the prevalence of journalistic formats of *In-Depth Analysis* and *Tales and Short Story*, which together account for 2/3 of the total number of articles produced each year.

Tales and Short Story are predominant respectively with 8 articles out of 20 in 2019, 9 out of 26 the following year and 8 out of 25 in the last edition analysed. The importance of the narrative format of the *Tales* derives from the importance of *Personal Experiences* and *School Experiences*, issues on which the majority of articles written by pupils in the various editions are concentrated.

This trend towards a narrative approach to journalism suggests several observations. On the one hand, it refers to the pedagogical importance of storytelling (Ohler, 2008), a tool that is evidently also useful in helping the pupils' first approach to the language and style of journalism, an objective that also emerges from the choice of devoting ample space to issues of proximity. On the other, it reflects the consolidated relationship between journalism and storytelling. *In-Depth* news are also mainly focused on local issues. In fact, the articles are dedicated to stories related to *Villaggio and Villagini*, the neighbourhood where the school is located and its inhabitants, and to *School Experiences*. However, there is also space for a rich focus on the *Environment*.

The comparison of Formats and Themes has given an idea of the centrality of personal experiences, and of the story form. However, by

widening the perspective, these data can suggest some cues concerning the differences between the edition realised in class and the two realised in distance learning mode. The first significant variation in the edition produced during the 2020 lockdown is the total absence of the *Interviews* format. This absence can obviously be explained by the social distancing imposed during the first phase of the pandemic, which prevented the pupils from conducting the interviews with villagers, shopkeepers, representatives of associations and other organisations in the neighbourhood that characterised the other two editions. In the 2020 edition, the space dedicated to Poems and Drawings will increase considerably, compensating for the interviews, rising from 2 articles in 2019 to 8 in 2020.

The 2021 edition also presents some innovations in terms of themes and formats. While *Chronicle* is disappeared, new formats emerge such as the already mentioned *Reviews* and *Recipes*, typical and increasingly frequent formats in modern magazines. In the first case, reviews are dedicated into books and films, while in the second, some family recipes and others tested in the classroom are proposed. Focusing exclusively on the *Themes*, it is interesting to note that the most marked variations concern the most frequent themes, *Personal Experiences, School Experiences* and *Villaggio and Villagini*. The first category of articles grows significantly in the edition made in lockdown going from 2 articles in 2019 to 6 in 2020. Similarly, the content dedicated to Village and Villages increased in the 2020 edition from 4 in 2019 to 7 in 2020. These changes are probably also due to the pandemic and the lockdown. The trend is different, for the theme *School Experiences*, which is the dominant theme of the last edition, with 9 articles out of a total of 26, compared to 5/20 in 2019 and 6/25 in 2020. This may be a manifestation of the changes to which students were forcibly subjected during the two years of the pandemic. If in 2020, as already discussed, the choice to focus on certain themes or formats might have been dictated by the impossibility of producing content that presupposed socialisation passages; in 2021 it is probably the need to return to collectively that determines the abundance of articles dedicated to school, lessons, classmates and teachers.

The last aspect analysed relates to the *Main Characters* and the *Signature* of the news. The choice of analysing these two variables is primarily dictated by the wish to investigate the work of the children at the level of the production 'routines'.

In this case, however, the survey did not provide any significant differences between one year and another, but only, especially in the case of the *Characters*, confirmation of trends already recorded. In all three editions of *La Gazzetta Olimpica*, the main protagonists of the students' articles are the students themselves. The *Students* category, which includes all the stories in which the subject or the main point of view is that of the students, accounts for more than half of the total in all the editions of the Gazzetta. This figure confirms the importance of the

proximity dimension in the children's approach to the creation of articles and magazines. In this case, this dimension is even closer, entering the intimate and private sphere of the pupils' lives. Personal experiences that have affected them become, through elementary processes of newsmaking, newsworthy facts. An approach, certainly didactic and educational but also journalistic, that does not even suffer the influence of the pandemic.

The choice of assigning articles to single pupils or groups also does not change significantly due to distance learning mode, except in a proactive manner. In the 2019 and 2020 editions, the articles are more or less equally distributed between individual and collective signatures, with a slight propensity for the collective ones. In 2021 this difference becomes more pronounced. There are 20 articles signed collectively, and only 5 individual ones. This choice was probably dictated by the children's desire to get back together, and to make the teachers' work on the magazine more collaborative and collective, after a year spent away from each other.

As already demonstrated through the content analysis, the result of these schoolworks is a product that has clearly visible some characteristics and strategies typical of journalism, skills that young journalists have developed during the preparatory lessons and the work in the 'field'.

Among these certainly is the ability to interpret and report facts and realities selected on the basis of interest and packaged with journalistic style and language.

The final study, which looks at the 2020 and 2021 editions, aims to explore how the pupils saw and represented the world during the lockdown months. All references to COVID-19 19 in the articles produced by the children were traced using specific keywords. The pandemic was not considered as an issue in itself but as an attribute of other themes. This is because, on the one hand, none of the children's texts explicitly focus on the virus and its health and social implications; on the other hand, because it is even more interesting to find out which aspects related to the pandemic are most crucial for young students.

For further investigation, the presence of the theme was classified into three variables according to the role within the text: *Protagonist Title*; *Protagonist*; *Secondary*. Finally, the references to the Formats, Themes and Protagonist Actors, which emerged in the previous analysis, were traced. This will make it possible not only to measure the relevance of the virus topic in the Gazette as a whole, but also to highlight its connections.

From a purely quantitative point of view, the COVID-19 topic is undoubtedly relevant, but it does not exceed half of the total number of articles. There are 10 articles out of 26 in 2020 and 8 out of 25 in 2021 that refer directly or indirectly to the coronavirus. Looking at these references in more detail on the basis of the above categories, it can be seen that in the 2020 edition the COVID-19 topic is more central to the narrative. In 10 articles examined, it is the *Protagonist* in three and mentioned in the *Title*

in the other three. In 2021, on the other hand, while maintaining a certain relevance, it becomes a complementary topic, being *Secondary* 6 times out of 8.

FIG. 4. *Main Characters in news, comparison between 2019, 2020, 2021 Gazzetta Olimpica*

FIG. 5. *News Signature comparison between 2019, 2020, 2021 Gazzetta Olimpica*
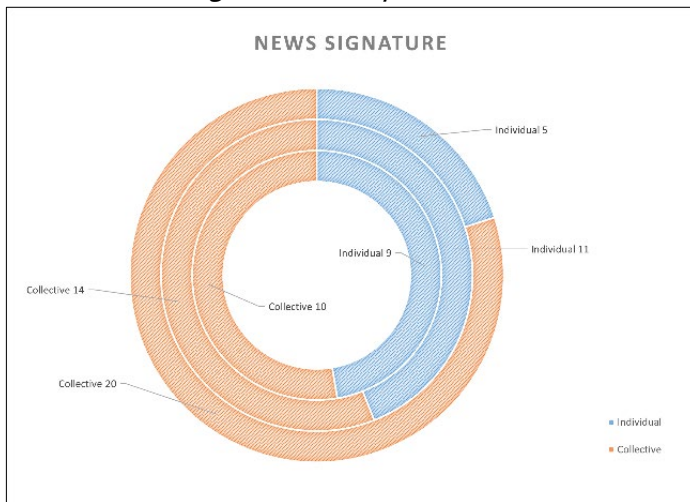
FIG. 6. *Role of COVID-19 issue in the news between 2020 and 2021 Gazzetta Olimpica*
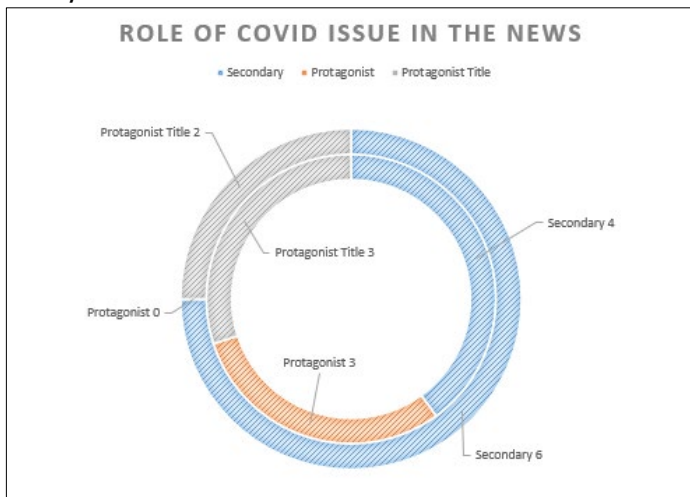
In the 2020 edition, the COVID-19 issue and its implications receive ample space both on the front page and in a 7-page special (with 6 dedicated articles). The 2021 issue opens with an in-depth look at the return to normality after a year of pandemic. The reference to COVID-19, however, is often incidental, operating more as a context than a protagonist.

The data confirms this tendency also looking at the connections with the other themes. In 2020 the pandemic, is essentially represented through the format of the *Tale and Short Story*. Central are the *Personal Experiences* of the young students, themes and protagonists that cover more than 2/3 of the total articles (Fig. 7). This shows how students related the hardships of the pandemic mainly to the private and personal dimension, less to the school or neighbourhood. Many of the articles are dedicated to how the students spent the lockdown period, to their feelings after the first return to normality. Three articles are devoted to the school, focusing on forced closure and the new element of remote learning. There is also an interesting article devoted to video games and hobbies that kept the children company during the lockdown.

In the 2021 edition the pandemic loses its centrality and becomes a complementary element. in this edition it is in the *Interviews* that references to the COVID-19 are most frequently found. In the interviews the pandemic was often used as a 'ritual' or contextual question, very rarely playing an important role. The space of *Personal Experiences* decreases in favour of *School, School Experiences* and *Villaggio and Villaggini*. A sign that after a year of pandemic the social dimension, obviously of proximity, the school and the neighbourhood, returns principal. The secondary role of the COVID-19 topic could be explained by the children's adaptation to what in 2020 was an emergency and in 2021 has become customary. The pupils, like the rest of the citizens, have become accustomed to the consequences of the pandemic and do not consider it a destabilising or extraordinary element but rather an everyday one.

FIG. 8. *News Formats of COVID-19 news in 2020 Gazzetta Olimpica*
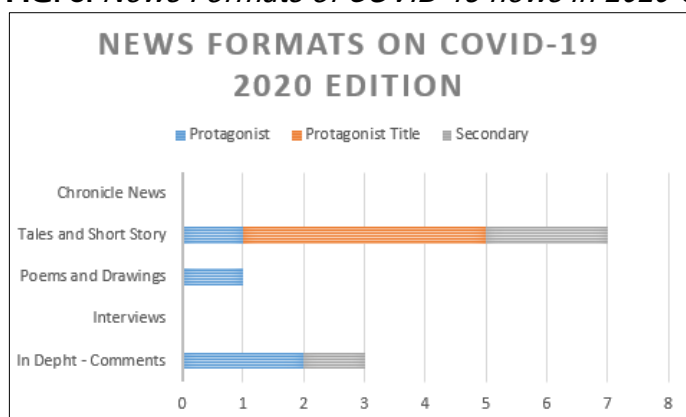
FIG. 9. *Main themes of COVID-19 news in 2020 Gazzetta Olimpica*
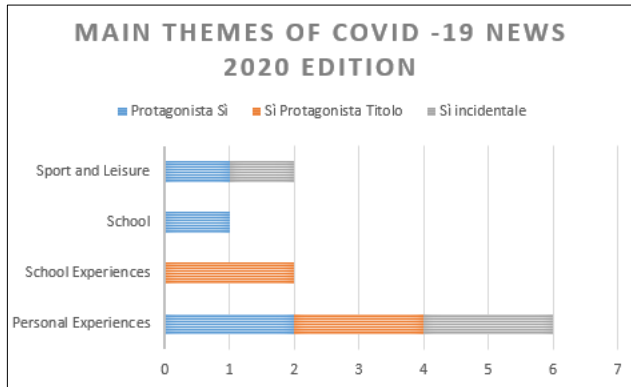
FIG. 10. *News Formats of COVID-19 news in 2021 Gazzetta Olimpica*
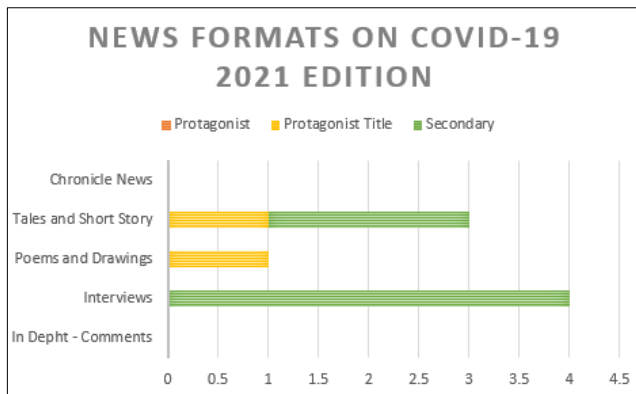
FIG. 11. *Main Themes of COVID-19 news in 2021 Gazzetta Olimpica*
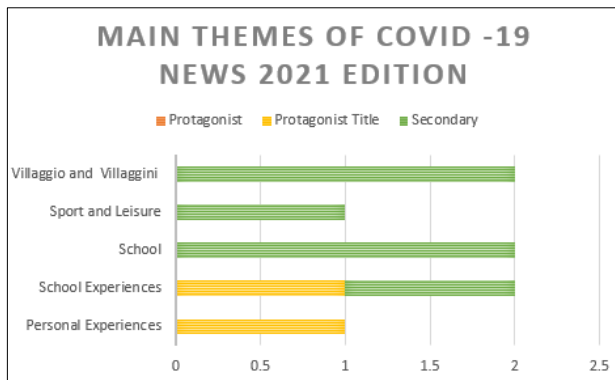
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"You Can Get It, If You Really Want!": Using (Formative) Assessment to Improve Student Learning Experiential Learning Activities in Primary School

COVID-19 and the School Assessment Reform? The Missed Effects on Formative Assessment Practice

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ABSTRACT: *The present paper focuses on formative assessment, and more specifically on the ways in which teacher education and educational policy have responded, over the last year, to the challenges of COVID-19. The unprecedented times of the COVID-19 pandemic have had a relevant impact on schooling. In this framework, educational assessment has been one of the most evident criticalities. For the sake of the truth, assessment, for teachers, has always represented a challenging task in their professional practice (especially formative assessment practice). However, the difficulties related to the implementation of remote instructional activities have made more evident how teachers, despite the broad literature on educational assessment, struggle to navigate old and new instructional circumstances in their assessment practice. While researchers and teacher educators demonstrate a strong commitment helping teachers face new difficulties resulting from the global pandemic (first of all, the practical issues of transferring teaching into classroom online), the illiteracy in the assessment domain, and more specifically in the formative assessment practice, remains a crucial and, sometimes, unresolved problem. During the school year 2019-2020 a new reform has been launched in Italy: formative assessment practices has been introduced as mandatory for primary school. However, despite the emphasis on formative assessment, teachers in Italy tend to avoid using this kind of assessment and continue to perceive it as improper and ineffective. Reporting a qualitative study on teachers' conceptions of formative assessment, this paper aims to shed light on the teacher education policy reform and on its implementation.*

KEYWORDS: *Formative Assessment, Teacher Education, Italian School System.*

Introduction

Over the last two decades, global educational research has had to deal with evidence-informed changes in the domain of assessment: several adjustments have been suggested to generate both accurate accountability data and robust evidence of individual mastery that support effective instructional decision-making and better learning within national and local school systems (Darling-Hammond, 2017; Farrell, Marsh, 2016; Stiggins, 2017). Some studies (Boardman, Woodroof, 2004; Brookhart, 2011) have already demonstrated that teachers are reluctant to change their assessment practices (and conceptions), especially when

new practices are framed within the rationale of institutional reforms (Brown, 2004; Remesal, 2007), or in new scenarios such as those that emerged during the COVID-19 pandemic.

Furthermore, it has become clear that it is difficult to implement policy reforms in the field of education without considering the contextual and cultural influence of assessment practices. Teachers' practices reflect social and cultural priorities. Thus, the following questions arise:

- How do teachers change assessment conceptions and practices in response to institutional reforms?
- Are teachers' conceptions and practices aligned with each other?
- Are pre- and in-service educational paths effective in fostering teacher assessment literacy?

The emphasis on the conceptions that teachers have of assessment can help define assessment literacy and design responsive teacher education programmes in the domain of assessment (Will *et al.*, 2019). Research has showed how assessment practice is interwoven with conceptions that teachers have of the purposes, strategies, and procedures: teachers' identity as professionals, conceptions of assessment, dispositions and perceptions of their role as assessors affect assessment practice.

The strong drive in the field of education to analyse the roles of teacher conceptions in assessment serves as a basis for an investigation of assessment practice. In this perspective, conceptions represent a crucial and powerful access to the modalities (how) and purposes (why) of professionals. Thus, conceptions work as a framework through which teachers see, analyse, and act within a specific learning context. While formative assessment has been widely recognised as a relevant component of educational practice, in Italy the teachers' negative attitudes (and practices) towards formative assessment still persist.

Entering this debate, the present paper reports part of more broad research study focused on teacher assessment literacy. More specifically, this paper intends to shed light on teachers' conceptions of formative assessment, as well as on their formative assessment practice on the backdrop of the latest educational policy innovation (i.e., *Linee guida* and *OM 172*, 4 December 2020).

The literature on formative assessment and teachers' conceptions lays out the foundation for the framework adopted in this study.

1. Conceptual framework

Following the theoretical perspective of assessment for learning (Black, Wiliam, 1998; McMillan, 2017), classroom assessment practices have shifted from the measure of learning achieved by students towards a view of assessment as a social practice (Bennett, 2011; Elwood, Klenowski, 2002) aimed at providing robust information to document and foster student learning (Andrade, Heritage, 2018; Filsecker, Kerres, 2012; Kingston, Nash, 2011).

Formative assessment approaches have expanded over the last decade in response to a traditional view of assessment (i.e. measurement tradition), in which assessment is solely about producing accurate estimations of students' learning to monitor and report on progress (Wiliam, 2011). However, despite the increased interest, teachers have minimally adopted these approaches to assessment.

Evidence from the ground shows that core assessment practices remain problematic at theoretical and methodological levels: using educational research to change assessment and feedback practice or promoting student learning and academic self-regulation trough assessment are seldom perceived by teachers as difficult actions (Baird *et al.,* 2014; Hopster-den Ottera *et al.,* 2017).

Recent studies on the use of assessment data for decision-making and teaching practice have showed that although teachers recognise the importance of using evidence and data gathered through assessment, sometimes, they are not able to manage several sources of information including data from large-scale and classroom assessments (Farrell, Marsh, 2016; Mandinach, Gummer, 2016; Schildkamp *et al.,* 2014). Different studies have pointed that teachers encounter difficulties in understanding the value of assessment and tend to have a lack of knowledge and abilities in the field of educational assessment (DeLuca, 2012; Leighton *et al.,* 2010).

Teachers do «not necessarily ensure assessment literacy or the knowledge needed to engage in using assessment data to inform instruction» (Will *et al.,* 2019, 1).

In this vein, several studies have highlighted how the focus on assessment conceptions is relevant to understand the dynamics involved in implementing educational policies. Investigations of assessment conceptions shed light on the practices of teachers and students in educational settings (e.g. the promotion of formative assessment or the uses and misuses related to the culture of testing). More specifically, current educational research seeks to understand whether teachers' conceptions of assessment can be analysed in the life context of the classroom. This represents a challenging research object because conceptions of assessment are complex, hierarchical, multidimensional, and interrelated (Brown, 2004; 2009). Research on teachers' conceptions of assessment has showed what teachers think of the purposes and functions of assessment and how they impact assessment in practice. While some studies have focused on teachers' conceptions of the aim, role, and effects of assessment (Barnes *et al.,* 2017; Brown, Remesal, 2017), others have linked teachers' conceptions to the development of appropriate assessment products and have accordingly differentiated between pre-service and experienced teachers. «The educational context in which teachers were themselves students shapes the way they think about teaching practice» (Daniels *et al.,* 2014, 140).

Educational research on teachers' conceptions of assessment is relevant in understanding teachers' practice. It plays a strategic role in

helping teachers effectively deal with accountability requirements and develop assessment literacy.

In the difficult context related to the pandemic (especially the practical problems related to the transfer of assessment practice into remote learning context), in Italy, the Minister of Education launched a new reform for the primary school. This reform provides the use of formative assessment not only in the daily practice, but also, in a more formal perspective, for report and communicate assessment results to parents (i.e., Assessment Document). This Assessment Document, like a four levels rubric, reports the learning goals achieved by students using a descriptive judgment. This judgment is expressed using four different criteria (student learning autonomy; student learning progression; student transfer of knowledge; student self-regulation of learning).

Despite the emphasis on formative assessment, teachers, in Italy, tend to avoid using this kind of assessment and continue to perceive it as improper and ineffective.

The common negative opinion related to the introduction of formative assessment led teachers to complain about different aspects such as:
- No sufficient time to understand the rationale of the reform;
- No sufficient time to shift from old assessment practices (i.e., summative assessment) to the new ones;
- No effective training paths on formative assessment;
- 'Hybrid' assessment practices. Most of teachers have mixed the structure of the Assessment Document with their assessment 'routine', and used marks and grades instead of the rubric levels;
- Difficulties to justify to parents a different kind of assessment (and therefore a different feedback on student learning achievements);
- Teachers' bad perceptions of formative assessment (as well as of the reform) during the pandemic.
- Reporting a qualitative study on teachers' conceptions of formative assessment, this paper intends to offer new insights for teacher education policy reform and on teacher education practice.

Aligned with the research perspective of Brown (2004; 2009) teachers' assessment conceptions are considered as influencing their decisions and professional activities. The main idea is that different conceptions lead to different assessment practices. Thus, teachers who conceive of assessment as important for improving teaching and learning will use formative assessment.

2. The study

2.1. Research method and participants
This study is qualitative in nature. To assure a number of methodological possibilities within the interpretative paradigm, a phenomenological methodology was used to explore teachers' conceptions of formative

assessment. This methodology has been helpful in understanding individual and contextual points of view (Bazeley, 2013).

All participants were informed of the purposes of the study, and were assured anonymity and confidentiality of their responses. They voluntarily consented to participate in the study.

Semi-structured interviews were used.

A total of 70 teachers from 4 schools in the (*Details removed for identification*) district were selected to participate in this study

The interview comprised 16 questions that were divided into 3 sections as follows:

1. Respondents' biographical sketch: This section gathered data on socio-demographic variables such as gender, age, years of experience, and teacher education paths;
2. Assessment conceptions: Questions in this section sought information on the teachers' conceptions of assessment and formative assessment; and
3. Formative assessment practice: This section aimed to analyse if, and how, teachers use formative assessment.

Multiple rounds of inductive and deductive analysis were performed (Muhr, 2004). The coding process comprised two steps: the analysis of each interview to identify emerging issues, and a comparison of interviews to identify common themes. Independently-coded data were cross-checked by the author and two research assistants who discussed the findings to ensure consistency in the analysis. The overall Kappa value (.71) and the K value of the coding categories (among 61 and 80) both indicated a good level of agreement and an adequate level of inter-coder reliability.

2.2. Main results

Almost all respondents were female. Teachers had relevant experience in terms of years of service. Half of them had never attended training or professional development courses that specifically focused on educational assessment. These characteristics roughly represent Italian teachers across the board (OECD, 2018). There were no differences between subject matters specialisation (Tab. 1).

TAB. 1. *Participants' demographic description*

Variable	N	Variable	N	Variable	N
Age		*Teaching experience in years*		*Education*	
20-30	4	1-5	2	Teaching Diploma	34
31-40	13	6-10	15	Bachelor's Degree	20
41-50	17	11-20	34	Master's Degree	16
51-60	34	20+	19	Doctor's Degree	0
61+	2	*Content area*			
		Italian	25		
Gender		Mathematics	24		
Male	3	English	10		
Female	67	Arts	11		

Data revealed no meaningful differences between senior and junior teachers. This raises some concerns in terms of assessment literacy and teacher education, whose effects are scant (DeLuca, 2012).

Generally, interviewed teachers tend to consider professional development paths as misaligned from real-life problems: 'Training paths are useful in theory'.

The intensity and the incoherence of professional development paths on formative assessment are also addressed as negative aspects. More specifically, teachers admitted that the courses attended on formative assessment were not responsive to their professional needs (e.g., the change from grades to descriptive judgments; or how to deal with parents' misunderstandings about the descriptive feedback).

An interesting point is that teachers perceive their assessment as an unsound practice: they are aware that classroom assessment and formative assessment practices are not as they should be. At the same time, however, the idea of formative assessment, the rationale and the aims of this kind of assessment are not clear.

Interviewed teachers, in fact, consider formative assessment a 'good thing'; however, when they were prompted to reflect on their perceptions, beliefs, and practices, they demonstrated very simplistic conceptions of assessment (they don't explain the axiom that formative assessment can support student learning).

The confusion becomes clear when teachers were asked to explain how formative assessment is implemented in action:

- Formative and summative assessment instruments overlap;
- The fundamental strategies to ensure formative assessment (e.g., explaining and sharing learning goals and success criteria) are not mentioned;
- Feedback practice is a-systematic;
- Self- and peer-assessment are not considered and used; self- and/or peer-assessment represent scattered and extemporary practices.

When invited to reflect on the formative assessment and on its consequences and effects, interviewed teachers were not able to problematize the assessment culture and its uses and effects.

Teachers admitted their formative assessment illiteracy with respect to practical aspects (e.g., how to share learning goals and success criteria). For these teachers, it is like that assessment *per se* is the problem, and not the unintended or undesirable effects that challenge the assumptions, conceptions, and practices of assessment in their local culture.

Teachers involved in this study tended to view their formative assessment practice with skepticism. They did not see clear connections between formative assessment, student learning, instructional design, and classroom context.

Teachers in this study, finally, appear to be in the 'darkness' about the purposes and the strategies of formative assessment.

The consistent gap in the assessment literacy, the lack of information, and the persistence of misunderstanding of the nature and aims of formative assessment are problematic for the Italian school system.

A study with a small sample like this cannot be generalised to the entire Italian system. This intrinsic limitation must be mentioned. However, this study presents an opportunity to share and compare challenges and highlights the need to address these challenges in order to review teacher education and professional development in the assessment domain.

Conclusions

Teachers' conceptions of assessment have been addressed both from qualitative (Simon *et al.,* 2008) and quantitative perspectives with cross-cultural comparisons (Brown 2004, 2009).

The qualitative approach in this study allowed a fine-grained analysis that uncovered the details of teachers' conceptions of large-scale assessments. This approach also led participants to speak their minds and bring their voices to the foreground. However, it has to be noted that the lack of difference among the teachers' conceptions (e.g. variables of age, subject matter, and years of experience) contrasts with the complexity of the findings of previous research in this field (Barnes *et al.,* 2017; Brown, Remesal, 2017; Klinger, Rogers, 2011).

It is likely that the prolonged lack of teacher professional standards in Italy has undermined the quality of teacher education.

Professional standards are generally fundamental in stating what the teachers have to accomplish (Furlong, 2015; Torrance, Forde, 2017) and offer a clear baseline of the expectations for both teachers and other stakeholders (e.g., students, administrators, policymakers).

Professional standards represent a frame of reference for teacher education and professional development (Deneen, Brown, 2016; Desimone, 2009; Farley-Rippl, Buttram, 2015).

At the same time, the impact of teacher education and professional development in Italy is not really significant for a change in the assessment conceptions and accordingly, for assessment practice: the increased importance accorded to assessment, as highlighted in other similar studies, is not linked to effective professional development paths that can encourage a systemic review of teacher assessment practices and conceptions (DeLuca, Volante, 2016; Klinger, Rogers, 2011; Will *et al.,* 2019). Teachers struggle to transfer what they have learnt in professional development paths in the real context of the classroom. Thus, they prefer to assess student learning modelling strategies and models used by expert colleagues. The risk, here, is to replicate ineffective assessment practices that are not aligned with other assessment practices within a national school system.

The lack of professional standards in Italy prevents the coherent alignment of educational policy and teacher education. This aspect, given

the new emphasis on assessment and data-driven decision-making, represents a criticality for the entire school system. These professional and cultural gaps are clearly evident in the teachers' conceptions, in their performances, and in their resistances to educational innovation and institutional reform

Improving teacher assessment literacy is one of the most pressing and contested contemporary educational policy and practice issues.

There is compelling evidence that assessment represents a key leverage point for improving student outcomes (Andrade, Heritage, 2018; De Simone, 2020; Klinger, Rogers, 2011; Smith, 2016).

The efforts made by policymakers, teacher educators, and administrators clearly show that the intersection of teacher education and assessment practice matters in fostering the quality of instruction in national school systems.

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Reinventing Decision-Making in Schools: Self-Evaluation & Data Literacy

Parents as Decision-makers. Financial-organizational Involvement of Families in the School of Autonomy

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ABSTRACT: *The involvement of families in school governance is a crucial aspect for the Italian school, especially after the reform of school autonomy. This research investigates the role of representatives of families in the governance of Italian schools in managing the donations of families for the educational offer and organizing school time.*

KEYWORDS: *School governance, Families in school, School time, Voluntary economic contribution, Equity*

Introduction

Twenty years after the introduction of school autonomy in Italy, there are many challenges still open, including with regard to the role of different subjectivities within the school. This work focuses on parental participation in the school's organizational choices.

The research presented here began in September 2020 to reflect on the involvement of families, in particular of their representatives, in the governance of Italian schools: the focus is on two issues that are scarcely investigated by the current pedagogical literature: (1) management of the families' donations for the expansion of the educational offer and (2) their involvement in the organization of school time. These two issues are interconnected and have a strong impact on pupils' school experience quality.

The hourly organization seems to respond to the needs of parents more than the needs of pupils in the different stages of growth, at the same time the starting economic conditions of individual cohorts of pupils seem to strongly influence the quality of their educational experience.

Our research hypothesis is that the financial and organizational involvement of families may represent a non-traditional factor of school inequality, like other factors such as the precariousness of the teaching staff, the dynamics of segregation and the mobility of teachers and students (Ferrer-Esteban, 2011). The family dimension, studied classically in the social sciences as an element of inequality in educational paths

(Bourdieu, 1966), takes on new implications in the current context: where the State fails to guarantee the school welfare state, families are involved to the extent of their economic possibilities (Ferrera, 1996).

An equitable and quality school certainly also includes a clear analysis of the repercussions that the involvement of families in governance can have on the school experience of pupils from the most diverse socio-economic backgrounds.

1. Main normative requirements

The most significant normative references for our research are the Legislative Decree 297 of 1994, which organizes the collegial bodies of the school and regulates the presence of families in governance, the Decree of the President of the Republic 89 of 2009, which regulates the temporal organization of the first cycle of education, and MIUR Notes 312 of 2012 and 593 of 2013, which indicate the ways in which it is possible to request an economic contribution from parents.

Legislative Decree 297 of 1994 specifies that parents, through their representatives, are present in all the collegial bodies of the school and that the president of the school council, which is a body with a deliberative function, is a parent.

The Decree of the President of the Republic 89 of 2009 specifies the temporal organization of the first cycle of education, especially significant for primary school. At the express request of parents during registration, full-time (40 hours) or normal-time (27 hours) classes can be activated.

The two MIUR Notes, then, specify that the economic contributions of parents are donations that schools can use to expand the educational offer provided by the PTOF. For parents, this is a voluntary contribution, whose use the school must report.

This normative reflection evokes the twenty-year reform of school autonomy (Costitutional Law 3 of 2001), which promotes autonomous choices in the individual institutions at the organizational, managerial, financial and, in part, educational level. It is a change that has yet to be made in many ways, but which brings out new dynamics relating to the role of the different actors at school.

2. A look at national and international literature

In the school of autonomy, school leaders move between pedagogical vision and organizational leadership (Bianchi, 2020; Marzano, 2019), qualifying themselves as educational managers who need a sensitivity in identifying and responding to the needs of a specific context, translating pedagogical and organizational aspects into school education policies.

As already specified, parents are present in all collegial bodies. Formal collegiality therefore appears very strong (Domenici, Moretti, 2011), but

in some ways it does not translate into lines of action common to the institution, since the autonomy of teachers still seems to be stronger than school autonomy (Mincu, Romiti, forthcoming; Mincu, 2020; Franzoni, 2012; Mincu, 2013). In any case, it seems that school autonomy has strengthened the subjectivity of parents in school governance (Mulè *et al.,* 2020; Benadusi *et al.,* 2020).

Moving on to the main themes of the research, there is a loss of the original reasons that supported the presence of different temporalities, with reference to primary school but not only (Triani, 2017; Bovini *et al.,* 2017). The organization of school time, observed by us as a pedagogical and not merely organizational variable (Cerini, 2004; De Bartolomeis, 1980), now depends on the needs of adult society, not on a well-defined educational project, also due to continuous cuts. The question at stake is how to satisfy the educational needs of pupils in the different stages of growth, truly placing them at the center of the educational scene (Granata, Ferrero, 2020).

The request for an economic contribution to families appears as a compensation mechanism in the face of the lack of educational and social policies of the State, not only in Italy but also in the international sphere (Ferrera, 1996; Rowe, Perry, 2020). In Italy, families appear to be among the largest public school financiers: without their intervention, the educational offer would not be fully realized (Granello, 2010; Marotta, 2010) and schools are increasingly seeking non-ministerial funds to guarantee the essential services of school life (Melandri, 2009; Salerno, 2011).

The involvement of families in school governance can effectively represent a non-traditional factor of school inequality (Ferrer-Esteban, 2011): in other words, the school does not overcome initial inequalities and, sometimes, would create new ones.

3. The research

The research integrates quantitative and qualitative investigation, seen not as radical alternatives but as polarity within which to act to understand the phenomena analyzed (Coggi, Ricchiardi, 2005). Therefore, the research design qualifies as an explanatory-sequential, according to the classification of mixed research methods by Creswell and Plano Clark (2008).

The relationship between family and school as regards organizational and managerial choices represents a delicate issue. Therefore, the choice of subjects to be involved represented a crucial step: there are school insiders (school principals, assistant teachers) and outsiders (representatives of parents, who live the school experience through their children).

The research took place in Piedmont and Lombardy, by virtue of the greater economic involvement of families in these two regions. During

the quantitative phase, 308 school leaders completed an online questionnaire; the heterogeneity of the sample made it possible to identify substantial differences between the first and second cycle of education with respect to the dimensions investigated. During the qualitative survey, in-depth interviews were carried out with 7 managers or vicars of comprehensive schools (pupils aged three to fourteen) and 6 representatives of the parents.

The analysis of the interviews was conducted considering the category to which the interviewees belong, so as to bring out similarities and differences within groups and between groups.

4. Results

4.1. Quantitative analysis

The analysis of the questionnaires shows that few schools have changed the economic involvement of families after the pandemic, making choices in the name of gratuitousness, equity, concreteness or quality.

From the point of view of temporal organization, the school principals responded to the questionnaire focusing above all on the changes made necessary by the pandemic emergency. The temporal reorganization was conceived as transitory, representing a response to bureaucratic needs, often not accompanied by pedagogical reflection.

The rationale of the choices was also useful in triggering controversy with the families, who, thanks to the representatives, brought their requests to the school council. The school has not changed itself, not even in a situation that offers ample room for innovation.

4.2. Financial involvement of families: results of qualitative analysis

From the words of school principals and parents emerges the strong need on the part of schools to resort to donations from families to cope with the lack of ministerial funds and the precarious economic situation of almost all schools («What if we did not have the financial contribution of the parents? The school would go into decay!», a Lombard school principal said).

In some schools it happens that parents have an important role in the management of these funds, which sometimes are not even paid to the school but to associations which, although recognized by the school, are composed only of parents. In general, parental representatives, especially in the school council, have a strong role in defining school policies with the management.

The economic demand for families has repercussions on the educational possibilities of students: there is a strong risk of reproducing the starting inequalities and creating new ones. From the interviews conducted, a differentiation in the quality of the training offer emerges according to the economic resources of families, an aspect that appears as a non-traditional factor of school inequality (Ferrer-Esteban, 2011). In

this case, the Matthew effect seems to be activated: in the face of a starting disadvantage, inequalities in the school curriculum intensify and the school ceases to be an engine of equity.

The lack of regulatory clarity leads to difficulties in raising funds from parents, strategies to ensure fairness, discontent, confrontations and tensions. On the other hand, the anonymity of families who do not pay the voluntary economic contribution is not always guaranteed («There is low gossip. Teachers, representatives and other parents know who is not paying», a Piedmontese representative said), whether due to economic constraints or a political and principled choice.

Some schools have established solidarity funds to guarantee all pupils the same educational opportunities. These funds are financed with the contributions of the families themselves. Somehow a form of redistribution of resources is implemented, which however is not in many cases made known to families.

The financial contribution has become useless for the (still) few expert fundraising schools, which open up to the territory and involve families for their skills, not for their money. The managers who use this method of financing have identified resources present on the territory, at national and European level, whose the representatives of the parents also speak in the interviews conducted.

4.3. School time: results of qualitative analysis

Reflections on the temporal organization refer above all to primary school; in subsequent grades of school the difference between temporality is not so marked and the choice of school complex is mostly logistical.

From the interviews conducted, it emerges that the 40-hour school time in primary school is expression of parents' need to support family organization, also due to the raising of the retirement age which means that one can no longer count on grandparents.

School managers and representatives interviewed are aware that the time of 40 hours is not suited to the needs of children compared to the time of 27 hours, not surprisingly called 'normal-time'.

There is difficulty by schools in guaranteeing the quality of 40-hours school time, due to a lack of resources: the need to guarantee this school time for all leads to choices not supported by pedagogical reasons, such as a reduction of co-presences, fragmentation of teachers' interventions in the classrooms.

While some parents believe that 40-hours school time can ensure a quality school experience for all pupils, not all families and leaders are convinced («Full time? It looks like a factory worker schedule!», a Lombard school principal said).

40-hours school time at primary school basically represents a sort of compensatory action of the school oriented towards the welfare state (Ferrera, 1996), given the lack of real support for families in terms of social policies.

Conclusion

Our research shows a marked role of parents in school governance, expressed through the economic contribution and the orientation of time choices.

The majority of institutions makes use of parental donations to support the life of the school: the Italian welfare state is strongly supported by the family institution and also at the school level a compensation mechanism is activated for lack of educational and social policies (Ferrera, 1996).

Equity appears to be at risk: in the face of a starting socio-economic inequality, schools of series A and series B can be created based on the different economic capacity of parents. This difference sometimes concerns the individual classes within the institutions, configuring a form of internal school inequality. The close link that emerges between the possibility of families to contribute and the quality of the educational offer is configured, in fact, as a non-traditional factor of school inequality (Ferrer-Esteban, 2011).

The need to make up for the growing shortage of ministerial funds is part of an at times ambiguous regulatory framework, which risks making a contribution that should be completely free mandatory in the eyes of parents. This data confirms a dynamic that has already emerged in international contexts (Rowe, Perry, 2020).

It is crucial that the importance of reducing economic inequalities between schools in different contexts is understood at a central level, by granting more resources to schools located in disadvantaged contexts.

As emerged from our research, the role of school principals in the school of autonomy is essential. Some schools have developed alternative fundraising strategies as a way of overcoming initial inequalities and granting a precise role to anyone who is part of the school community: the raising of funds takes place through local, national and European tenders, while families field their own skills. This strategy could be further explored by pedagogical research, in terms of supporting schools in the renewal of financial management with a view to greater equity and quality of school life for all pupils, as our Constitution urges to do.

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The Use of Data to Support Strategic Planning and School Improvement and Innovation

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ABSTRACT: *The theme of school improvement and innovation is central in national and international debate and regards crucial issues for the evolution of educational systems: the ability to respond to social change, to meet the challenges of innovation, to stay abreast in a globalized and interconnected context. In this scenario, schools must characterize themselves as learning organizations, i.e., as organizations that learn and are capable of profound changes in roles and functions, making effective use of data to plan and realize more fitting and sustainable processes of improvement and innovation. In relation to this theme INDIRE conducted the research 'Evaluation of innovation processes' involving 52 secondary school participating in 'Avanguardie Educative' aimed at investigating the experiences of schools that have activated innovation processes, to understand how these processes change the organization of the school and what impact they have on the main actors of the school. In this paper, we present a part of the result of this research, in particular related with the dimension of 'Propensity for change' that regards the use of data for improvement and strategic planning of the educational organization. This dimension aims at examining if and how the monitoring of improvement actions is carried out by the school; who manages the process and who are the actors involved; how the school identifies improvement goals and based on which data and information and, finally, the overall level of strategic planning of the school. The results underline how the use of data in school is yet a complex and difficult process: data do not represent knowledge in itself, it requires a sharing process for processing in the school context, only through sharing, exchange, and collaboration can be developed relevant knowledge and readiness for change. School staff must be trained to analyse and use data effectively, to improve and transform existing practices.*

KEYWORDS: *Strategic planning, School as learning organization, School improvement, Professional learning community, Propensity for change*

Introduction

The school is a complex and dynamic system that is configured both as a learning environment and as a professional community. According to the model of the School as Learning Organization – SLO (Kools, Stoll, 2016), a 'learning school' is an organization capable of changing and

adapting to new solicitations and circumstances as all its members, individually but also as a group, are able to learn and act for the realization of a shared vision of school. The model contemplates seven 'action-oriented' dimensions, which provide not only a description of the skills that the educational institution can develop, but also a common direction and operational objectives to achieve. The dimensions identified concern: the ability to develop and share a school vision focused on the learning of each student, to combine equity and excellence; creating and supporting ongoing training opportunities and promoting learning and collaboration opportunities for the entire school staff; support and stimulate a culture of research and innovation; create an integrated internal system of knowledge management and synergies with the territory and with the entire educational system; identify and support a shared leadership model for learning.

In literature about SLO, there are numerous references to the importance of the effective use of data and information by the schools. The use of data and evidence by teachers, head teachers and school staff has become a central tenet for continuous improvement processes, to support policy and decision-making strategies (Schildkamp *et al.,* 2013), an adequate development of professional capital (Hargreaves, Fullan, 2012) and an improvement in learning outcomes, also in terms of decreasing variance between classes, schools and territories (Wayman *et al.,* 2009; OECD, 2013). A school that learns must be able to use multiple sources of information to self-evaluate but also to deal with external references; trials, successes and failures must be monitored, analyzed and shared within the entire school community (Senge, 2012).

Learning how to use evidence does not follow automatically from the mere availability of quality data: it depends on serious engagement and it also depends on effective data use, which longitudinal information systems can facilitate. For this to happen, a SLO ensures its staff have the capacity to analyse and use data for improvement and, where necessary, transformations of existing practice. Nevertheless, the literature on school as a learning organization highlights how in many schools the ability to collect, analyze and systematically exchange knowledge and learning (despite the possibilities guaranteed by the use of ICT) is still underdeveloped. Even with the availability of a range of data sources, schools rarely use these data and reports to take action and develop strategies to improve student learning. School staff need a specific training to be able to utilise multiple sources of data and information (e.g. from students, parents, teacher survey, peer review, team teaching) for feedback and to inform teaching and the allocation of resources (OECD, 2013; Schildkamp *et al.,* 2014).

1. The research 'Evaluation of innovation processes'

Within this theoretical framework, INDIRE conducted the research 'Evaluation of innovation processes' involving 52 secondary school participating in the project 'Educational Avant-garde' (Avanguardie Educative – AE) aimed at investigating the experiences of schools that have activated innovation processes for several years, to understand how these processes change the organization of the school and what impact they have on the main actors of the school.

The project AE is the result of a joint initiative by INDIRE and a group of 22 founding schools, started in 2014. This led to the identification and definition of some innovative and sustainable teaching schemes that allowed the definition of several 'Ideas for Innovation'. Each idea is a piece of a puzzle that aims to revolutionise the education system and space and time of learning and teaching.

The number of schools taking part in the Movement is constantly growing. They are institutes that identify themselves with the Movement's inspiring principles and work daily on rethinking the lecture-based school model to give a concrete answer to the constantly changing challenges of the knowledge society.

Educational Avant-garde is open to all schools that welcome the opportunities offered by scholastic autonomy and can identify innovation, characterise it, and develop it so that it becomes viable, sustainable and transferable to other suitable situations. It is addressed to schools that consider technology an effective tool to overcome the inertia and space-time limitations of 'traditional' educational activities.

Within the three basic dimensions of teaching, Physical Space, Time and Didactics, the Movement has developed 15 innovative ideas:
- Subject-related Classroom Lab
- Flexible Spaces
- Grade Retention with Course Credits
- Block Scheduling
- TEAL (Technology Enabled Active Learning)
- Integration of Digital Educational Content/Textbooks
- Spaced Learning
- ICT Lab
- Flipped Classroom
- Scenario-based Teaching
- Debating
- Inside/Outside School learning
- Differentiated Learning
- Beyond the school subjects
- Independent Learning and Tutoring
- Inside/outside – service learning

At the moment more than one thousand and two hundred schools that have joined the movement[1].

The research 'Evaluation of innovation processes', conducted during the school year 2019/20, was aimed at evaluating the impact of innovation in schools that have joined the Movement for at least two years. The research respond to the need to read innovation in AE schools through the perception of the main actors: teachers, students, school managers and parents, and to understand what changes have occurred in terms of motivation for learning, well-being and active participation of students, collaboration and motivation of teachers, shared leadership processes and school governance.

1.1. Research phases and tools
The research involved five main phases:
1. A general survey phase on the universe of schools participating in the AE Movement at the end of the school year 2018/19 (about 800 at that time), which produced a classification of schools and the definition of the sample;
2. The creation of a theoretical reference framework with dimension, subdimensions and indicators for the evaluation of innovation and the elaboration of the questionnaires.
3. A pre-test phase, which involved four upper secondary schools that did not have the characteristics of the schools chosen for the sample (see par. 1.1), as they lacked the criterion of two-year experimentation. This phase was used for the development of the designed tools and for the calibration of the various items contained in the questionnaires.
4. The survey phase with a quantitative approach, carried out between September and December 2019, which provided for: the administration of a questionnaire and two psychometric tests to the students; the administration of a questionnaire and an online psychometric test to teachers; a semi-structured interview with the Headmaster; an online questionnaire to the presidents of the school councils representing the parents component.
5. The fifth phase envisaged by the research concerns a qualitative study that was not carried out in this school year due to the health emergency. This phase involves the clustering of schools with respect to a greater or lesser propensity for innovation, in order to substantiate this concept more substantially.

1.2. The sample
The research, that is configured as an explanatory type (Creswell, Piano, 2017), was carried out on a sample of 52 secondary schools of different types: 20 Lyceum, 10 technical institutes, 3 professional institutes, 19

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[1] For more information see also the Avanguardie Educative website at https://www.indire.it/en/progetto/avanguardie-educative.

Higher Education Institutes with different specialization, selected from the entire universe of schools participating in the AE Movement.

From a first survey on the database of the AE Movement, the population was of 243 schools: of these, 89 (51%) were actually in possession of the requisites to participate in the research – they had experienced at least two ' ideas' for at least two years; 28 of these did not join the research, reducing the actual sample to 61 schools. Of these, only 52 responded to all the tools (questionnaires, tests, interviews).

For each school of the sample were involved:
- the School Principal
- at least 2 to 3 teachers who have been experimenting the AE ideas for at least two years
- students from at least 2 to 3 experimental classes (of different years, mainly III, IV and V)
- the President of the School Council, representing the parental component.

1.3. The 'Innovation framework'

In order to evaluate the impact of the actions implemented by the schools of the AE Movement, the research group elaborate a specific theoretical framework that provide four dimensions which refers to the AE Manifesto but also to a broader panorama considering national and international literature on innovation.

These dimensions in fact refer to four major themes: the first concerns the propensity to change as the desire to implement, even starting from context data, a responsible change in line with the vision and mission of the school. The second concerns the transformation of teaching-learning practices, which represent the heart of the change, with the modification of the teaching structure, of the evaluation methods, of the use of learning resources, and the organization of the classroom. The third is that of leadership as a lever of change, in which innovations find space and are encouraged and expanded through the promotion of collaboration between teachers for the sharing of knowledge, and the active participation in school decision making. Finally, the opening to the territory as a channel that allows combining the aspects of participation with those of integration of formal, informal and non-formal learning, also through unusual forms of teaching.

It is assumed that in AE schools, with several years of experience in experimenting with innovative paths, these four dimensions are significantly correlated and mutually reinforced, creating a virtuous circle of continuous improvement and innovation.
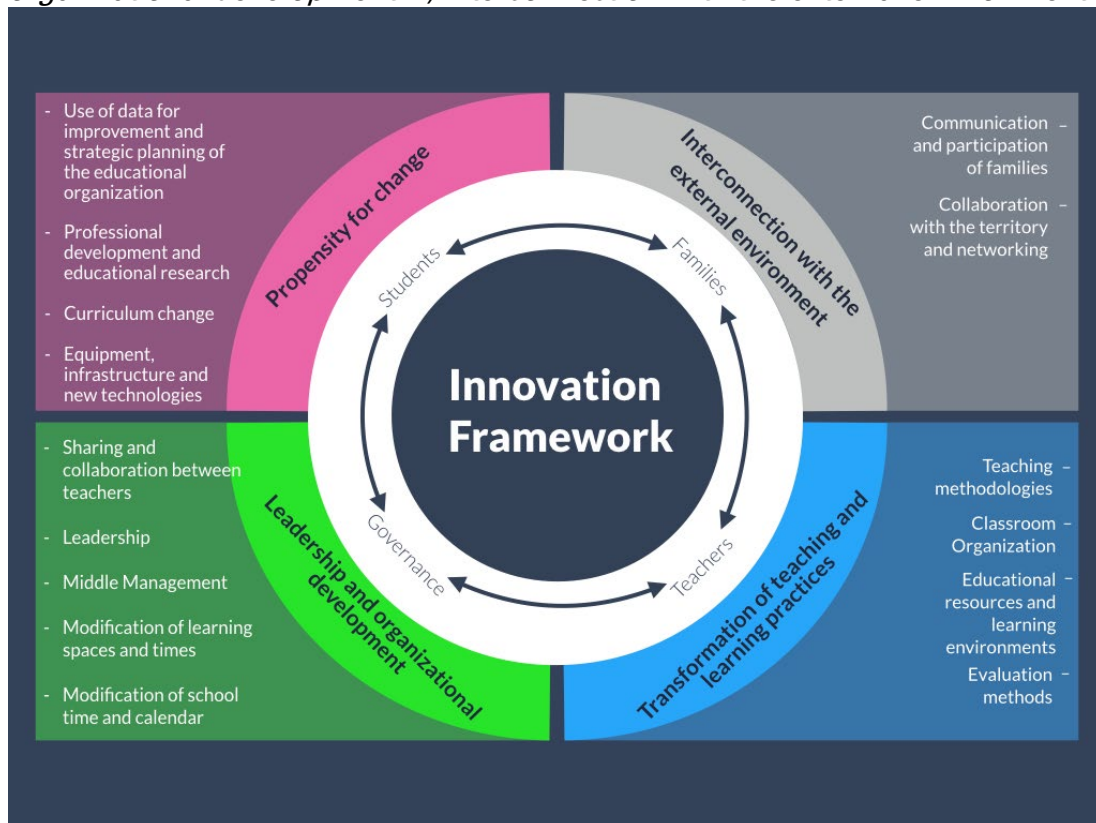
In this paper we will illustrate the result of teacher and head teacher questionnaires regarding the first dimension 'Propensity for change' and in particular the two sub dimensions: A. 1) Use of data for improvement and strategic planning of the educational organization (PTOF, RAV, PdM, Bilancio sociale) and A. 2) Professional development and educational research (teacher training, participation in European projects, international mobility, visiting, educational research, sharing of best practices).

The first indicator *Use of data for improvement and strategic planning of the educational organization* (PTOF, RAV, PdM, social report) aims to investigate if and how the monitoring of improvement actions implemented by the school is carried out; who manages the process and who are the actors involved; how the school identifies improvement goals and from what information (e.g. data provided by international surveys, INVALSI data, internal evaluations within the school), the overall level of strategic planning of the school. The second indicator *Professional development and educational research* provide information about the use of data to plan and implement specific professional development courses and to participate in educational research and experiments.

2. The results

In the context of the research described in the previous paragraph, it has been realized two questionnaire addressed to teachers and head teachers.

Regarding the use of data for improvement and strategic planning in the educational organization, three different questions were asked in the teachers and head teacher questionnaire.

From the analysis of the first question 'From what are improvement objectives identified?' (Fig. 2), with regard to the aspects of support to identify the objectives for improvement emerges that four main elements are used by most of the institutions: the process areas indicated as weak on the RAV (95% of teachers; 98% of head teachers), the results of the INVALSI tests (95,1% of teachers; 92% of head teachers), the results of monitoring carried out within the school (77,8% of teachers; 76% of head teachers).

The focus on inclusion is also important. Objectives are developed based on documentation of special educational needs (86,1% of teachers; 82% of head teachers).

Less relevant on the other hand Results of international surveys (e.g. PISA, TIMSS, etc.) Results of surveys conducted by local authorities other institutions or agencies. In this answer there is consensus between teacher and head teacher.

FIG. 2. *The improvement objectives*
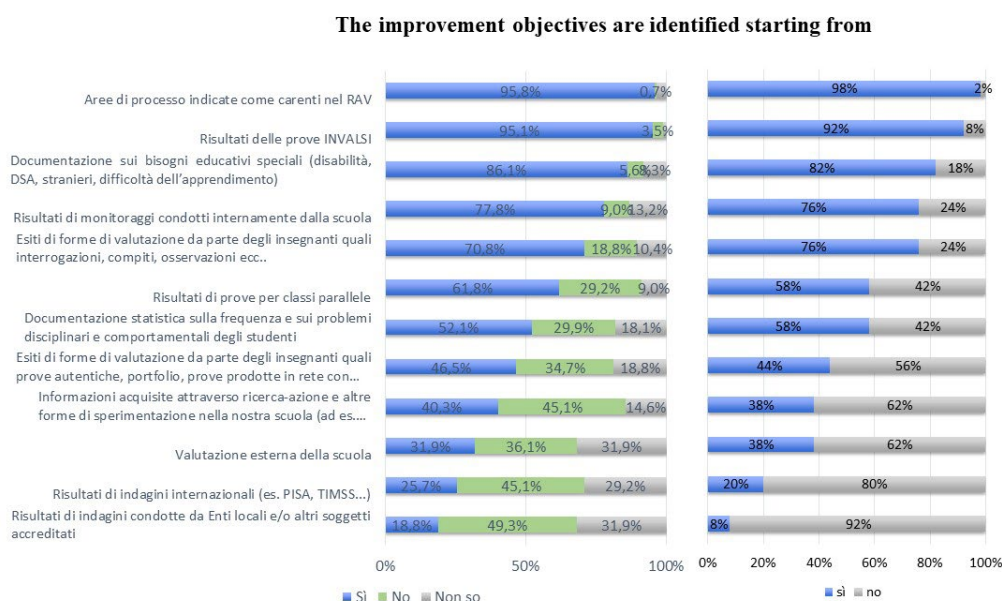
The second question was differentiated in the two questionnaires.

Teachers were asked about what data are used to plan education and instructional strategies in the classroom 'the following data used to plan interventions and instructional strategies in your classroom?'

From Fig. 3, it is clear that the main sources of data used in planning interventions and educational strategies are the results of exams (96%) and entrance tests (89%). Results from INVALSI tests are also important (79%).

The use of data and indications coming from international or national surveys is less commonly used.

FIG. **3**. *Propensity for change*
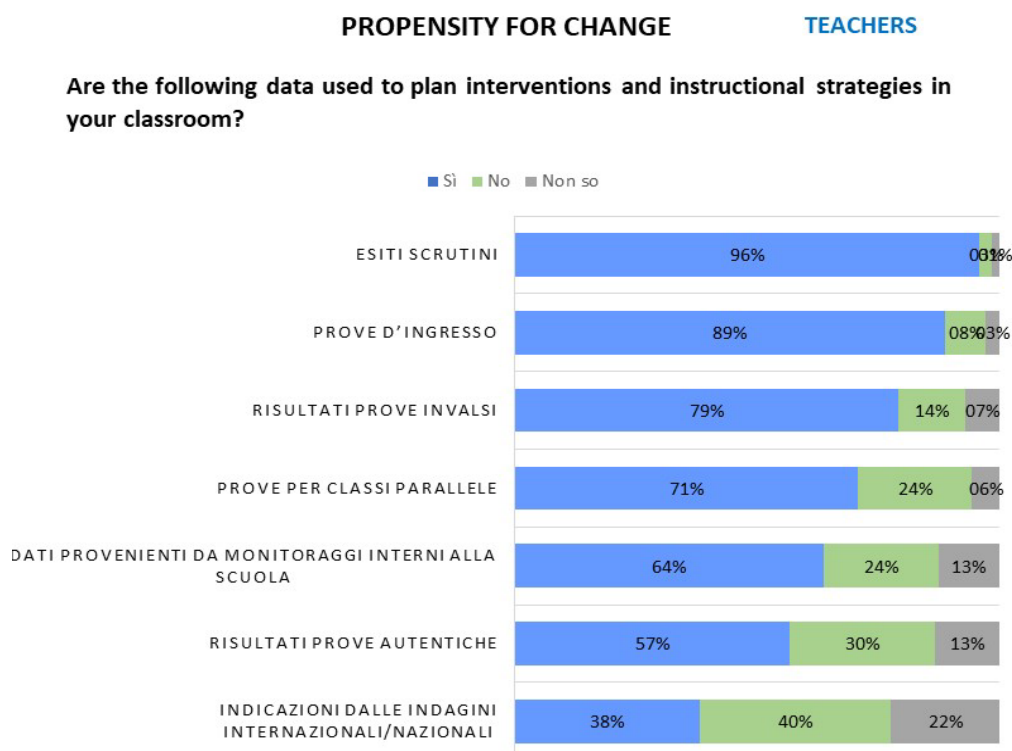
Head teacher were asked if any monitoring of the strategic planning and improvement actions carried out by the school is realized. It is interesting to underline that most head teacher (72%) answered that is realized by involving a group of teachers with specific assignments (instrumental figures, NIV).

No one said that is realized by the head teacher, and only 2% responded that no monitoring is carried out. This is very interesting as it means that schools are increasingly aware of the importance of monitoring activities.

Finally, teacher and head teachers were asked to indicate the depth of involvement of the school's faculty in decisions that relate to strategic planning *Using data and changing the curriculum.*

From the answers given, four types of involvement seem to be more frequent (Fig. 4):

Discussion together with teachers about the results (98% of head teachers; 90% of teachers); The school supports teachers professionally (100% of head teachers; 86% of teachers); and Teachers are involved in

the preparation of the Strategic planning (92% of head teachers; 78% of teachers); Activities with external experts aim at goals shared by the school community (90% of head teachers; 83% of teachers).

However, sharing with technical and administration staff and educators, with parents and more generally with all the school's stakeholders seems less popular.

FIG. 4. *Propensity for change: Using data and changing the curriculum*

Propensity for change: Using data and changing the curriculum

Percentage of those who indicate "Quite" or "A lot"

Strategic Planning

	Docente	Dirigente
Risultati discussi insieme a tutti gli stakeholders	37%	32%
Risultati discussi insieme ai genitori, ai soggetti esterni alla scuola e con il PCI	50%	56%
Risultati vengono discussi insieme ai docenti	90%	98%
Visione strategica condivisa con le famiglie	76%	76%
Visione strategica condivisa con gli ATA/educatori	53%	84%
Visione strategica condivisa tra i docenti	78%	92%
Attività svolte con gli esperti esterni mirano a raggiungere obiettivi comuni	83%	90%
I docenti sono coinvolti nell'elaborazione del PTOF	83%	96%
La scuola sostiene professionalmente i docenti	86%	100%

In addition, the sub dimension related to *Professional development and educational research* show that use of data is relevant.

Professional development and educational research (e.g., teacher training, participation in European projects, international mobility, training course, educational research) explores the professional development activities organized and financed by the school and the level of dissemination of these practices within the teaching staff; the procedures for planning and organizing the training plan, the ways in which it is developed and the actors involved in it.

In the question regarding the different ways of planning and organizing the teacher training plan, the results showed that the plan is almost always elaborated on the basis of the priorities and objectives expressed by the RAV and PDM (96% of head teachers; 90% of teachers), but it also includes training requests expressed by individual teachers, departments, colleges and school boards (99% of head teachers; 90% of teachers) and on the basis of a systematic reconnaissance of teachers' needs (100% of head teachers; 88% of teachers).

FIG. **5**. *Propensity to change: Professional Development*

Propensity to change: Professional Development

Percentage of those who indicate "Quite" or "A lot"

Training Plan

Il piano è affidato dal DS ad uno specifico team di docenti/funzioni strumentali — Docente 75%, Dirigente 72%

Il piano è declinato a partire dagli indirizzi dati dal DS — Docente 77%, Dirigente 90%

Il piano è elaborato sulla base delle priorità, traguardi, obiettivi espressi nel RAV e nel PDM — Docente 90%, Dirigente 96%

Il piano accoglie le istanze formative formulate dai dipartimenti disciplinari/ collegio/organi di istituto — Docente 90%, Dirigente 99%

Il piano accoglie le istanze formative formulate anche dai singoli docenti — Docente 86%, Dirigente 88%

Il piano viene elaborato sulla base analisi dei bisogni dei docenti — Docente 88%, Dirigente 100%

■ Docente ■ Dirigente

Conclusion

To transform schools into learning organizations, it is necessary to develop processes, strategies, and structures that enable them to learn and respond effectively in changing and dynamic environments (for example the important change of identity of a school for re-sizing or merging). Strategic school planning should be based on the reading and analysis of data and on shared paths of self-evaluation. Tools and resources, a knowledge management system, should be used to ensure dialogue and exchange of information, to collect and analyse data from multiple sources. The school should also regularly review the progress of the professional development of its staff and the impact of the improvement actions taken, redesigning them where necessary. Learning mechanisms must be geared toward revising existing knowledge.

Effective use of data by the school community has become central to school improvement processes that could be defined as 'data driven'.

Schools must have systems in place to ensure that they are 'information rich' or, more appropriately, 'informed'. Information is not knowledge; there needs to be a sharing process for processing in the school context. Only through sharing, exchange, conversations, and collaboration we can developed relevant knowledge and a propensity for change. Hence, to build a culture of schools as professional learning community, it is necessary to create the structures for ongoing dialogue and knowledge sharing among staff and others school actors, such as parents and other community members. For the same reason it is important to train teachers for an effective use of data so that they can actively and expertly participate in strategic planning and decision making.

Considering the research results, the authors would like to underline also the importance of data communication in a perspective of school

accountability, as one of the aspects that schools should plan as objective of specific improvement action.

Sharing as much information and data as possible allows the organisation to achieve very high levels of efficiency and effectiveness. Indirectly, being aware of the activities undertaken by the school increases the sense of belonging within the school community with a positive effect on the internal climate and organisational well-being. This reflection of internal communication occurs irrespective of the nature of the messages disseminated: an organisation that engages in dialogue with its stakeholders conveys a sense of attention and importance to its human capital. Implementing an effective communication system, internal and external, to return a photograph as complete as possible of the projects implemented and the results obtained, enable schools to increase the level of participation of all the stakeholder, disseminating and promoting those elements characterizing the vision and mission of the school.

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Assessment Literacy, Data Use, and Teacher Decision-making: A Feasible Balance?

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ABSTRACT: *Together with the spread of standardized assessment, there is a relevant growth of systems and technologies aimed to store, manage, analyse, and report data on student performance. Despite the broad recognition of advisability of using data on student learning for decision-making (at educational policy and practice levels) data use of instructional decision-making is not widely recognized. Few research studies, indeed, have tried to understand what schools and teachers do with data on student learning. Given these assumptions, the present papers reports on an attempt realized in the Italian school system to implement an interim assessment. A light professional development path has been designed and implemented with the aim to improve teacher assessment literacy, data use, and instructional decision-making. The teacher inquiry path, through the implementation of the interim assessment system, involved 37 primary school teachers. The present paper reports the main aspects of this path and critically reflects on how to support teacher assessment literacy and data use.*

KEYWORDS: *Teacher Assessment Literacy, Data Use, Professional Development, School Improvement.*

Introduction

Since the early '80s, the school accountability movement has considerably grown. As policy actors attempted to leverage improvement through accountability mechanisms, technological advances improved the speed and ease by which teachers could generate, analyse, and respond to various educational data. Due to technological advances, as well as to public expectations and policy pressures, teachers across countries are expected to use a variety of data to inform and improve classroom practice. Teachers have always looked at student assignments and test results to make judgments about how much their students have learned. Therefore, the use of data to inform instructional decisions is not new. The link of data use with accountability systems, instead, is new. However, data use is complex. Still, educational research indicates that teachers struggle with using data gathered through large-scale assessment programs, to inform their daily practice and use these data

to improve student learning (Chudowsky, Pellegrino, 2003; DeLuca, 2012; Goren, 2012; Henderson, Petrosino *et al.,* 2007).

Thus, currently two main questions have arisen:
- Is it possible to counteract large-scale assessments effects and make these external assessments, more relevant to teacher practice and student learning?
- How can large-scale assessments, remote from the classroom, serve instructional purposes?

On the backdrop of a broader research project aimed to investigate the constructs of teacher assessment and data literacy and their main implications for teacher professional development in Italy, where these topics are still a neglected area of research, the paper presents main results of a teacher inquiry study realized to support teachers in the implementation of an interim assessment.

The paper reports on a model of match between the national large-scale assessment program (INVALSI) and an interim assessment system implemented in a primary school in Italy.

The paper, more specifically:
- Offers a brief literature review on the studies focused on the concepts of teacher assessment and data literacy, decision-making and interim assessment;
- Reports on the research and training path that led to the implementation of an interim assessment system aligned with the national curriculum standards and with the teacher instructional design;
- Reflects on the main criticalities and implication for educational research, as well as for educational policy and teacher professional development in the Italian school system and beyond.

1. On the backdrop of teacher assessment and data literacy

The data use to inform teaching action is not new in the educational assessment field. Teachers have always used student tasks and test results to judge how, and what, their students have had understood or achieved (Popham, 2008). What is new is the link to accountability systems (Ackoff, 1989; Schildkamp, Portman, 2015). For the sake of the truth, if on the hand educational research in this field has demonstrated how large-scale assessment data may be useful for schools and for the design of improvement actions within the school organization, on the other hand, it is clear how teachers and students consider these data not really useful (Babo *et al.,* 2014; Rogosa, 2005; Supovitz, 2009). At the same, it has to be noted that some radical positions are calling for the ground-up redevelopment of assessment in education: R. Stiggins (2017), for example, in his latest book, *The Perfect Assessment System*, mapped out the adjustments, in practice and culture, necessary to generate both accurate accountability and the specific evidence of individual mastery

that supports sound instructional decision-making for teachers and better learning for students. Assessment literacy and data literacy, in this perspective, are widely recognized as pivotal elements. More specifically, assessment literacy is an interrelated set of knowledge, skills, and dispositions that a teacher can use to design and implement a coherent and appropriate approach to assessment within the classroom context and the school system. An assessment literate teacher understands and differentiates the aims of assessment, and articulates a sound, cyclical process of collection, interpretation, use of evidence, and communication of feedback. In this way, assessment information can be used to make inferences about student learning, inform decisions about curriculum, and adjust instruction (Pastore, Andrade, 2019). Assessment literacy has been recognized as important for teachers because it helps them use information about student learning to teach more effectively by responding to students' learning needs

Data literacy for teaching, instead, is the ability to transform information into actionable instructional knowledge and practices by collecting, analysing, and interpreting all types of data (assessment, school climate, behavioural, snapshot, longitudinal, moment-to-moment, etc.) to help determine instructional steps. It combines an understanding of data with standards, disciplinary knowledge and practices, curricular knowledge, pedagogical content knowledge, and an understanding of how children learn (Mandinach, Gummer, 2016).

The problem addressed in the present study was that some teachers in our educational system are not using data to inform and improve their instruction resulting in actionable change (Supovitz, 2009; Williams, Swanlund, Konstantoupoulos, van der Ploeg, and Meyers, 2004).

A gap exists between having and interpreting data and making meaning in such a way that there is an actionable change in instruction.

Teachers often do not respond to data or use data in simplistic ways that does not lead to an improvement in their instruction (Blanc *et al.,* 2010; Farley-Ripp, Buttram, 2015; Marsh *et al.,* 2015; Schildkamp *et al.,* 2013).

There is a lack of skills and understanding with teachers about what questions to ask about data, how to understand what the results show, and how to respond instructionally. Teachers, generally, cite issues such as data systems, principal leadership, time, and a lack of knowledge about how best to use data to improve instruction (Datnow *et al.,* 2003; Levin, Datnow, 2012).

Indeed, educational research often indicates that a lack of quality data-related professional learning opportunities contribute to this knowledge gap. Quality is an operative word here – teachers are often exposed to plenty of professional learning about data use, but often report that little of it meets their practical needs In this perspective, Marsh and colleagues (2015) talk about the 'data-practice divide' as a gap teachers have in interpreting the test results and in translating them into actions that support learning.

There are two possible explanations for this problem:
- First, the presentation regarding test results does not correspond with the assessment literacy skill level of teachers, resulting in difficulty interpreting the data and thereby making inappropriate use of the test results, with all its attendant consequences.
- Second, the content of the presented data does not fit the information needs of teachers, resulting in problems translating the data into actions that support learning.

Despite the broad recognition of its advisability, using data on student learning for decision-making is not widely recognized. Few studies, indeed, have tried to understand what schools and teachers do with data on student learning. Rarely, studies examine data-related professional learning directly.

Research on data use sometimes addresses professional learning as a crucial aspect to be considered. Specific to knowledge, this same research base often indicates that professional development represents the main problem. While the professional learning literature is robust when it comes to characteristics of effective professional learning in a broader sense, but supporting teachers in becoming better users of educational data is not a focus of this body of research.

Consequently, the aim of the present study is to examine the intersection of professional learning, teacher assessment literacy and educational data use.

2. The study

Given the assumption that continuing development and learning of teachers is one of the keys to improve school quality a professional development path on assessment and data literacy has been designed. The main idea is that working on knowledge and skills in the educational assessment domain it is possible to instigate a review of conceptions, attitudes, beliefs teachers have of assessment and consequently try to change their assessment practice. All these efforts, following the Desimone model of professional development (2009), would/should lead to an improvement in student learning (i.e., the INVALSI results will be used to check this aspect). More specifically, the professional development has been conceived stressing the practical dimension through the creation of an interim assessment system in one school in the school district.

Why an interim assessment? The interim assessment merges the formative aims of assessment with a large and standardized modality. So in this way it is possible to work at the same time on different plans (e.g. monitor student learning and define instructional strategies to improve student performance at school, class and single level; align the different assessment forms and practices within the national school evaluation framework; improve teacher assessment and data literacy). While the

formative assessment is an assessment designed to provide information to (daily) guide instruction (in the classroom), an interim assessment is a formative assessment, usually with two or more equivalent forms, administered to the same children at multiple times over a school year (improvements in scores resulting from taking the same version of a test multiple times). Thus, the interim assessments allow educators to monitor the progress of students against national standards and to predict performance on national large-scale assessments (Crane, 2008; Herman, 2006; Pereira, Tieken, 2012; Rogosa, 20025).

In the following are reported the rationale and process of test development for the interim assessment system.

2.1. The homemade test development process

In a standards-based perspective, assessment data, and more specifically, standardized assessment data, allow understand what students have learnt and to how they are forwarding in the achievement of the expected learning goals. However, the data have sense on the backdrop of concepts, theories, and interpretive frames of reference. In this perspective, the concept of alignment is relevant: it represents the link between the expected learning outcomes and the needed instructional processes and the practices (e.g., assessment). In order to avoid inefficiencies, as well as practical problems related to the misalignment between test and curriculum (e.g. confused information reported to teachers on what they should teach or on to what extent their instructional practice supports student learning) in the interim assessment system has been introduced a control process of tests realized by teachers (37 teachers involved). The interim assessment tests cover, like the INVALSI tests, the domains of Italian, Math, and English.

The interim assessment tests system has been linked, on the one hand, to the INVALSI tests and to the INVALSI frames of reference, and on the other hand to the school's curriculum. Moreover, these tests have been related to the different taxonomies of learning. More specifically the RTTI taxonomy of learning (Remember/Training/Transfer/Insight) and the Anderson's taxonomy, as well as the AERA, APA, NCME Standards (1999) have been used to support teachers in setting of learning goals, as well as in defining contents domains, and in posing questions.

The match of two different taxonomies represents the conceptual framework for the test design process: the RTTI taxonomy and the Anderson's model of knowledge. In a very general sense, RTTI is a method to improve teaching and learning and enhance student performance. This method has been selected because it can be placed within the research tradition of educational effectiveness and school improvement and therefore it can be useful to foster teacher assessment and data literacy. In order to guide teachers in the test design process also the Anderson's model has been proposed, because in this way teachers have been able to select the right task for the right kind of knowledge.

The Kendall index has been calculated to measure the teachers' agreement about the learning outcomes and learning goals in the RTTI matrix (Tab. 1).

TAB. 1. *Teachers' agreement on learning outcomes*

Subject matter domain learning outcomes	Kendall's W	Degrees of freedom
Italian	0,508	7
Math	0,423	9
English	0,834	3

Having a frame of reference is fundamental because is both a guide and a ballast especially for the assessment, that is always a comparative process. A frame of reference allows teachers to make reasoned, defensible choice about teaching practice.

So it is fundamental to interpret data a make sense of data. However there is another relevant concept to be considered in the process of test development: the alignment. In order to ensure reliability, reduce bias, and gather robust information on the levels of learning achieved by students the measurement of the grade of alignment of tests constructed by teachers has been performed.

In the context of education, alignment can be broadly defined as the degree to which the components of an education system – such as standards, curricula, assessments, and instruction – work together to achieve desired goals. Generally the educational policies inform what practitioners are expected to do. Alignment is not particularly new to the field of educational assessment The alignment between an assessment and a set of content standards in a subject area has long been recognized as evidence of the assessment's validity – the degree to which the interpretations of an assessment's results can be considered accurate. Following the AERA, APA, NCME Standards, when a test is used as an indicator of achievement in an instructional domain or with respect to specified curriculum standards, evidence of the extent to which the test samples the range of knowledge and elicits the processes reflected in the target domain should be provided. Therefore, both test and target domains should be described in sufficient detail so their relationship can be evaluated (AERA *et al.,* 1999). The index of alignment has been used to address the grade of alignment between the interim assessment test contents, the standards of learning (*Indicazioni nazionali* and INVALSI frames of reference), and the school curriculum.

The Porter procedure (2002; 2006) has been used to investigate the alignment. This procedure produces an index of alignment ranging from 0 to 1. The index can be used to investigate the degree of content alignment between any two statements of content, including content standards. It categorizes the standards and assessments according to content topics and cognitive demand (CCSSO, 2002).

To investigate the alignment of a test to a unit, a comparison of the matrix for the unit to the matrix of proportions for the test has been performed (Italian=.52; Math=.62; English=.63). Given the low level of alignment the tests have been reviewed by teachers until the maximum level of agreement has been achieved.

The professional development supported teachers to design and implement an interim assessment system in their school. Through this path, teachers have had the chance to learn how to:

1. Establish the main aims of an assessment test;
2. Examine the clarity and the specificity of aspects and traits measured by the tests;
3. Arrange a sufficient number of test items in order to take a valid and aware decision;
4. Examine a sample of items for having information on wider competency domain.

It is not possible to provide evidence about the impact of the interim assessment on the improvement of student learning: the implementation of the interim assessment is currently on the going and will continue through the next school year. Due to the COVID-19 pandemic, in fact, the administration of the interim assessment tests has been postponed.

Conclusion

Despite the current diffusion and the relevance of data in the school context, there are different problems and open questions related to the teacher data-driven decision-making and to the assessment data use. Educational policies, not only in Italy, sometimes don't support school actors with clear indications on how to use data for the improvement of the school neither on how to effectively use data.

Having data is not a guarantee for the improvement.

At the school level, data can differently impact decision-making. The sense-making theory, in this perspective, has clearly explained how actors tend to interpret, adapt, or transform what are the action directions. The decision-making is not focused only at the instructional level on the role teachers have in the data use within their classrooms. Thus, the most relevant aspect in this process is represented by the change of the school culture.

The professional development path implemented has trained teachers to pursue more clear and tailored learning goals and will support them in interpreting the interim assessment data. If a teacher doesn't know how a test has been designed and realized, if he/she doesn't know how scales (or sub-scales) have been used and how the standards have been defined, he /she will never be able to interpret a percentage on student proficiency; he/she will never really understand what data mean and imply for students and for teaching practice. If assessment results are disaggregated for learning goals it is possible to have information that

teachers will use more easily in their instructional practice. This is why the concept of alignment has been relevant in this professional development path.

Hence the implications related to the use of standardized tests are different. Data gathered through large-scale and interim assessment should be useful for teachers to:
- Define what are instructional priorities;
- Define further teaching actions for students who have difficulties in learning;
- Identify, more easily, student learning strengths and design instructional actions that support them in fostering their leaning;
- Review teaching methods and strategies;
- Establish, at the micro level of the classroom as well as at macro level of the school system, if and how adjust the instructional curriculum (in terms of local student learning goals and expected outcomes) to the information gathered about student learning (Stiggins, 2017).

There are relevant and different implications in terms of educational policies and practices because how teachers use data, and more specifically assessment data, to support decision-making and instruction, is not only a 'procedural' question. Moreover, designing, selecting, interpreting, and using data gathered from an interim assessment system constrain teachers to act in a more functional and responsive way to the local context needs but also to the national context requirements (Little, 2012; Slavit *et al.,* 2013).

Beyond the classroom limits, teachers have, therefore, the chance to really identify and manage the factors that impact on the alignment between the national evaluation school system and their daily teaching practice. In this perspective, there should be more chances to understand if teacher assessment practices and their data-driven decision-making are responsive to innovations and to educational, social, and institutional transformations (Levin, Datnow, 2012).

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Useful Self-Assessment. The Role of Self-Assessment Processes in School Improvement

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ABSTRACT: *When the School is called upon to reinvent itself, it is also necessary to reinvent the decision-making processes within the institution. How are improvement decisions made? Using what data? Self-assessment processes risk still having a marginal role in the improvement process and being experienced by many with a compliance value. The goal is to overcome the gap between the narrated school and the lived school and this goal is achievable if we focus on some critical issues that characterized the first three years of application of DPR 80/2013 (2015-2018). This contribution illustrates some critical issues that have emerged within an empirical research, conducted by the authoress, on RAVs and PDMs. We will question what the essential elements of methodological accompaniment are so that the teaching staff can effectively participate in the drafting of a quality PDM, which can be monitored over time, pursued and consistent with the intervention priorities identified with the Self-Assessment Report. An implicit will be addressed that too frequently remains latent: the improvement of an institution necessarily passes through change and (quality) change should necessarily pass-through learning. The contribution therefore presents some proposals relating to training plans and learning elements that should be favored in the evaluation team (NVI but not only) in order to be able to tackle the challenge of useful self-evaluation with mastery.*

KEYWORDS: *Self-assessment, Improvement plan, Training plan, Methodological competence,*

The Italian legislation and new teacher professionalism – An empirical research

A Decree by the President of the Republic (n. 80), March 28, 2013, established in Italy the regulations concerning the national system of evaluation in education and training. The Decree set up a process by steps that includes: a) self-evaluation of educational institutions, b) external evaluation, c) improvement measures, and d) social reporting of educational institutions, through the publication and disclosure of results. Improvement actions are also expected to be developed through collaboration with universities, research institutes, and professional and cultural associations (without creating new or greater charges for public finance).

Ministry Note 4173 (April 2016), in which terms for drafting the Self-Assessment Reports ('Rapporti di Autovalutazione', RAV) were reopened, helps us to understand that something in the first national process of school self-evaluation didn't work as expected. Note 4173 informs the director of each school about the opportunity to decide whether to retain or revise the previous analysis in the self-assessment report. To understand that such emphasis on self-assessment is not purely formal but focuses on a nucleus of essential skills for the success of the school self-evaluation process, we need further analysis.

Following this legislative framework, some research questions were raised in reference to teachers' skills put into action during the preparation of the self-evaluation report. How did teachers interpret the delivery of the school self-assessment report and what are the strengths and weaknesses of these reports? This paper presents some reflections in reference to these research questions.

The empirical evidence on which this paper is based is the published reports (RAV): the output produced (and published online) by each institution as a result of a self-rating process. This analysis aims at identifying weaknesses in compiling the reports and the gaps of teacher expertise expressed, and recalibrating the self-planned improvement plans and teacher training (that has now been made compulsory).

The hypothesis is that teachers who have prepared their self-evaluation reports didn't possess enough methodological structure and self-assessment skills to draw up a self-evaluation plan and that the current self-assessment sections present misconceptions and/or large recourse to educational practices not supported by empirical research in pedagogy. The RAV is composed of open fields and closed fields. The closed fields mainly present statistical indexes (percentage frequency distribution available from Italian Minister for each school); open fields present free answers from teachers to questions asked by the Ministry. I believe that the analysis of the filled open fields on RAVs can provide useful information on teachers' educational needs and can be the basis for designing a new model of teacher education, both at the college level and on-the-job.

Research strategy is based on a mixed method (or multimode exploratory sequential) design starting from an exploration phase (Creswell, Plano Clark, 2011) using analysis tools with a low degree of structure (predominantly paper-pencil and analysis of lexical frequency) and followed by a second step using structured data collection tools (checklist for the evaluation of RAVs).

The reference population is represented by the 8644 Italian state schools (database Ministry of Education 2011). The sampling is randomized by finite population with random draw (without re-introduction of this as a result of random selection). The sample, now, is stabilized at 65 schools but is expected to reach 150 institutions at the end of the research.

1. First results of RAV analysis: observed gaps in teacher education

The Ministry has provided schools with statistical information not only about their school, but also those of schools in similar situations (by geographic area or socioeconomic status). The school was tasked, via the RAV, to provide a self-assessment of their position and to write down their perceived strengths and weaknesses. The statistical data made available by the Italian Minister for each school should have been the basis for the first self-assessment evaluation. Each section of the RAV has an introductory section in addition to the evaluation ones. Evaluation is related to the presentation of the positioning of the given school (designed by an identification code) in a specific ranking, and to benchmarking of each school in relation to the ones situated in similar geographical or socio-economical context with reference to some evaluation criteria.

Each school institute was so enabled to make a quick comparison of its own data versus average values of their geographical region and geographical macro-area, referring to ESCS and test results. It is known that the evaluation goal is to go beyond the objective data and that the evaluation can be fruitless if not followed by an action aimed at shrinking the difference between the observed action and the preferred and achievable expected action. Analysis of the possible gap between 'observed' and 'expected' should drive the school to implement corrective actions focused to bridge the gap.

Self-evaluation process should imply that teachers and directors in a given school, analyzing the gap, have to reflect on what has been already done, what can be done and what cannot realistically be done to reach the expected target with explicit description (required) of the limits that the school cannot overcome on its own. This reflection in analyzed RAVs is basically missing, and certainly the 60 more days granted by the Italian Ministry to complete the compilation won't solve the problem.

Another problem is related to the degree of completeness with which the RAVs were compiled. Every section of the RAV contains a set of questions referring to a single factor (e.g.: student performance after completing their school years is being investigated based on the number of students who enrolled at the university, the number of university credits earned in a year, the number of students who have enrolled but have not really earned credits, etc.), but to many questions the teachers simply did not answer, instead providing just few words to fill the field.

Ongoing research (Robasto, 2017) has provided a later categorization of the open answers, analyzing 16.780 pages of RAVs. The open-questions have been classified according to this classification: 0 = no answer; 1 = only partially complete answer; 2 = complete answer.

The statistical classification analysis shows interesting data. The first set of questions with the highest non-response rate (88% absent answers) is questions referring to the design of educational projects customized on the basis of special educational needs, or the design of educational

projects dedicated to pupils from disadvantaged areas. This result can be linked to the historical difficulties of the Italian school system, even if public and free for everybody, in effectively addressing the issues of social inequality and special needs students.

The second type of questions with the highest non-response rate (about 80% absent answers) is questions pertaining to the impact of the high school on student performance exiting the school system, both continuing to study or entering workforce. This result may to a significant degree be attributable to the school system's historical background, especially to the tendency to conceive of school as a closed environment whose outcomes should be good in themselves and not judged according to external expectations. A third group of questions (with an absent answers rate of around 75%) relates to how teachers have 'treated' the difficulties and, conversely, the excellences expressed by students: e.g., how they design cognitive enhancement projects or to how they work when there are large disparities in outcomes. Finally, a fourth group of missing answers is for questions pertaining to student assessment (absent answers rate between 70-73%): if teachers design and communicate the assessment criteria, if they work according to evaluation rubrics, how and if they use the assessment results as educational tools and how the quality of teacher education is assessed.

It is no surprise that almost all questions on or relating to the evaluation have not been adequately answered: the concept of assessment is not clear and/or teachers are not educated to give rational explanations of their assessment and docimological choices (Bottani, Checchi, 2013). This is made still more evident by the 'naïve' compilation of many sections of the RAVs. Enacting a law that forces self-assessment on teachers who are still unable to effectively evaluate students may be a questionable strategy.

2. Teachers' educational needs and new teaching professionalism

The risk of having a mismatch between the available rich and articulated database and poor data analysis is high. The database that could allow each school to critically reflect and analyse its own situation can be 'read' superficially or incorrectly with interpretations being non-evidence-based or incoherent given the nature of the data. This incorrect reading could be based on a popular pedagogy (Bruner, 1996) that resurfaces again and again (for example the common reference to digital natives).

Moreover, open fields in the self-evaluation section have been often used to claim additional resources and to report failures caused by other actors (municipalities, families, missing funding). All these matters are unfortunately really big issues, but their reference in the self-evaluation section is not appropriate. The considerable work related to DPR 80/2013, through RAV, could bring evidence, first of all, of a teacher education gap in the school field: the difficulty to collect evidence and support its own

way of teching2 and the still greater difficulty in 'reading' (in the sense of assigning a meaning to) the evidence supplied by a database. Building tools for reading a collection of useful information, detecting the data, and understanding the data are basic skills for an evidence-based approach to education. This scenario seems to be still far from the educational procedures adopted in most school contexts, where experimentation could sometimes mean simply the implementation of 'trial and error' procedures without methodological expertise.

When the lack of an experimental approach is combined with unclear definition of evaluation criteria and lack of docimological competences, what has been made evident by the RAV analysis is inevitable: the teacher is asked by law to evaluate himself, but doesn't own enough methodological skills.

The weakness of the process required by DPR 80/2013 is furthermore visible in Section 5 of the RAV, entitled Highlight of priorities and Process objectives, where priorities and objectives with a poor coherence with the data collected in the previous sections of RAV are to be found very often. These objectives, moreover, are not achievable by the school in the short-medium term due to structural of financial limits, or the explicit objectives given as priorities are not at all consistent with strengths and weaknesses emerged in the RAV.

It is noteworthy that Section 5 should be the basis for the redaction of the School Improvement Plan on which each school is asked to focus efforts and resources for, at least, the next three years. The application of the Decree could void the role of the teacher from its necessary interpretative role (essential for a self-evaluation process) to assign him a format and only an executive role, without addressing his educational needs

We should not only limit ourselves to emphasizing school issues and gaps in teacher education. This is not fruitful on the long run, as the school could be tagged, another time, as guilty, missing or incompetent; right now that the process for evaluation and self-evaluation of the school has started and is ongoing. Detailed analysis of the available RAVs could be a strong tool to identify, based on evidence and not unclear hypotheses, what needs improvement, and to propose feasible solutions focused on problems and suited to specific teachers' educational needs

The need for teacher on-the-job education (Quaglino, 2004) is often defined as a gap to fill, a distance from one's own skills and the ones necessary to effectively perform their own professional duties, and is strictly related both to professional role and general competencies required by an organization, context or sector. Educational needs reflect the relationship between an individual and his or her school and are an 'indicator' of a 'system of needs' (Carozzi, Quaglino, 2004) that a single organization or a sector emphasizes as a gap to fill facing new and sudden change.

The most apparent teachers' educational needs emerging from the RAVs seems to be a need for a critical culture of evidence (Calvani, 2014,

9), whose realization implies at least three achievements by school staff: strong self-reflexive awareness of the teaching staff and the ability to critically assess their own assertions, the epistemological awareness of these assertions, and finally the adoption of a particular philosophy of evaluation, viewed with a dynamic and self-correcting approach, in order to operate towards improvement (Robasto, 2018; Freddano, 2018)

The project of a clear and micro-designed teacher education plan implies affording a matter of no small importance: educational needs should move from being taken for granted to being expressed and explicit, and it seems that in this process an important role is that of the school director. Last but not least, in analyzing RAVs and other school data we must finally take into account an unavoidable gap between the narrated school (and usually narrated by a few) and the real school (experienced by many), and always keep in mind that self-report documents will not always reflect the problems or difficulties perceived as such by people acting in everyday school life.

3. Useful self-assessment. The role of self-assessment processes in school improvement

The analysis conducted has highlighted, in particular, two types of criticism: a self-assessment process that is predominantly compliant and an improvement plan that is inconsistent with the self-assessment and/or impracticable process.

The first category of criticality includes all those self-assessment reports that are not at all guided by the guiding questions; this report are full of self-generated data tables but without reflection on the internal processes that could have originated such outcomes (an aspect particularly present in the RAV 2020 editions) or even mainly hetero evaluative or justifying reflections.

On the other hand, the second category of criticality includes those *Improvement Plans* which present long lists of activities in place of improvement objectives; long-term goals and not targets that can be monitored in the short term; expected results on pupils, inconsistent with the proposed activities; monitoring indicators not empirically detectable; indicators of satisfaction (at best) and not of change; data collection sample inconsistent with indicators and objectives.

Beyond the predominantly methodological issues, what actually seems to be missing in order for the self-assessment processes to become useful is a close link between the System self-assessment and personal self-assessment. It is a necessary link as the same System improvement can only take place on condition that numerous and repeated personal micro-changes actually take place.

At this time it seems that self-assessment, regardless of how it is carried out, necessarily involves an improvement of the system and

automatically also of the individuals who work within the school. But we know that this is not the case at all.

It is certainly a very delicate topic but the time has come to face it with sincerity: until it is revealed how everyone modifies their actions (didactic, evaluative, managerial, organizational) following a self-evaluation process, the discourse on self-evaluation and improvement scholastic will continue to be on a predominantly abstract level: without any effective relapse into schools.

Critically reflecting on these aspects also necessarily means asking questions about the links with training plans, not only in terms of recruiting new resources, but above all in terms of updating existing resources, their ongoing tutoring and coaching when the staff, having detected a criticality, actually wants to try their hand at new practices, new procedures, new strategies (Davoli *et al.,* 2019).

At present, a teacher who wants to change his actions runs the risk of feeling alone, of not having any safety net. He assumes a very high risk and therefore, in most cases, he prefers to move within his comfort zone even if that area is full of critical aspects.

At this moment personal change is not taken into account, fatigue, audacity are not taken into account but also resistance and how they could be overcome with actions to accompany the change.

Therefore, self-assessment can once again be a useful tool, a very powerful tool for achieving or improving certain quality standards. However, until the links with the human resource development plans, the expected improvement goals in terms of change and personal learning, improvement of the people who work in the processes, the actions to support the change are not highlighted in a more stringent way, it is difficult to imagine that this new round of self-evaluation can also have a real impact on improving the school system.

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How Schools Address the Covid Emergency: Voices from Principals, Teachers, and Students

The ECEC Professionals Within The COVID-19 Emergency: From Remote Contacts to Learning Communities

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ABSTRACT: *In Italy, the lockdown due to Covid-19 in February 2020 and the interruption of schools and services for children aged 0–6 have led early childhood educators and teachers to develop strategies for staying in contact with families remotely, in order to offer parents and children both support and educational experiences. As their work is usually strongly based on physical and emotional proximity, they had to deeply rethink their role, aims, methods, tools and activities. Ministerial guidelines for the 0–6 education system were developed only in May 2020, highlighting the specificity of needs and actions, but the first emergency had already been managed by the local schools and services. Within this framework, an online survey was carried out between June and July 2020 in order to examine how the professional figures involved reinterpreted their roles and redefined their tasks and objectives within the pandemic emergency. The study involved 1,086 educators and teachers of children aged 0–6 across Italy. Starting from the point of view of educators and teachers, the analysis focus on: 1) what kind of obstacles and strategies the educative professionals found 2) what kinds of competences, support, networks and resources were they or were they not been able to draw upon 3) what kind of effects the pandemic experience had on the educative contexts. Rethinking the educational settings was obviously a challenge for the education staff's ability to adapt their role to online education, and the analysis highlights the difficulties faced by educators and teachers but also the resources and networks they managed to find. The interviewees' uptake of a multiplicity of online training activities suggests they feel a need to fill gaps in their skills and also perhaps to use the unusual situation as an opportunity for professional development. The interviewees also actively sought support and ideas through online contact with peers and online professional communities and experts, as well as from family members, showing the importance of horizontal networks. The vertical relations appeared to be weaker: internal coordinators (as pedagogical coordinators, school heads or principals), but also the responsibles of other organisations involved (municipalities, third sector organisations, the Ministry) were not often considered as significant sources of help. The results also highlight how the education offering had not been the same across the country: not all the families were reached and the most vulnerable were likely lost. However, when communication worked, a sort of new emotional connection between professionals and families emerged. Physical distancing has demanded considerable effort, with different professional spinoffs, but also opened up to some innovations.*
KEYWORDS: *ECEC, COVID-19 lockdown, Learning communities, Remote education, Educative professionals*

1. Introduction

The focus of our research study is on Early Childhood Education and Care professionals within the COVID-19 first lockdown in Italy. Considering the governance of the pandemic emergency, we realized that limited attention was given to the children aged from birth to 6.

Ministerial guidelines followed behind the evolving lockdown, instructing school principals to ensure continuity in education and allocating resources to support staff training, the use of digital platforms and the supply of computer equipment. The main focus, however, was on primary and secondary school (DAD-Distance learning), while a marginal and late attention was dedicated to early childhood education. However, early childhood educators and teachers tried to develop strategies for staying in contact with families remotely, and they had to deeply rethink their role, aims, methods, tools and activities, as their work is usually strongly based on physical and emotional proximity.

To study these professionals' strategies, efforts, challenges, difficulties and resources activated within the pandemic emergency, we carried out an online survey between June and July 2020 reaching 1,086 educators and teachers working in early childhood care services and pre-schools. In this presentation, we would like to share some previous findings, focusing on how educators and teachers have managed this emergency balancing difficulties and creative solutions.

2. The ECEC system in Italy and the challenges of the pandemic management

The ECEC system in Italy has traditionally been structured into two segments (Mari, 2017; Sabatinelli, 2016). The 0–3 segment consists mainly of *crèches* (*nidi d'infanzia*), together with other supplementary services (*servizi integrativi*) developed from the Nineties. However, the attendance for this segment is low compared with the European average (34.2%) and there are wide disparities in the regional provision, with more services available in Northern and Central Italy. This segment was established as a social-educational support for children with working parents, and has traditionally been funded by the Ministry of Social Policies.

The 3–6 segment consists of kindergartens (*scuole d'infanzia*). Due to greater awareness of the educational value of these schools, this segment is under the Ministry of Education. The coverage rate is about 90% of the target population and the education staff consists mostly of graduate teachers.

The schools and services can be managed by the State or local institutions, externalised to the third sector, or realised by private accredited or independent organisations. Different public-private mixes characterise the Regions and local contexts. They are difficult to be coordinated and homogenised to guarantee equal education in the Country.

In this framework, a recent reform[1] has instituted an integrated system of education 'from birth to six years', under the responsibility of the Ministry of Education. In practice, the implementation of the reform is complex and gradual (Mari, 2017) and its aims are not yet achieved and fragmentation still prevails.

In our research, we assumed that this condition could have affected the management of the ECEC provision during the lockdown. The State has provided indications for services and schools to contact and provide activities dedicated to younger children and their families only in May 2020. The National Committee for the Integrated System has set out a document with educational guidelines for this age group: the 'Educational Guidelines for Distance Education Relationships' (LEADs). The document recognizes the specific needs of the children from birth to 6 and the importance of keeping educative relationships with their teachers and educators, but also of providing support for parents and countering the risks of education poverty and inequality. However, most schools and services had already taken action with highly diversified support tools. As this kind of remote education was new for teachers and educators, we supposed they had to face unknown challenges, tried to exploit any kind of resources and networks, but also that fragmentation and heterogeneity could emerge, due to the lack of coordination. Consistent with other studies on pandemic preparedness in child care centers (Shope et al. 2017; Samuelsson et al. 2020; SIRD, 2020), we supposed that educators and teachers could feel ill-prepared for the changes required of them when the pandemic struck, especially about the technological demands of creating videos, establishing media channels, and setting up virtual classrooms. In addition to that, other ethical struggles could arise from the teachers' desire to safeguard their own health while also living up to their professional responsibilities to children and families, as well as the fact that the virtual pre-school and kindergarten classrooms relied heavily of parents' having enough time to implement their on-line lessons (Samuelsson et al. 2020).

3. The research

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[1]   See Italian Law No. 107/2015 (NL 107/2015) and Legislative Decree 65/2017 (NLgsD 65/2017)

The empirical study was conducted through an online survey carried out between June and July 2020. The survey collected both quantitative and qualitative information. It involved 1,086 educators and teachers in schools and services for children aged from birth to 6 across Italy. The survey was circulated through professional and personal emailing lists and social media networks. The sample' self-selection limits the possibility of generalisation; however, the interviewees are well distributed nationwide and across types of schools and services, as shown in the following table.

TAB. 1. *Type of services/schools and geographical areas in which the respondents work (% of columns)*

Type of services/schools for children aged 0–6	North	Centre	*Mezzogiorno**	Total
Kindergartens (3–6 y.o.)	55.4	62.3	77.1	61.0
Crèches (0–3 y.o.)	39.3	29.3	15.1	32.5
Supplementary services (micro-crèches, family or home crèches)	3.0	4.2	5.9	3.8
Integrated services for 0–6 y.o. children	1.7	2.5	0.0	1.6
Other services (playgrounds, etc.)	0.6	1.7	2.0	1.1
Total	100.0	100.0	100.0	100.0
No. of valid answers	641	239	205	1085

Source: fieldwork data. * Note: The geographical area called *Mezzogiorno* includes Italy's southern regions and islands (as in ISTAT *et al.,* 2020)

The sample consists almost entirely of women. Educators account for 40% of the sample, teachers for 52% and special needs educators/teachers for around 5%[2]. A small percentage of coordinators (2%) and other education professionals (0.6%) make up the sample.

Kindergarten staff account for 61% of the sample, crèche staff for 32% and staff in 0–6 integrated services or supplementary services for 7%. In terms of geographic distribution, 59% of respondents work in Northern Italy, 22% in Central Italy, and 19% in Italy's southern regions and islands (*Mezzogiorno*). It should be noted that this distribution is quite in line with the national data, as ECEC schools and services are more diffused in Northern and Central Italy, especially for the 0–3 segment (ISTAT *et al.,* 2020).

Starting from the point of view of educators and teachers, the analysis focus on: 1) what kind of obstacles and strategies the educative professionals found; 2) what kinds of competences, support, networks and resources were they or were they not been able to draw upon; 3) what kind of effects the pandemic experience had on the educative contexts.

4. Findings: from remote contacts to learning communities

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[2] In Italy, children with disabilities attend the same schools and classes as their peers in both ECEC segments, facilitated by special needs teachers (*insegnanti di sostegno*) who help them with learning and integration.

4.1. The type of contacts and the strategies implemented

The immediate need during the lockdown was to re-establish and maintain an educational relationship between educators and teachers, children and parents. In order to achieve this aim, LEADs necessarily require the parents' mediation and engagement, to jointly identify the most adequate and effective strategies, tools and activities. The Ministerial document suggests participatory decision-making processes in dealing the emergency and stresses the importance of the teaching team in planning shared programmes and possible assistance from coordinators and principals in early education schools and services. The collected data, however, show that decision-making processes were more frequently solitary rather than collegial: moreover, they were more participatory in Northern Italy rather than in other areas. Teachers and educators were not always involved in decisions on how to deal with the emergency, but not infrequently they were the only figure to whom the decision was delegated, especially in the *Mezzogiorno*, in kindergartens and in the public sector, where they were practically left alone in that decision-making phase. Their decisional processes were more participatory in Northern Italy rather than in other areas.

FIG. 1. *Percentage of respondents who maintained constant contact with families by respondent characteristics (per 100 with the same characteristics)*
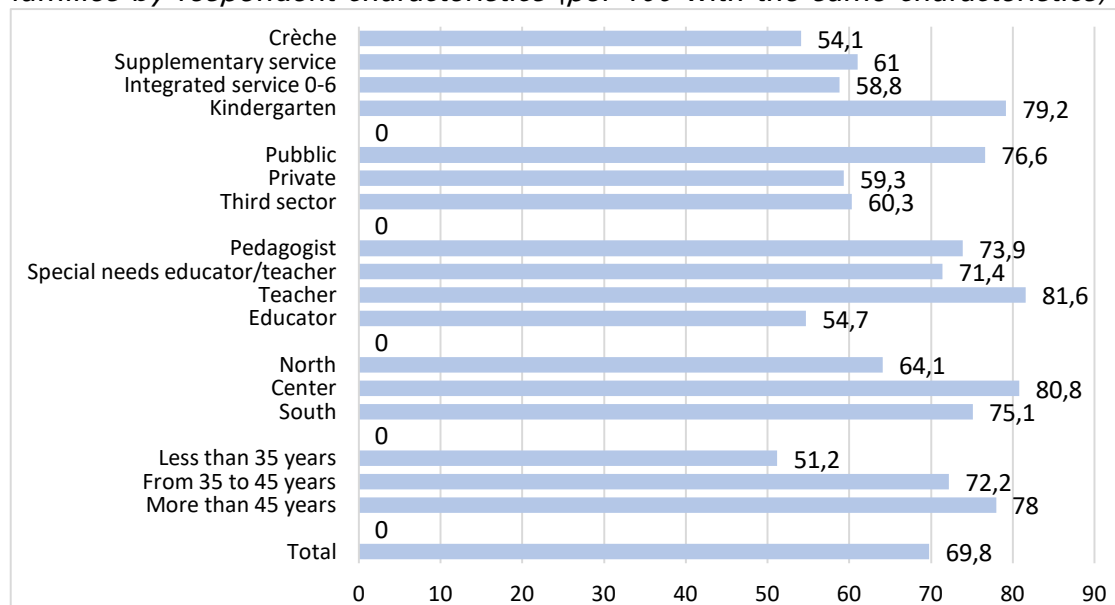
Parents were only marginally consulted and thus had little impact on planning. Parent participation in decision-making was far higher in kindergartens (15.5%) than in crèches and additional services (5%), and was also higher in the public sector (14%) compared to the Third sector (8%) and the private sector (6%). No variations in parent participation were found between geographical areas. Differences were found according to the type of contact maintained with families.

70% of the interviewees stayed constantly in contact with the families, while around 27% went through periods with variably intensive or

discontinuous contact. Only 2.5% stated that the school or service ceased all contact with the families during the lockdown. Kindergartens kept constantly in contact with families in 79% of cases, with supplementary and integrated 0–6 services following well behind at 60%, while in crèches contact with families was less constant (54% of cases). The public service stayed constantly in contact with families more frequently than did the private and Third sectors: 77% in the former case and around 60% in the latter two. Consistently with this, kindergarten teachers and older teachers, public sector staff and those with greater job stability report greater continuity. These data suggest that stability of services and job stability influenced the system's capacity to support families during the emergency compared to more flexible situations. The private and Third sectors may also have had to consider availability of resources and staff, and assess costs, benefits and business risk in the strategy they pursued. Whatever the case, the families using public services probably received a steadier and also a more intensive flow of education actions during this period.

Another important point required by that LEADs is familiarity with digital technologies because these relationships are constructed in a virtual environment; at the same time, also careful planning of the activities is suggested, to avoid them becoming improvised ways of entertaining the children. Looking at the strategies implemented, the activities offered usually involved a mix of different modes of communication, the predominant of which was asynchronous communication, although some synchronous activities were carried out especially in kindergartens.

TAB. 2. *Activities offered to the children during the lockdown period: percentage of respondents who answered 'Frequently'*

Activities offered to the children during the lockdown period	Phone calls or video calls with the children	Self-produced video and/or audio recordings	Video and/or audio materials selected online or created by others	Written instruction for realising activities	E-mail, letters and messages written to the children
Geographical area					
North	31,0	83,2	10,5	33,7	32,7
Centre	41,6	85,7	15,5	41,6	28,0
Mezzogiorno	40,0	76,9	27,1	51,5	41,8
Type of service/school					
Crèches	22,8	85,9	9,3	26,9	22,5
Supplementary services	30,0	62,5	7,5	28,2	20,0
Services 0-6	50,0*	100,0*	6,3*	33,3*	18,8*
Kindergartens	41,3	82,0	18,3	45,5	40,2
Other services	45,5*	66,7*	16,7*	45,5*	33,3*
Total	35,1	82,7	14,9	38,8	33,5

* The small number of cases involved in the sample (see TAB. 1) limits the statistical meaning of the elaboration

In around 83% of cases, contact with children was based on video and audio recordings made by the teachers/educators themselves. Phone and video calls were used 'frequently' to communicate with the children (over one third – 35%). Frequent use was also made of written text, a communication mode that requires more active engagement from the parents as 'mediators' of the message. Lastly, audio and video materials created by other parties were used less frequently.

More than half have implemented parent support actions, playing an active role by sending to them suggestions as well as through phone calls/video calls/chats with them, individually or in a group, even if more in public schools/services. In Northern Italy, the COVID-19 topic has been less directly address in the activities realised by teachers and educators with the families (53%), perhaps also influenced by the more severe effects of the pandemic there – although some interviewees offered activities on their own initiative (25%) or in response to prompting from the children (24%) or at the parents' request (2%). Some educators and teachers addressed negative emotions, while others focused more on fun to help families overcome the climate of isolation.

4.2. The ECEC professionals between difficulties and concerns

The main difficulty the ECEC professionals encountered involved rethinking their profession in terms of combining physical distance with emotional closeness, even if also family and personal problems affected their experience.

TAB. 3. *Difficulties experienced by teachers/educators in carrying out online activities*

Difficulties	% on respondents
Difficulty in rethinking their profession in remote modality	62,7
Family difficulties (managing children, dependent persons, the home, etc.)	28,7
Personal problems that made it difficult to concentrate (worries, sadness, etc.)	21,0
Difficulty in using technologies	20,2
Lack of/Inadequate IT resources (PC, tablet, internet connection)	15,2
Other difficulties	4,7
No difficulties	4,4
Total answers	1.060

Source: fieldwork data. The sum of percentage values is higher than 100% because each interviewee could provide more than one answer.

The qualitative data highlighted, in some cases, feelings of frustration, isolation and worries.

> It was very tiring to work on remote, without a real relationship, I often felt frustrated, I missed the daily life with the children, the concrete exchange of knowledge, I was very worried about them and the families.
> When the school closed, my colleagues and I were laid off and then fired. The headteacher excluded us from DAD. After so much work and

> dedication to our children, they excluded us and took away our dignity at work. It is not right, and it must not happen again.
>
> Without the mutual support of our colleagues, we would not have been able to cope with the workload we took on.
>
> It was a difficult period for me. The coordinator was absent. My colleagues and I managed to organise the work quite well, but I missed the possibility to reflect about what we were doing and why we were doing it.

Another challenge in the provision of education during the lockdown was the concrete possibility to reach the family and the children. The LEADs guidelines stress the key goal of reaching everyone, tracing those with whom contact is lost and using feedback to redesign the actions. In the analysed contexts, not all the families were reached and the most vulnerable were likely 'lost', without the opportunity to redesign the education offering in the light of their feedback. More than half of the interviewees (55%) stated that all or almost all the children in their class participated in the activities offered, while 34% reported that half the children did. Only 6% stated that participation was very low. However, some interviewees (4%) said they are unable to answer the question, reflecting possible one-directional or interrupted communication.

According to the educators and teachers, the difficulties experienced by the families include worries, busy schedules, lack of interest and technology and language issues. However, the feedback from those who participated is perceived as positive in the majority of cases (77%), even though not all the families provided feedback (13%), or their feedback tailed off over time (9%).

Higher participation was reported in crèches (58%) than in kindergartens (53%). Lastly, the private sector seems to have been less effective (48%) in attracting wider participation than the public (57%) and the Third sector (56%).

4.3. Emotional connection and professionals' spinoffs

The work needed for refocusing on and improving social and emotional skills remotely was the main effort for the ECEC professionals. From the qualitative data collected, it emerges that emotional connection was frequently the basis for successful relationships, but also the goal of the implemented actions.

> It was a big challenge: trying in every way through virtual methods to find the communication, emotional contact and empathy that are usually built in daily life and in proximity made me make an extra effort.
>
> The importance of relationships emerged.
>
> Encouragement from parents was very important.

I can't say I did school, but I put all the effort I could into being close to children and families

Social skills were another important resource on which to base horizontal support networks. In fact, colleagues provided the most important support networks in coping with the difficulties: 85% of the interviewees turning to their class or school/service colleagues, and a further 18% relying on colleagues in other schools/services. A fairly significant proportion found support through the virtual community, with 18% getting help from colleagues or experts contacted through the internet or social media networks, or by participating in online meetings.

The percentage of those who mentioned coordinators from their own school/service (e.g. teaching coordinators, school heads or principals) as significant sources of help was not very high, with less than 1 interviewee out of 4 selecting this answer. This signals the weakness of 'vertical' relations and of the ability of these professional figures to play a pivotal role in supporting educators and teachers both during and beyond the emergency. Lastly, roughly 5% indicated other support figures such as their family members (children, partners, etc.) or lack thereof, or said they did not need any.

TAB. 4. *Key figures in providing support*

Key figures in providing support	%
Colleagues from the same class/school/service	85,1
Colleagues in other schools/services	18,3
Coordinators (pedagogical coordinator, school head or principals)	24,3
Colleagues or expert through virtual community (social network) or online meetings	17,9
Other	5,6
N	1.060

Note: the sum of percentage values is higher than 100% because each interviewee could provide more than one answer

Overall, the prevailing feeling among the interviewees is that they were supported within their own organization during the pandemic: 45% said they felt fully supported, 39% said they felt reasonably supported, while 12% did not feel supported. Those who felt least supported, though not always with marked differences, were the younger educators and teachers, the interviewees working in crèches compared to kindergartens, and in the *Mezzogiorno* area and Third sector.

Another kind of support was founded thanks to training opportunities. Around 82% took part in online training courses or events, some found independently online (45%), others offered by the organization they work for (33%), or both (4%). The interviewees' uptake of a multiplicity of online training activities suggests they feel a need to fill gaps in their skills and also perhaps to use the unusual situation as an opportunity for professional development.

Perhaps for this reason, many professionals perceived a professional improvement during this period. 60% of the interviewees stated that they had learned a great deal and improved their professional competences from the experience, while for over 7% it had more positive than negative effects. A significant proportion of the sample thus see it as having positive spinoffs for their work, which could also be beneficial when the children go back to school. By contrast, 17% believe the experience had more negative than positive effects, and 6% think it should be completely forgotten (23%). The remaining 10% pointed to the emergency nature of remote modalities and highlighting the dangers of excessive exposure to screens, which they disapprove of, and underscoring the importance of direct contact in early childhood education.

> Reinventing oneself is not easy but it brings new stimuli, even improvements

> Reflect on my professionalism and expand my knowledge of technology

> However, I got very interesting feedback from the families as they recognised the importance of the early childcare education experience and how much they missed out on. When they come back they will be even more convinced

> Distance learning is an asset that we will take with us and that we can reuse in all those situations that prevent children from attending regularly. The webinar option for certain types of training is also very good. But now I would just like to go back to presence.

Short conclusion

In conclusion, the lack of coordination of the educative 0-6 system during the pandemic and the prevalence of 'solitary' (and not rarely assigned to educative professionals) decision making processes on how to manage the emergency caused fragmentation and heterogeneity in the educative practices and differentiation among the different type of services, geographical areas and type of services management.

The ECEC professionals tried to exploit any kind of resources to address the emergency challenges and to offer remote education to younger children. A peer-to-peer sharing of emotions, support and resources has been the 'key' to address the emergency rapidly and with weak support from higher level institutions.

The goal of creating socio-emotional connections with families and children required more than digital tools. Moreover, fragmentation and heterogeneity emerge among the different type of services, geographical areas and type of services management. Professionals' feelings about the experience of remote education during the pandemic were polarized:

those who had a positive experience and are optimistic and those who suffered through this period, with knock-on effects also for the children's return to the classroom.

The educators and teachers who could successfully overcome the effects of physical distance from the families and children as well as from their colleagues, pointed out the ability to compensate the difficulties and the efforts made by the sharing of a complex experience that strengthened relationships, particularly when the educators and teachers with stronger skills made them available to the group, implementing concrete (even if remote) learning communities.

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Distance Learning at Emilia-Romagna's Schools. A First In-Depth Quantitative and Qualitative Analysis from the Teachers' Perspective

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ABSTRACT: *The outbreak of the COVID-19 pandemic has seen some of its most disruptive effects on schools. Indeed, due to closed schools, an estimated 74 days of learning lost worldwide per student have been estimated (Save the Children, 2021). UNESCO, UNICEF and World Bank (2020) calculated that the loss of one-third of a school year in terms of cognitive skills losses could reduce the future student's earned income by 3% and a country's GDP by 1,5% for the rest of the century. This dramatic scenario could be exacerbated by the impact of the losses in social-emotional development and the pre-existence of disadvantaged conditions relating pupils. According to this, the present work aims to represent a first in-depth quantitative and qualitative analysis of the SIRD national survey regarding the target of 3.423 Emilia-Romagna teachers of all school grades, who filled the questionnaire between April and June 2020. In particular, the role of several didactic, organizational, and relational variables that influence the percentage of students not reached by DAD and the percentage of 'missing' students (i.e., those not completely reached) was explored. Quantitative analyses were conducted for different school grades to describe the difficulties perceived, the collaboration perceived, the teaching strategies perceived and the evaluation for technical, organizational, and didactic issues by teachers. Furthermore, an explorative analysis was performed to identify the factors affecting the early school leaving. Qualitative analysis were conducted to investigate more deeply the experience of teachers in emergency teaching, and in particular they were asked to indicate the difficulties of students in the use of DAD, the strengths and weaknesses of remote education. To study the open-ended responses, an analysis model including macro-categories and sub-categories (Batini et al., 2020) was created, capable of restoring the complexity of perceptions and experiences of teachers belonging to different school grades. The quantitative findings highlight the role of both the perception of technological tools' availability by students' families and the perception of having included all students, in predicting the perception of early school leaving. In terms of differences within school grades, the effect of some variables appeared stronger: the difficulties regarding pupils' parents (kindergarten); the difficulties regarding colleagues and school managers (primary school); the perception of technological tools' availability by students' families (secondary school); and the difficulties regarding DAD (high school). At the same time, the qualitative results explore the difficulties in the use of DAD going beyond both the 'problems related to technological tools' and the 'lack of*

direct contact'. In particular, the difficulties in planning and achievement of objectives due to age inadequacy in the use of the tool (0-6 ECEC), the difficulties related to the quality of communicative exchange, interaction and feedback (primary), the trouble in evaluative processes and in the control and monitoring of students (secondary school). First reflections will be carried out in the light of probable risk scenarios linked to school dispersion and to the general impoverishment of competencies to which the current target students involved in the emergency distance teaching and learning process are severely exposed.

Introduction

Since 5 March 2020, the health emergency caused by the COVID-19 pandemic has required Italian education to switch from traditional face-to-face learning to distance learning (DL) without having enjoyed previously explored and tested pathways or procedures. Due to the closure of schools during the first phase of the COVID-19 pandemic emergency, a loss of 74 days of learning per student has been estimated worldwide (Save the Children, 2021). In parallel, UNESCO, UNICEF, and World Bank (2020) calculated that the loss of one-third of a school year in terms of cognitive skills losses could reduce the future student's earned income by 3% and a country's GDP by 1,5% for the rest of the century. According to this, it has been estimated that students already at risk of social exclusion could be further disadvantaged and increased invulnerability by the impact of losses in socio-emotional development (Bayrakdar, Guveli, 2020; Haeck, Lefebvre, 2020).

The present study is part of a broader SIRD National Survey that involved a target of more than 16.000 school teachers in the national territory and developed its data collection between April and June 2020 through an online questionnaire, promoted in collaboration with the Teachers' Associations. Regarding this, the survey represented an opportunity to re-establish a strong alliance between teachers and researchers in schools and students' interests through a discussion of educational practices. Moreover, the national survey aimed to investigate/identify the teaching, organizational and relational variables (independent variables) that, during the period of the first national health emergency (March-June 2020), influenced the perception of teachers (dependent variable) of each school grade. In this regard, several quantitative (Lucisano, 2020; Lucisano *et al.,* 2021; Ciani, Ricci, 2020; 2021a; 2021b) and qualitative (Lucisano *et al.,* 2020; Batini *et al.,* 2021; Dalledonne, Scipione, 2021) analysis results have already been published.

Therefore, the objective of the present work is to represent a first in-depth quantitative and qualitative analysis of the SIRD national survey regarding the target of 3.423 Emilia-Romagna teachers of all school

grades. In particular, the role of several didactic, organizational, and relational variables that influence the percentage of students not reached by distance learning and the percentage of 'missing' students (i.e., those not completely reached) was explored.

1. Method

The methodological framework consists of a mixed-method (Creswell, Plano Clark, 2011; Ponce, Pagán-Maldonado, 2015) having a parallel research design (Trinchero, Robasto, 2019). Regarding data collection, it was carrying out through relations between university teachers of pedagogical areas and schools. In particular, the data collected in Emilia Romagna are impressive, and it represents the 6% of the Emilia-Romagna teachers. The job roles' distribution into the sample consists of 45% primary school's teachers, from the other side, 23% first degree of secondary school teachers, 18% kindergarten teachers, and 13% second degree of secondary school. The 68% of the sample is between 35 and 55 years old.

The online self-administered questionnaire was composed of 122 items, including six open-ended questions; the open-ended questions allow to hear the teachers' voices and understand how they have been through this experience. Concerning the quantitative sub-study, the dependent variable is represented by the percentage of perceived 'missing' students; in order to measure it, it has asked teachers, on the one hand, to estimate the percentage of students not reached by distance learning and, on the other hand, to estimate the percentage of students partially reached. To calculate the 'missing' student percentage, it has correlated these percentages with the data concerning the student population in Emilia-Romagna and then transformed them into estimated absolute values. Finally, the independent variables are represented by difficulties perceived, collaboration perceived, teaching strategies perceived, and factors affecting early school leaving like the inclusion of all students perceived, availability of technological tools by students' families. The teachers answered using a 5-level ad-hoc Likert scale (1=Not at all; 5=Very much) to quantify the perception of different constructs.

Concerning the qualitative sub-study, it focused on exploring the teachers' perception of pupils' difficulties in using distance learning. The qualitative categorization process included five phases elaborated and adapted from the work of Braun and Clark (2006): familiarization with the data, definition of criteria for category modelling, organization of categories and sub-categories, review, and calculation of occurrences and interpretation.

Descriptive statistics were conducted for different school grades to describe the difficulties perceived, the collaboration perceived, the teaching strategies perceived, and the evaluation for technical, organizational, and didactic issues by teachers. In addition, an explorative

analysis was performed to identify the factors affecting early school leaving. From the other side, the qualitative analysis model, including macro-categories and sub-categories (Batini *et al.,* 2020; 2021) was designed to restore the complexity of perceptions and experiences of teachers belonging to different school grades.

2. Quantitative analysis results

2.1. Teaching strategies

The descriptive analyses start with a focus on the teaching strategies used by teachers of all levels in distance learning. As shown in Table 1, in the Emilia-Romagna region, the teachers often resorted to modes of reasoned transmission of material (4,33). This choice, considered to be the most frequent, represents the initial difficulties in implementing DL.

TAB 1. Teaching strategies applied during the DL.

	Total
Reasoned transmission of materials (accompanied by specific indications)	4,33
Intervention after explanation (clarification, restitution)	3,83
In-person explanations (video lessons)	3,78
Written explanations of the materials provided	3,70
Homework and individual study	3,58
Delayed recorded explanations (audio or video)	3,46
Textbooks	3,39
Presentations of individual work by students or groups	2,09
Virtual workshops	1,90
Synchronous collective discussion (in presence)	1,84
Unstructured group work	1,78
Flipped classroom	1,77
Presentation of group work by students	1,65

The first seven teaching strategies most used by teachers during the first lockdown period through distance learning are characterized, with different nuances, by a traditional teaching mode, quite similar to the more frontal models of face-to-face teaching. In this perspective, the teacher defines the assignments and presents them to the students without any particular interaction either with them or among the students. The student is, in fact, asked to receive the assignments and carry them out in a type of work that is distinguished as an individual. Needless to say, at the time of the emergency, the reintroduction of the teaching model used up to that moment (probably the traditional one)

was the safe haven for many teachers. In general, active and interactive teaching strategies were particularly limited in all school grades, while more transmissive teaching strategies, requiring individual student work, maintained high average values (see Figure 1).

FIG 1. *Average Indices of Teaching Strategies applied during the DL (1=not at all; 5=very much).*
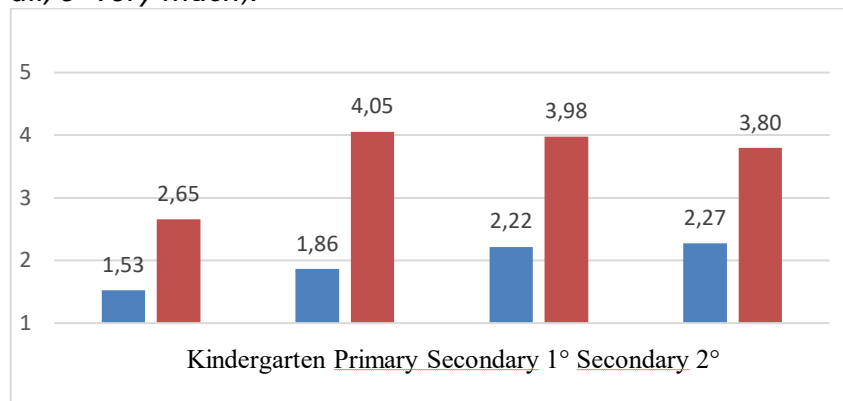
2.2. The collaboration

Overall, the collaboration from which teachers in Emilia-Romagna (3,33) were able to benefit was greater (t= 8,35, p<.001) than in the other Regions (3,10) from several points of view. They were able to rely partly on the organizational and management structure of the school and its referents (2,84; t= 4,72, p<.001), and even more on the help of parents (3,06; t=6,19, p<.001) and class teacher colleagues (3,78; t= 7,96, p<.001). Across the different school grades, the highest cooperation index is always that of fellow section teachers in pre-school (3,90).

2.3. Difficulties

There was no shortage of critical factors affecting different areas: from the time management and tools to relational aspects and didactic-assessment issues (Figure 2). From the management point of view, there was an increase in working time (4,13) and the management of a new learning environment such as the DL (3,87). The extension of time probably required a further effort of programmatic remodelling (3,51). On the didactic-assessment side, the second most critical issue is reorganizing assessment methods (4,06). Proposing open or semi-structured written tests and reconfiguring them for online administration was probably tricky. The difficulty in perceiving the participation of individual students (3,50) was less reported but still relevant from an educational point of view. If we add to this more didactic criticality concerning the technical difficulties of students' connection (3,33), a worrying picture emerges on the equity and school drop-out side. On the other hand, as far as relational criticalities are concerned, as imagined from the results of the collaboration indexes, relations between colleagues and parents were not hindering. On the contrary, inadequate

forms of contact activated by students (3,76) and much fewer difficulties in managing the class as a whole (2,58) were found.

FIG 2. *Teachers' difficulties during the implementation of DL (1=not at all; 5=very much).*
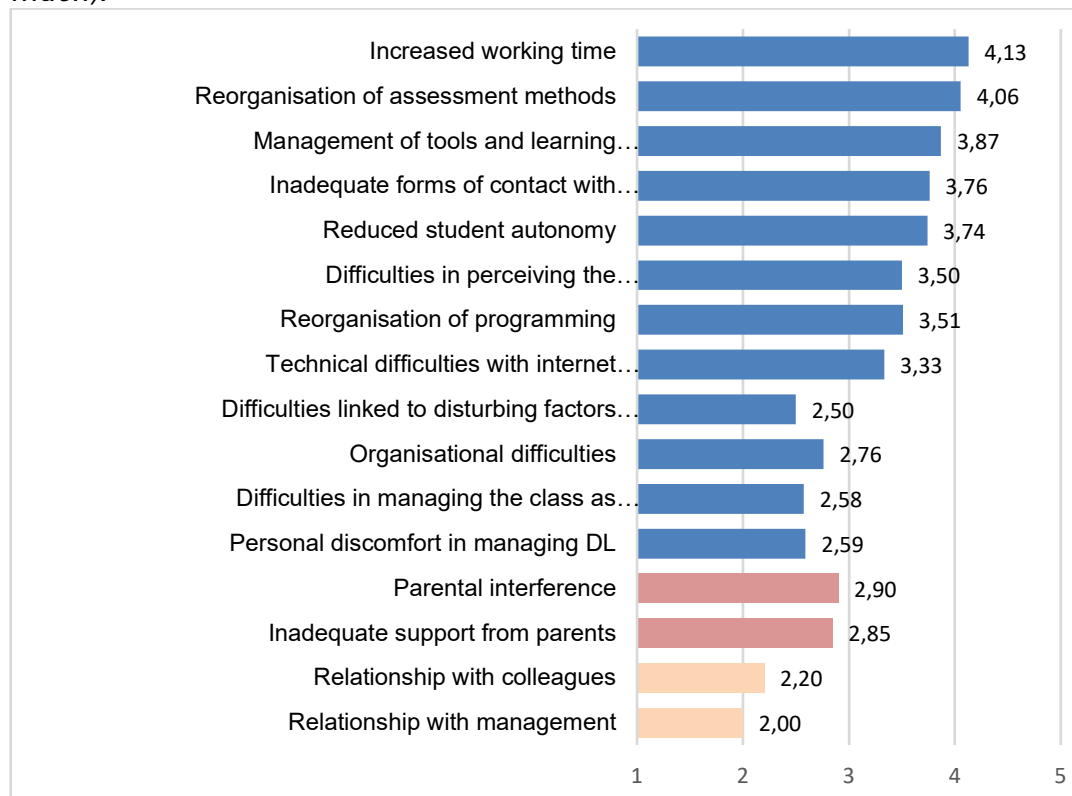
2.4. Explorative regression analysis

Using exploratory regression analysis, it was possible to identify protective and counterproductive factors influencing early school leaving. According to the perceptions of teachers from Romagna in all school grades, the contrasting factors that acted significantly against early school leaving were mainly (see Figure 3):

- the availability of technological tools for DL (= -,15; p<.001);
- the use of transmissive teaching strategies, which represented a reassuring and easy-to-manage continuity; (= -,19; p<.001);
- the perception of including all students (probably also corresponding to the teachers' wishes, = -,12; p<.001).

A protective resource and, therefore, one that favored school drop-out was the perception of using appropriate assessment (evidently intended as summative or as strategies for behavioral control of the class). There are different and interesting nuances concerning protective and counteracting factors against early school leaving at different school levels, but the availability of technological tools remains the most important and constant factor. This underlines the importance of supportive policies.

FIG. 3. *Protective and counteracting factors influencing early school leaving.*
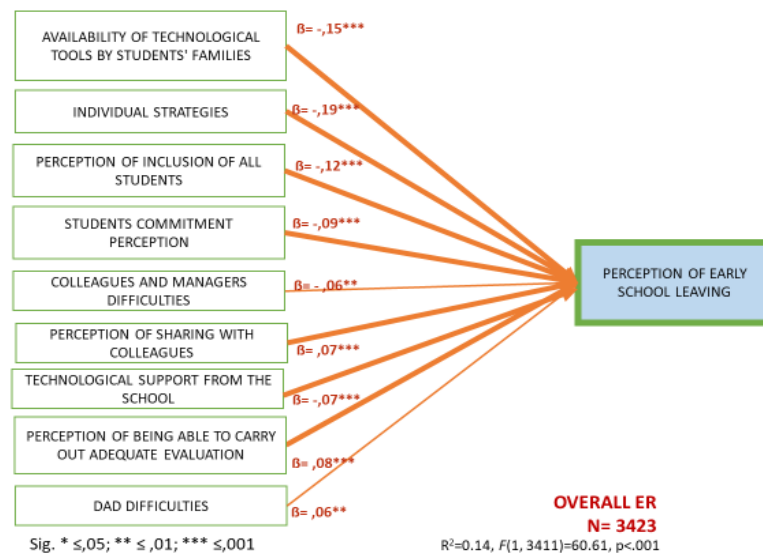
3. Qualitative analysis results

Qualitative analysis was conducted to investigate more deeply the experience of teachers in emergency teaching, and in particular they were asked to indicate the difficulties of students in the use of Distance Education, the strengths and weaknesses of remote education. Open-ended questions allow us to hear the teachers' voices, their reflections, and understand how they have been through this experience. Among the questions posed to teachers regarding distance learning, here we will present the data regarding the question on students' difficulties (open Question n. 1) because it seems the most appropriate and in line with quantitative research. The interest in this question stems from the fact that it tells us what external factors have influenced students' access/participation in distance learning.

3.1. Distribution of categories by school grades

In Table 2 we can observe the distribution of the categories with regard to the question 'indicate what difficulties the students had in the fruition of DL' based on the distinction of school grade. The categorical model has 9 macro-categories and 38 sub-categories for this question.

The teachers, of all school levels, agree in recognizing as a limitation to the use of the DL problems due to poor or absent technological tools (in the availability of devices, in the limitations due to the internet connection). This finding is also confirmed by an initial exploration of the research findings on the qualitative analysis of the national sample where the percentage of occurrence of this category is 40% of total occurrences (Batini *et al.,* 2021). In this data technological difficulties are followed by student attitudes toward DL, issues related to poor collaboration, inclusion, and issues related to life contexts. To enrich the framework of

the data and open interesting avenues for discussion, we will attempt here to return the distribution of categories for each school grade, relative to the sample of teachers in the region.

TAB. 2. *Distribution of categories by school grades*

	ECEC %	PRIMARY %	SEC. 1° %	SEC. 2° %
Issues related to technological tools	23,6	36,0	41,3	46,2
Issues related to computer skills	3,6	9,4	6,8	3,0
Issues related to life contexts	13,2	10,5	6,3	7,3
Problems related to the lack of social relations/interaction	2,2	1,2	0,6	0,5
Issues related to lack of or limited cooperation	18,2	13,2	9,2	2,5
Issues related to the new learning environment	11,5	4,3	1,8	2,0
Student attitudes toward distance learning	6,9	7,6	18,9	22,5
Inclusion/ special educational needs	10,1	12,3	12,3	9,4
Other answers	10,5	5,4	2,8	6,6

Regarding preschool and primary school teachers, it seems to be perceived as a fairly relevant the Issues related to the lack of/or limited cooperation that means a lack of collaboration with family. Followed by the occurrences of the categories, it appears that for teachers of pre-school a non-negligible difficulty is the Issue related to the life context (13,2%), a fact that, although in smaller percentage, is not negligible even in other groups of respondents. For primary school teachers, however, the critical Issues of inclusion and special educational needs are more relevant (12,3%).

The technological skills of the actors involved (students, parents and teachers) do not seem to have been decisive in the early childhood (3.6%) and in the second-level secondary school (3%), while they were more reported by teachers in primary (9.4%) and first-level secondary school (6.4%). Interesting is the reporting of critical points in the computer skills of parents, although minimal, almost exclusively by primary school teachers (3.5%). In secondary school, however, it is the attitudes of students towards DL that are among the main reasons for difficulties in its use (in both levels, 18,9% in the first-level and 22,2% in the second-level): the teachers report a lack of participation, a lack of attention and commitment, but also a lack of motivation in teaching activities in which students were perceived as little interested or selectively interested only in some content or some subjects.

Focusing attention on the overall data (Tab. 3), it is possible to note that early childhood appears to be a sample apart, the difficulties having a strong connection with the family reality and the availability of resources (material and otherwise), in relation to the young age of the children and their need for support in making use of DL. Second-level

secondary school teachers differ from the regular trend of the other school grades in giving less weight to the dynamics of cooperation with the family. In primary school it is possible to note as data that differs from the others that related to the technological skills of the actors involved that seem to have influenced the processes of use of the DL. Finally, within this general overview, the data of the first-level secondary school that differs most from the others is recorded in the answer 'other answers': they are the lowest percentage of teachers who said they did not have difficulties.

3.2. Distribution of the emerging subcategories
In an attempt to give back the complexity of the experience of distance learning lived by teachers in Emilia-Romagna, we believe it is useful to bring attention also to the subcategories that have had a higher frequency within the corpus of data. This is because, while the categories give us a general overview of what were the students' difficulties in using distance learning, the most frequent subcategories allow us to grasp what are those contextual, educational, personal dimensions that have most influenced the students' learning process.

Even in the case of the subcategories, it is possible to note some percentage differences based on school grade (Tab. 3). If we refer to the problems linked to the reorganization of the family nucleus, we notice that the percentage in ECEC (12.1%) is double that of secondary school (5.2% and 5.4%), succeeding in grasping how important the role of the family has been especially for younger and less autonomous children. This tendency is confirmed also in another sub-category relative to the lack of family support and collaboration that was perceived as problematic above all in ECEC (18.2%) and in primary (13.2%) compared to upper secondary education where the percentage drops to 2.5%. The differences between ECEC and upper secondary education are also evident in the subcategory related to the inadequacy of the virtual learning environment for the different age groups (early childhood 9.9% while in secondary the percentage is 0). This first analysis tells us that one of the problems most perceived by the teachers was precisely linked to the age of the children and to the fact that the lack of autonomy in the management of the learning tools represented a potential obstacle to the learning processes. Interesting is the reporting of critical points in the computer skills of parents, although minimal, almost exclusively by primary school teachers (3.5%).

Finally, it is interesting to note that a good overall percentage of teachers have not encountered any particular difficulties, and that this percentage is higher in early childhood (7%).

TAB. 3. *Distribution of emerging subcategories*

	ECEC %	PRIMARY %	SEC. 1° %	SEC. 2° %
Problems and reorganization of the family nucleus/work-family reconciliation	12,1	9,0	5,2	5,4
Lack of family support and collaboration	**18,2**	**13,2**	9,2	2,5
Inadequate environment for age ranges	9,9	2,5	0	0
Students' participation, attention and commitment	2,4	2,9	**7,5**	**7,7**
Students' motivation, interest, and selective interest	2,6	0	**5,5**	**7,7**
No difficulties encountered	7,0	4,5	2,2	5,2

Conclusion

The quantitative and qualitative survey carried out has offered some important reflections, but with respect to some themes, it seems that more in-depth study is needed to better interpret and bring out the specifics that characterize individual situations. Reflecting overall on the results of the research, the element that appears in the foreground is how there is no univocal experience of DL. The conditions of redesign, as well as the students' difficulties, change both in relation to the school grade and to the different educational realities and personal experience of each teacher. What emerges from the analysis of the data is that the possibility of fostering the participation of all students, of supporting learning, of collaborating and evaluating effectively do not depend, however, only on the availability of technological means but also on the vision of school that each teacher possesses. In this regard, the focus on the region of Emilia-Romagna was intended to offer a picture at the local level, paying attention to the different orders of school.

As far as quantitative data is concerned, it emerged that the contrasting factors that acted significantly against early school leaving were mainly at different school levels, but the availability of technological tools remains the most important and constant factor.

At the qualitative level, going beyond both the problems related to technological tools and the lack of direct contact, the difficulties of attending DL encountered by students were mainly related to the school levels.

Finally, it emerged that the questionnaire offered some hints that need to be further investigated in order to enhance the experience and the 'voice' of the teachers.

In order to enrich the reflection in the light of probable risk scenarios linked to school dispersion and to the general impoverishment of competencies, will be desirable to cross-reference qualitative and quantitative data which allow us to understand what has been a limitation to the use by students and what instead teachers have perceived as an

intrinsic difficulty of the DL. First, incorporate the data that emerged from the 'student difficulties' with the data of 'weaknesses of DL' discussed in light of quantitative data on risk factors. Second, return the data that emerged from the 'strengths of DL' reread in light of what emerged as the protective factors with respect to school dropout.

Therefore, further research and training initiatives could be a valid support to the activation of reflective processes that support professional development starting from a reinterpretation of the educational and didactic experience lived in the period of distance learning.

In the light of what has emerged, we believe it is useful to support a reflection that does not focus only on the level of teaching technologies, but that is able to offer opportunities to support and sustain the professional development of teachers in order to deal consciously and effectively with the 'future normality' of teaching in presence.

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The Teaching Experience During the COVID-19 Emergency: The Results of a Field Research

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CDUVTCEV≮*Due to the global pandemic, schools in most of the countries were forced to an emergency distance teaching that, for a while, has been the only strategy for keeping the students on learning during the lockdown. Since this is having a relevant and dramatic impact on society, a national survey about the School remote experience has been carried out with the aim of understanding the opposing tensions that are animating the various school stakeholders during this still-lasting emergency. The research has the descriptive-interpretative intent of fostering the debate on post-emergency schools and, consequently, on the education policies. Since the issue involves multi-players, the study has been conducted from multiple perspectives and has reached different targets such as school principals, students, teachers, and parents. The objective of the analysis is to observe how the Italian efforts of building distance teaching (DT) in the emergency period might be improved, with the aim of catching both the new development trajectories and dangerous social risks accrued in this pandemic experience which is still lasting to these days. In particular, the paper describes the experience of the teachers, with a specific focus on their professional and emotional experience and on the teaching practices carried out during the COVID emergency. With this dual-purpose were investigated the concrete responses activated to ensure teaching continuity, the training needs emerging as a result of the digitization of teaching, the strengths, and criticalities of the experience.*

MG[Y QTFU≮*Distance teaching, Teaching practices, School teachers, COVID-19*

Introduction

This essay is the result of a more extensive research carried out by the *Digital Technologies, Education, Society Research Center* (DITES) of Link Campus University, by a multi-stakeholder partnership[1].

The basic hypothesis that guided the entire research is that the digital challenge represents only the tip of the iceberg of a much deeper crisis that runs through all the components of the educational alliance; the

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[1] The collaboration was realized with the Department of Business Administration of the Roma Tre University, the National Association of Public Managers and High Professionalism of the School (ANP), the Forum of Family Associations (FAF) and the Italian Digital Revolution Association (AIDR).

Distance Teaching (DT) represents only the 'theater' that has made it possible to stage this clash of visions, expectations and responsibilities that pertain more to the cultural and value sphere than to the technical one.

In particular, this work aims at describing the concrete responses activated by teachers to ensure didactic continuity, the training needs emerging as a result of the digitization of teaching, the strengths and criticalities of the experience[2].

1. Methodology and sampling

The study has been conducted from a multidimensional perspective, reaching different targets such as school principals, teachers, students and parents through a web survey; it used a multi-faced questionnaire structured in five common sections with some parallel items and some items specific by target.

The first section of the questionnaire aims at describing the respondents' profile and their professional information. The second section investigates the organizational (Barnard, 1968; Cocozza, 2020; Mintzberg, 1893), methodological and design aspects activated, in order to respond to the challenges imposed onto the remote teaching by the emergency period. The third section explores the digital divide (Finnegan, 2011; Hargittai, 2010; Jackson, 2008; Stansbury *et al.,* 2003), considered as a main topic, highlighting a deep and renewed cultural and social inequality.

The fourth section examines the overall satisfaction of the various actors involved in the process, with particular attention to internal organizational processes, in a logic of self-evaluation based on a SWOT analysis. The questionnaire's last section collects a series of open answers to analyze the transformation taking place more in depth and, in particular, the repercussions on teaching practices and on the relationship with students and families.

The main research questions we are going to address are:
1. what are the main identified criticisms and their relevant adopted strategies that the School has put into place during the emergency state;
2. what are the key issues that – during the pandemic – have been daily experienced by the main actors in the School?
3. In other words, which factors have ensured the school organization to rediscover itself as a 'resilient organization'.

The web-survey has been carried out between May and July 2020 and has reached, with the help of social media, 474 SPs, 3444 teachers, 787 students, 2116 households' parents, for a total of 6821 interviews.

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[2] The paper reports the results of the first phase of descriptive analysis of data which will soon be followed by more elaborate statistical analyzes.

The following paragraphs analyze the main data collected on the experience of DT (DT) which involved school teachers of all levels during the first pandemic wave.

The sample was constructed in a self-selective manner; therefore, the survey is not representative from a statistical point of view; however, the high number of complete cases analyzed (2015) allows us to acquire useful information on the didactic practices adopted and, on the feeling, gained during the Distance Learning.

The respondents were 85.6% women and the remaining 14.4% men, confirming the gender distribution at the national level with only three percentage points of difference compared to the national data describing the teaching staff made up for 82.7% by women and the remaining 17% by men (MIUR, 2019).

31.2% of the responding teachers are aged between 41 and 50, 53.9% over 50. The distribution by age confirms the OECD data according to which more than half of the teachers of primary and secondary schools in Italy are over 50 years of age against a European average of around 36%, confirming the Italian teaching staff as the oldest among OECD countries (2019).

The 25% of the respondents comes from Central Italy, 38% from Northern Italy and the remaining 37% from the South and the Islands, diverging by a few percentage points from the national territorial distribution, which sees the Center with 20.4%, Northern Italy with 40.9% and the South with 38.8% (MIUR, 2019).

The most represented regions by our sample are Lazio (17.3%), followed by Lombardy (13.8%), the most affected region by the pandemic, Campania (13.3%) and Sicily (7.1%), saturating half of the sample reached. This bias is linked to the self-selected nature of the sample and the greater coverage of the territory of Central Italy by the researchers involved in the survey.

Almost 50% of kindergarten teachers come from Southern Italy and the Islands (49.7%), where on the other hand there was a consistent response also from teachers of lower secondary school (42.1%). While 42.6% of secondary school teachers come from Northern Italy.

98.5% of the teachers reached by the questionnaire come from public schools, the remaining 1.5% from peer schools. 61% of responding teachers teach in lower secondary school with a prevalence of the latter (37.5%), the remaining 30.4% in primary school, and finally a residual percentage in kindergarten (8.6%), tracing the national distribution of the teaching population (MIUR, 2019). 63.4% of responding teachers teach Literature, Historical and Geographical disciplines, 30.7% Mathematics and Sciences, 12.8% Art, 13.3% Support.

2. Results

2.1. A look at teaching practices during the pandemic emergency

The response of the schools to the emergency was immediate: only 10.3% of teachers declared that their school was activated with the DT after more than two weeks. 71% of teachers say that their school responded in a very short time ranging from a few days to a week.

As was to be expected, concerning the school order, kindergarten and primary school needed more time to activate the DT, on an organizational and educational level: respectively 41.7% and 35.7% of teachers of the two school levels declare activation times ranging from two weeks to more than two weeks. The realization of the DT, as 85.5% of the teachers reached states, involved all subjects. Only 5.3% declare that they are not aware of this information.

How the institutes have led the teaching staff towards online teaching was fair to completely clear for 85.7% of teachers. This is a fact that describes a resilient system, adaptable to changing situations, capable of restructuring itself in a short time, and guaranteeing didactic continuity.

The contribution of families in initiating videoconferences, as it was easy to imagine, was prevalent in the first school cycles, as well as the necessary support for students for the use of distance learning environments such as Classroom (Google Suite), Moodle, or Edmodo.

The responding teachers organized the DT through the carrying out of videoconferencing lessons (81%), transmitting didactic materials uploaded on digital platforms (82.3%), and using the class register in all its communication functions and teaching support (66.7%). Primary school teachers preferred more than others to record and send video lessons to students (40.4%).

In the lower and upper secondary schools, on the other hand, the lesson in synchronous mode was prevalent through the use of platforms for videoconferencing, the transmission of teaching material on digital platforms, and the use of the electronic register.

However, between the lower and upper secondary school, there is a significant deviation from the engagement of students in the realization of group work and project work. Of the teachers who claim to have used this methodology, 52.8% come from the upper secondary school and only 27.2% from the lower secondary school.

Gender and age of teachers, as well as the disciplines taught, do not significantly affect the choice of the activities carried out during the DT. This data gives us a rather homogeneous sample concerning the practices implemented during the lockdown period, where no relevant differences emerge, except those strictly related to the order of school to which the teachers belong (Fig. 1).

FIG. 1. *Teaching practices and tools during the pandemic emergency*
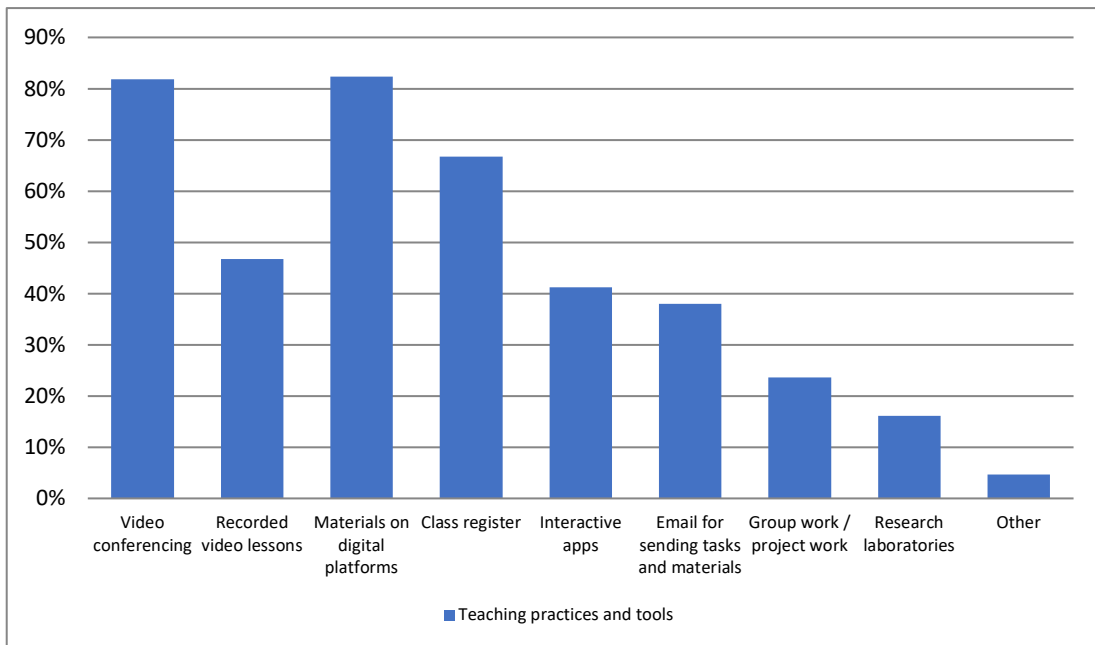
Source: Our research (2020)

Observing the data, it can be reasonably said that what was achieved was an emergency teaching, where the frontal lesson, albeit mediated by digital technology, prevailed over a constructivist and laboratory teaching with percentages that do not exceed 40% of the teachers interviewed.

Although the findings are the expression of a so-called emergency teaching method, the research data does not differ from what has already been described in other studies conducted a few months before the COVID-19 pandemic on the use of digital technologies in teaching (Capogna *et al.,* 2017, 2020).

This still assumes a predominantly transmissive character, which bends digital technologies to limited and instrumental use, not grasping their potential for methodological innovation in the teaching-learning process.

The spread of innovative teaching methodologies, supported by the use of digital technologies, is still a patchy reality in our country and the pandemic has done nothing but bringing out practices and processes already in place, together with the strengths and to the areas of attention that already characterized the school system in the pre-COVID phase.

In more than half of our sample there is a critical attitude towards goodness of the DT if we consider the size of the attention and participation of students and the amount of work required of teachers.

59.3% of teachers believe that the threshold of students' attention during online lessons is no higher than in traditional lessons; 52.3% also strongly disagree with the statement that they would like students to be facilitated by the DT in involvement and participation.

70% of the sample, on the other hand, agreed in noting how DT increases the workload of teachers. The virtual classroom requires, on the other hand, a greater commitment in the preparation of the materials

to be shared, in the preparation of online spaces for sharing and collaborative work, in the preparation of adequate tools for the assessment of learning.

The absence of physical proximity also requires a greater effort to engage students in the educational relationship. This is then joined by the digital divide, which in some cases has made it difficult, if not impossible, for students to access online teaching.

Although the highest percentage of teachers have proposed a transmission lesson remotely, not fully exploiting the possibilities offered by digital on a methodological level, 42% say that distance learning has changed their own between a lot and completely. didactics and only 15% declare that the DT has changed little or no way of teaching. As was to be expected, this change in the way of teaching was particularly recognized by teachers in kindergarten (58.3%) and primary school (49.3%).

This gap between the activities implemented and the perception of change in one's way of teaching may be understandably due to a perceptual bias between the pervasive use of the IT tool in teaching, and the actual expertise in educational technologies.

This gap between what has been achieved and the perception of one's teaching experience recalls the need to systematically document practices and experiences, through moments dedicated to self-assessment and comparison between peers to feed a meta-reflective circuit that in the long run grow the system, contaminating even those contexts most resistant to change.

Almost half of our self-selected sample (43.7%) are quite satisfied with the long-distance relationship established with their students. On the contrary, 32.8% are not satisfied or not at all satisfied. Only a little more than 2 in 10 teachers (23.5%) say they are very or completely satisfied with the relationship mediated by the DT.

The disciplines that, from the data collected, appear to be most penalized concerning the teacher-student relationship are music, social sciences, physical education, and support.

In particular, the condition of dissatisfaction of the support teachers is also reflected in the experience of families and is a vulnerability widely represented by the teachers themselves, questioned on the critical points of the DT experience.

The ISTAT report on the school inclusion of pupils with disabilities (2020) confirms this evidence and the concern expressed by teachers and families for the coming months. The activation of the DT has made a delicate process such as that of school inclusion more complex and has highlighted the structural deficiencies of the system in terms of a lack of specialized teachers and assistants in autonomy and communication, which together with the relationship in presence with their peers, an adequate organization of spaces and the use of specific digital technologies, are prerequisites for guaranteeing truly inclusive teaching.

2.2. Innovation and emerging training needs

The attitude of teachers regarding innovation is quite positive, in particular about the recognized need to ensure adequate future training for students and teachers to the empowerment of digital skills. 48% also fully or strongly agree that they want to integrate face-to-face teaching with online teaching and believe that the school should encourage the use of online learning platforms in addition to lectures.

The teachers who are more inclined to the introduction of mixed teaching are also those who have been able to integrate the available technologies using innovative teaching methods. They are therefore those who, in addition to the use of Apps for videoconferencing and the electronic register in all its functions, have used interactive digital apps for teaching, promoted group work and workshops. They are therefore those innovative teachers who are present and continue to be so online.

The areas of expertise that teachers believe they need to develop more in the future and which have been structured according to the DigCompEdu taxonomy (Redecker, Punie, 2017), concern the teaching-learning area and specifically the implementation of devices and digital resources in the teaching process and student support for collaborative learning (58%) (Fig. 2).

While we observe an interest of almost half of the sample reached in almost all the proposed areas of competence, the area of professional commitment remains more marginal, which specifically concerns the strengthening of organizational communication and professional collaboration (30.9%), concerning which support teachers, in particular, show a need for specific training (36.3%).

The emergency has concentrated the efforts of teachers in online teaching rather than in aspects related to collaboration with colleagues, therefore considered marginal also for future professional training, and we will see, also concerning improvement actions to be implemented in the light of lived experience.

The contingency has highlighted the need for methodological training that allows the teacher to effectively use the technologies for teaching, exploiting the potential they offer.

A figure that also speaks through the answers collected to the question on the activities articulated by the teachers during the DT, mainly of a transmission type, during which in most cases a reproduction of the online lecture is recorded. Teachers seem to be aware of this limitation and this can be seen in the identification of the methodological area of teaching-learning as the main area on which to invest in future training.

FIG. 2. *Training needs on digital skills*
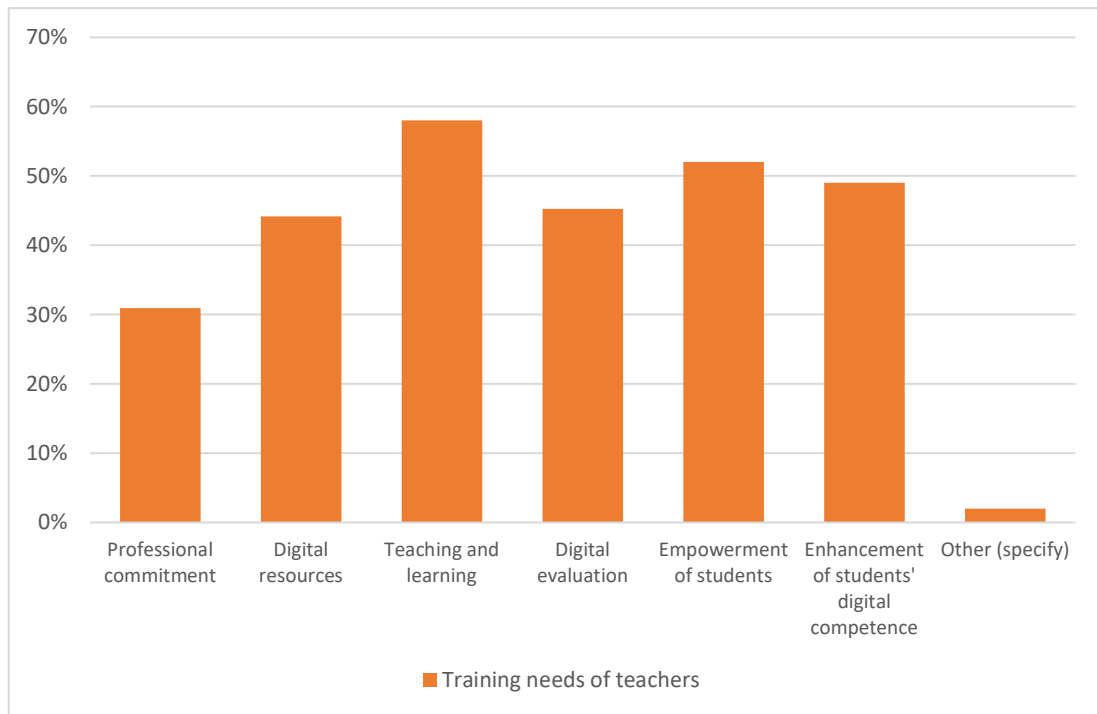
Source: Our research (2020)

2.3. Strengths, criticalities, future challenges

Although teachers are overall very satisfied with distance learning in response to the emergency (52.5%), they are less in agreement to say that they are overall satisfied with the distance relationship with students and colleagues.

Dissatisfaction in the distance relationship with students has been recorded more in kindergarten teachers; an understandable perception gave the age of the students, and the teaching strategies usually used in this specific school order (manipulation, play, exploration, etc.). The teachers who are less satisfied with the relationship with their colleagues during the DT, on the other hand, are those who belong to the lower and upper secondary schools.

Teachers are also more critical of the timing and methods of work activated in the emergency. Almost 80% of teachers agree that they feel tired of the frequent use of digital devices. On the other hand, 40% believe that network problems are not at all easily manageable, and 60% that online education platforms should be standardized to avoid fragmentation and dispersion in the management of materials.

The teachers were then asked to express their feelings concerning polarized semantic variables (e.g., distance/proximity; difficulty/ease, etc.) arranged on a seven-modality scale.

We know how positive and negative feelings influence learning and can reinforce past attitudes, or create the conditions to feed the negative or positive disposition to future learning, and this applies to students as well as teachers in their professional practice (Illeris, 2003).

This survey shows that more than half of the teachers (53.6%) felt penalized in teaching during the distance lessons. This widespread

feeling among teachers speaks of a shared difficulty in transmitting the contents of one's discipline, remotely, in terms of effectiveness and performance of the training action.

However, this perception does not seem to have a direct impact on the serenity of teachers in the activity of preparing the lessons, which represents a reason for anxiety only for 27.7% of respondents, nor on the difficulty perceived during remote lessons concerning the use of technologies which is recorded in 21.9% of the cases considered, nor on the indifference towards digital technologies, nourished, also in this case, by a minority of teachers (24.4%). The difficulty, therefore, seems not to lie, according to the teachers, in the use of digital technologies as devices, but in the very way in which the technologies seem to condition teaching practice, specifically the relationship/interaction with students.

The female teachers of our self-selected sample suffered most from the relationship mediated by digital technologies, to which they are also less enthusiastic than their male colleagues.

The isolation from their students was perceived in particular by the teachers of the nursery school and by the teachers of the regions of Northern Italy, for whom the continuation of the teaching activities added to the spread of the pandemic, with all the difficulties that this may have resulted in teaching.

Teachers over 60 complain more than others about the perception of isolation compared to their colleagues, more than 7 percentage points compared to teachers in the age group between 41 and 50 years. Older teachers have suffered most from the change, often not finding adequate support from the faculty. Teachers over 60 are, among other things, those who in the semantic continuum in difficulty/at ease with ICT, feel more in difficulty with digital technologies, 19% against 5.5% of teachers of the age group ranging from 31 to 40 years, and 11.2% of teachers in the age group 41-50 years.

Among the strengths of the teaching reorganization experience in times of emergency, more than 60% of responding teachers emphasize the experimentation of innovative organizational and teaching models (67.2%). This data, however, must be read in the light of the actual activities carried out during the lockdown.

Of those who indicated experimentation with innovative organizational and teaching models as their strengths, only 25.8% and 17.3% respectively involved students in group work and project work, and in experimental laboratories and in-depth research. While 85% of these same teachers organized video conferences and transmitted teaching materials through digital platforms. Therefore, an idea of innovation emerges that is still very centered on the use of the digital device rather than on the way that characterizes this use; to indicate, as already highlighted in the previous paragraphs, the prevalence of transmissive teaching, centered on the content.

The teachers noted in particular two types of problems relating to the lived experience: among the difficulties encountered during the

reorganization of the teaching in this emergency, the considerable increase in the working time of teachers (79.4%), which is followed by the increased stress and physical fatigue (65.5%), particularly noted by teachers of primary and lower secondary school (Fig. 3).

Then follows the difficulty in feeding through the DT the sense of belonging, participation, empathy, and effective communication with students (51.8%), the difficulty in guaranteeing assistance and educational support to students with disabilities (49, 9%), and the increase in the threshold of absences and non-participation by students (48.1%).

FIG. 3. *Criticalities emerged by school level*
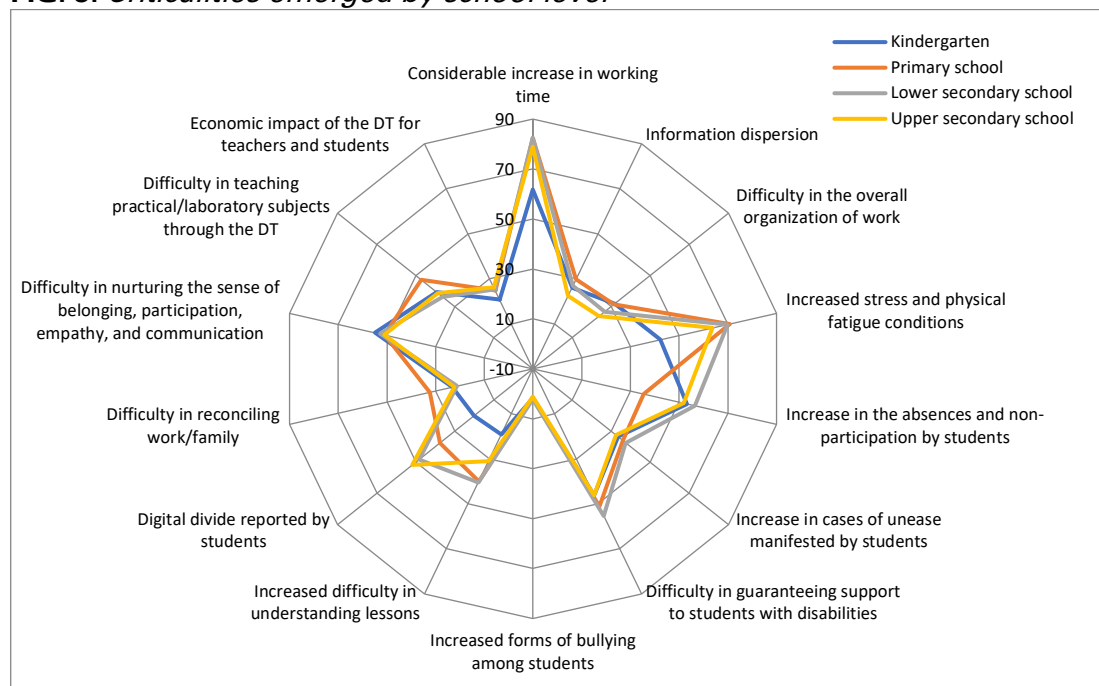
Source: Our research (2020)

Among the improvement actions that teachers report to favor the integration processes of digital technologies in the redesign of teaching, the need emerges to favor an adequate share of resources to support the quality of teaching-learning with the help of digital resources (53.7%), followed by the perceived need to organize internal training courses to support the development of specific skills related to the exercise of the role in the new digital environments (46.6%).

Almost half of the intercepted sample also believes it is important to collect the evaluations of students and families concerning the experience of the DT in the emergency phase (42.5%) to think about a conscious redesign of the teaching and learning processes.

Only 20%, on the other hand, believe that a self-evaluation path shared by teachers is useful to reflect on the experience and socialize what has been experienced with colleagues. This latter evidence, on the other hand, is reflected in the time dedicated to discussions with colleagues which for 50% of teachers did not exceed two hours a week, probably

fueling the sense of isolation and self-referentiality concerning the reorganization of teaching 'emergency.

Few teachers recognize in the experience of their colleagues a value to be shared to be able to reconstruct what they have experienced together, in agreement with the low percentage of those who identify among the strengths the opportunity to be able to identify planning objectives for the future (14.9 %).

The DT seems to be experienced as a temporary parenthesis and not as a challenge to be faced even in the long term; a perception unfortunately ignored by the current extension of the pandemic state.

FIG. 4. *Improvement actions proposed by school order*
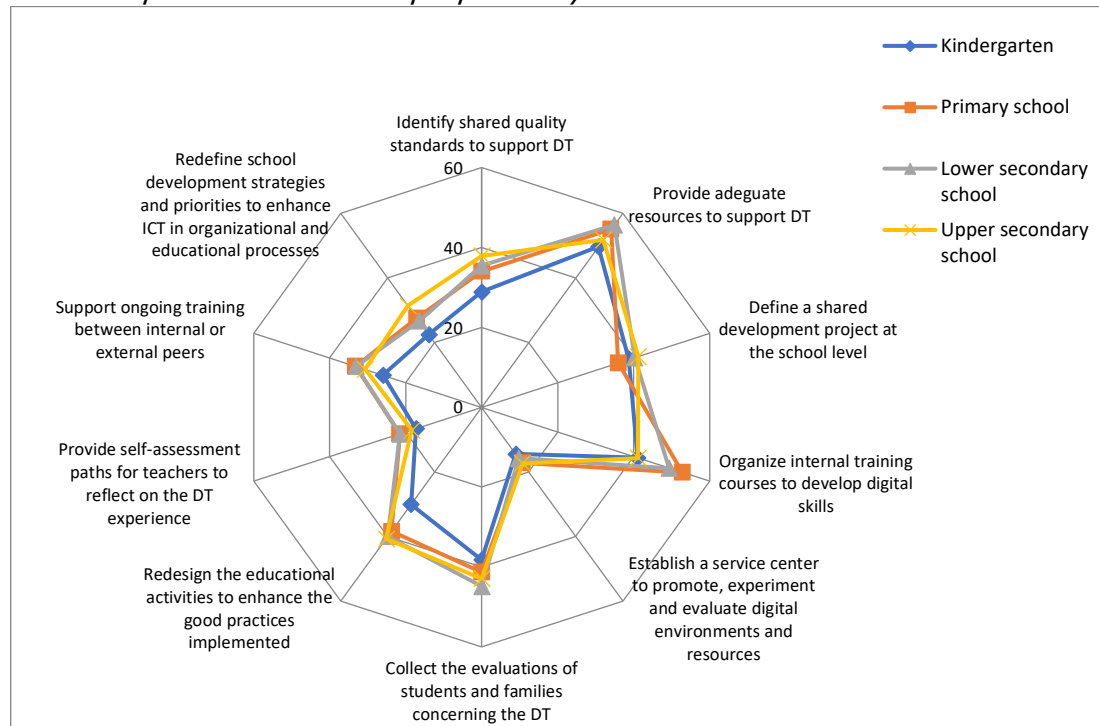
Source: Our research (2020)

Conclusion

Many teachers claim to have experienced DT as an emergency teaching, which runs out in the times and spaces defined by the pandemic situation but which cannot be considered the normality of the educational relationship. The teachers reach this conclusion even in the face of an increase in the workload that does not correspond to the actual resources deployed by the school system, the main element that also emerges when asked about the areas for improvement concerning the lived experience.

The theme of recognizing the teacher and her work therefore returns, to which it is necessary to correspond with policies (recruitment, for continuing education, remuneration) that respond to this request.

The research also shows a desire by teachers to re-read the parenthesis of the DT in the light of the experience of students and families (42.5%). This need intercepted by the survey is an element that invites the school itself to become a promoter, and in turn, a beneficiary of the culture of data, in the didactic planning and management of the institute.

The teachers' answers do not reveal this same sensitivity towards peer evaluation and self-evaluation related to the experience of the DT, still preferring a predominantly hetero-evaluative model of a cognitive type.

A culture of self-reflection, on the other hand, is important both in the teaching-learning process and in the decision-making and organizational processes that affect the school (Hoy, Miskel, 2001). Several studies have highlighted the positive relationship between teachers' self-assessment and their professional growth (Festinger, 1954; Peterson, 2000; Clandinin, Connelly, 1988).

A reflexive meta culture has a dual purpose (Capogna, 2020):

1. to intervene directly on the organizational climate and culture to build positive social relations between the members of the organization and in this way respond to internal and external demands for change (Fullan, 1993);
2. to support subjects in the acquisition of methodologies and skills adequate to respond to the challenge of contemporaneity (Kyriakides et.al., 2002; Muijs, Reynolds, 2001), to increase educational effectiveness (Scheerens, Bosker, 1997).

In particular, the use of self-assessment tools integrated with other personal and group supervision strategies, can help teachers and staff to (a) increase awareness of the sense of the effectiveness of their action both formative and organizational; (b) help teachers and administrative staff in building improvement paths and in defining the actions necessary to face the criticalities and challenges of change; (c) facilitate communication between peers and nurture a sense of belonging and collaboration; (d) stimulate constructive strategies for solving the problems that the DT has inevitably produced on the organizational and teaching level, undermining, in some cases, the sense of self-efficacy of the teachers themselves, forced to reinterpret their role and reconsider their skills.

Finally, the data collected give us back a teaching staff that seems to have more the appearance of a group-destiny than a group-project, and of a school reality in some ways still rather self-referential, in which the opportunities for internal and external collaboration at the institute itself they remain episodic and spread patchily throughout the national territory.

Teachers declare a lack of motivation to socialize their own DT experience with colleagues, accompanied by 41.1% by the feeling of isolation from their peers. On the other hand, however, there is a need for internal training courses that allow the teacher to develop the appropriate skills to exercise their role remotely.

The DT as one of the responses of the country system to the emergency, can, in conclusion, be reread as a litmus test of practices and organizational models operated in the school even before the pandemic, for which we believe it is important to make a critical reflection to propose new developments, which call into question the status quo, through the promotion of a culture of the professional network, of the exchange between peers, of self-evaluation, favored by the school management itself.

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Pandemic and School Management: Challenges for Future Education

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ABSTRACT: *2020-2021 will be remembered as the years of the Pandemic caused by COVID-19, a virus that suddenly spread worldwide affecting the health and the life of millions of people of all ages and putting a strain on welfare, economic, scientific and politic structures of all the Nations that have tried to respond to the multiple needs of their populations facing many obstacles and difficulties. In these two years all the public and private institutions have tried to overcome the limits imposed by the repeated lockdowns with new organizational, logistical and communication models and to continue to help citizens with their facilities. Among these ones, the school, like the other social agencies, faced the emergency by adopting, as a first measure, the suspension of teaching in presence and continuing with all the remote activities, from the educational training to the administrative services. With reference to this, the article intends to present the planning framework and the results of an exploratory qualitative research aimed at the sphere of school management, which intended to investigate the skills, methods, times, tools and resources to which the principals have applied to direct, coordinate and enhance the human resources of their institutes in order to guarantee to all their pupils the right to a continuous and quality learning, which is an indispensable prerogative for a fair and sustainable human growth.*

KEYWORDS: *Pandemic, School, Principals, Leadership, Management*

Introduction

The last two years of school (2019-2020 and 2020-2021) were deeply affected by the health emergency that caused not only educational difficulties, but also significant changes in the organisation of the educational system in Italy. The adoption of Decree Law n. 6 on the 23rd February 2020 and the Decree of the President of the Council of Ministers on the 4th March 2020, amongst other things, established the suspension of the school activities in presence in favour of their continuation through distance learning. Consequently, many questions and considerations arose concerning the institutional and academic fields with which it is necessary to deal urgently, using competence and commitment (Agasisti, 2020; Bertagna, 2020; Laneve, 2020).

Among the several issues: how to guarantee to the students the right to study while taking into account their personal needs? How to reshape the school activities and lessons in order to adapt them to virtual platforms while keeping a high quality in the relationships and in the process of teaching-learning? (Limone, Toto, 2020; Moretti, 2021)? How to train teachers and principals for the purpose of activating processes of empowerment and agency (Boffo, 2018; Dato, De Serio, Lopez, 2007) that are fundamental to understand and manage the new educational emergencies (Annacontini, Vaccarelli, 2021; Ulivieri, 2018)? How to remould the relationship between school and families in order to create an effective and concrete educational co-responsibility (Amadini *et al.,* 2019)?

1. Research Objectives and Theoretical Framework

Based on these presuppositions, the inter-university research group D.I.S.C.O.V.ER.[1] launched the project 'School management in the time of the pandemic' with the aim of understanding through what processes, strategies, decisions, and responsibilities the principals succeeded in leading schools during the first lockdown while guaranteeing the right to study which is established by the Italian Constitution (Marone *et al.,* 2020). The research focused on the following objectives:
- identifying what methods and instruments were used in order to reorganise the school routine during the lockdown;
- identifying those resources and strategies that enabled the transition to distance learning;
- understanding how the students' needs were fulfilled, with a particular focus on school non-completion, drop-outs, and/or students with disabilities;
- collecting information about what school principals 'learnt' from this situation and what competences helped them be active and resilient;
- highlighting what aspects of school management are fundamental in order to face present and future school difficulties.

The research was divided into six phases in order to better organise the activities to be carried out:
- first phase (April 2020): identification of the methodological system and of the research planning;
- second phase (June 2020): elaboration of the interview schedule;
- third phase (July 2020): creation of the convenience sampling;

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[1] Research group D.I.S.C.O.V.ER. (*Studies and research on school leadership from an inclusive and gendered perspective*) is composed of professors from the University of Naples 'Federico II' and Florence and school principals from Naples. This group aims at developing and implementing those studies concerning school management from the point of view of inclusivity and gender which are used to interpret the organisational and managerial processes in schools.

- fourth phase (August-September 2020): interviews and their transcription;
- fifth phase (October-November 2020): textual analysis of the interviews;
- sixth phase (February 2021): restitution of the results to the participants and to the scientific community.

During the first phase, the team selected the reference theoretical framework for the research. They chose naturalistic observation (Lincoln, Guba, 1985) that Luigina Mortari (2007, 61) defines as

> what occurs in a natural setting, that is in those places and in those ways in which the phenomenon normally happens [...] and finds its *raison d'être* in the fact that each phenomenon under consideration acquires its sense by reference to the context in which it occurs.

The main points of naturalistic observation are investigation of the phenomena and methodological flexibility that allow us to take into account unexpected events and diversities which are likely to be observed in human existence. Furthermore, this method permits us to obtain an in-depth knowledge of the meanings that the subjects attribute to the problems under consideration. For these reasons, naturalistic observation does not opt for a specific theory *a priori* and does not want to make generalisations from the results. Rather, it tries to give a deep and accurate interpretation of them paying attention even to those aspects that could be considered as being secondary (ivi, 64).

In order to collect the experiences of the principals during the first lockdown, the research team opted for the narrative method (Clandinin, Connelly, 2000; Demetrio, 2020) applying the autobiographical interview as an instrument tool. According to Atkinson (2002, 21):

> it is the most effective research approach in order to obtain a subjective perspective and a better understanding of the topic or issue under consideration. Autobiographical narrations tend to organise life events and circumstances coherently. For the purpose of giving a meaning, identifying the factors that influenced those life events, and interpreting those experiences, the autobiographical narration is the perfect method. It helps the researcher understand life events from the point of view of the person who experienced them.

Thus, the autobiographical interview is provided with a double pedagogical function. On the one hand, it allows the interviewers to deeply understand the interviewees' experiences; on the other, it permits the interviewees to tell their stories, focusing especially on those aspects and dynamics that they consider as being crucial for the reconstruction of their cognitive, relational, and emotional experiences.

2. Thematic Areas and Procedure Used for Conducting Interviews

In line with the above-mentioned objectives, it was established on what thematic areas the biographical interview was to be focused: Area n. 1 – Chance of school organization; Area n. 2 – Collaboration with teachers and the absence of middle management; Area n. 3 – The redesign of educational activities; Area n. 4 – The leadership strategies implemented to support school personnel; Area n. 5 – The difficulties of families and the co-responsibility pact; Area n. 6 – The difficulties of families and the co-responsibility pact; Area n. 7 – The right of students to learn; Area n. 8 – The evaluation of distance learning activities; Area n. 9 – Inter-institutional relations and with local authorities; Area n. 10 – The safe reopening of schools; Area n. 11 – The experiences during the lockdown from both a professional and personal point of view (Fig. 1).

In the interview schedule all these areas were translated into open questions so that school principals, while telling their experiences, could give meaning to the relational, educational, didactic, organisational, and managerial activities they carried out during the lockdown. In so doing, they could also critically judge their work in terms of educational quality and equity.

FIG. 1. *Thematic areas that were addressed during the interviews*
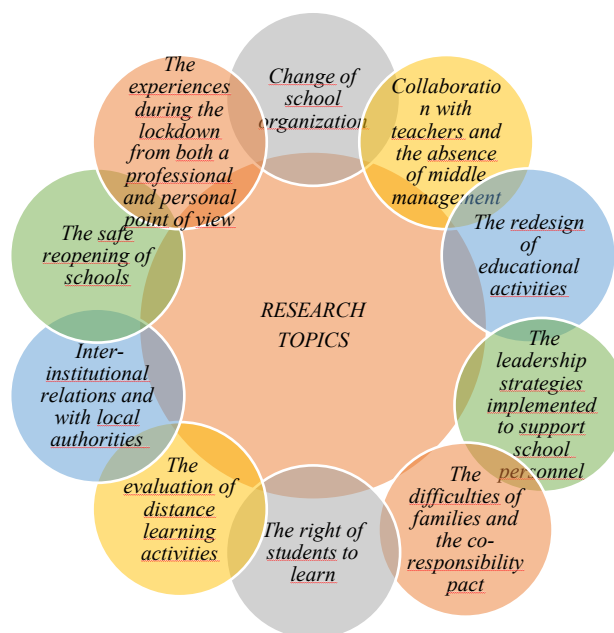
The interviews were conducted online in August and September 2020[2]. The respondents were 26 principals – 19 women and 7 men – managing

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[2] Interviews were held on platform Google Meet. Date and hour were agreed with principals and each meeting lasted around one hour. Participants were asked their consent to record the meetings so that narrations could be accurately transcribed and later analysed.

educational institutes of different levels (from kindergartens to upper secondary schools) in various regions of Italy: Basilicata, Campania, Emilia-Romagna, Lazio, Liguria, Lombardy, Apulia, and Tuscany (Fig. 2).

An interesting point to be taken into account is the fact that the majority of the interviewed principals stated they manage two educational institutions (one of which was temporarily entrusted to them) of the same or different level. This aspect is not to be overlooked since it allowed the interviewees to analyse their leadership from more than one perspective and showed that each context required specific decisions and solutions.

FIG. 2. *Composition of the convenience sampling*

Number of principals	*Levels of the schools*	*Geographical location of the schools*
Total number of principals 26: - 19 female principals - 7 male principals	- Comprehensive schools (pupils aged 3-11) - Lower secondary schools - *Licei*: Linguistico (Foreign Languages High School), Scienze Umane (Human Sciences High School), Economico-Sociale (Socio-Economic High School), International Scientific Cambridge STEM, Artistico (Art High School) - I.P.S.E.O.A. (Institute for Enogastronomic and Hospitality Services) - Provincial Institute for Adults' Education	Basilicata Campania Emilia-Romagna Lazio Liguria Lombardy Tuscany Apulia

The technological tools that were used to conduct the interviews were extremely useful for the collection of data. Not only did they enable the interviews to be carried out despite the restriction on circulation, through online meetings, but also gave the opportunity to record them. Thanks to this high-quality digital material, it was then possible to transcribe the interviews with great accuracy and precision (Bichi, 2002). Consequently, the resulting texts were largely coherent with the corresponding oral interviews.

3. Educational Leadership at the Time of COVID-19: The Voice of the Principals

In October 2020 textual analysis (that is the fifth phase) started. On the basis of the selected methodological approach, it was organised as follows:
- entering in the text: this step aimed at identifying those elements considered as significant with reference to the research questions. No preset scheme was adopted.

- sense-making: the most significant parts of the narrations were analysed in order to understand their meanings and to find correlations among them.
- persistent immersion: it enabled the researchers to highlight those schemes and structures making up the narrations.
- confirming: the elements emerging from the narrations were tested;
- presenting the account: in this last step the final report of the analysis was put into writing.

For the purpose of identifying the core elements of the narrations and in order to guarantee an as accurate as possible interpretation of them (fidelity criterion), more than one expert of the research team was involved in each step.

For the sake of brevity, in this paper we will present an in-depth analysis on the narrative contents with reference to the core category *Leadership and flexibility implementation*[3] (Marone *et al.,* 2020). During the suspension of the school activities in presence, this dimension of the educational leadership played a central role in managing the relationships with teachers, students, families, and stakeholders. The principles on which it relied were dialogue, collegiality, and coherence and through them it was easier for ideas and for the strategic plan to take shape. Moreover, every participant made their contribution with a spirit of cooperation.

Since the principals were trained according to the principles of this educational, widespread, and democratic leadership, they were able to improve the cohesion within the school community so that everyone cooperated for the achievement of a common objective as it happens in close-knit teams.

> Without a doubt, this experience contributed to both my personal and professional growth; having to reorganise school relations, to keep alive the relationships with the students, to find mutually agreed solutions to the problems we had to deal with, helped me learn new values and meanings related to school management. I understood the importance of my role not only as guarantor for unanimous decision-making and intervention, but especially for students' outcomes and formative success. (DS-F-SSSG[4])

> educational relationships need an organised environment, fixed rules, which can even be questioned, but, anyway, it is indispensable for them to have order and harmony. […] working with this idea in my mind

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[3] Five core categories could be identified through textual analysis of the interviews: 1) Self-awareness, context analysis and coping strategies; 2) Recognition and analysis of personal and system resources; 3) Re-planning and orientation to new objectives for an uncertain future; 4) Leadership and flexibility implementation; 5) Keeping relationships alive.

[4] Labels legend: DS-School principal; F-Female; M-Male; IC-Comprehensive Institute; SSSG-Upper Secondary School; CPIA-Provincial Institute for Adults' Education.

helped me manage distance learning as well. Everyone's contribution to organisation, dialogue, keeping the communication channels open, guaranteeing several reference points. I understood that it is a fundamental aspect in school management. In some respects, it is a privileged job since in the school community everything must work according to the principles of a micro utopia, it is a world where relationships must be honest, open, and clear. (DS-F-IC)

I wanted to create an 'educating school community' with a democratic and shared leadership starting from a cooperation with departments, teachers' meetings and all the teaching staff [...] we gathered all together. That made us feel like a team that was not afraid of exploring new organisational methods [...]. (DS-F-SSSG)

shared leadership does work, if we involve the others in our own objectives and we share with them the reasons that caused specific decisions, it is positive. [This experience] strengthened my conviction that shared leadership is effective, I am convinced [of that]!' (DS-F-SSSG)

From the beginning, principals understood that this rapid change could be managed only through flexibility, transformation, and innovation (Antonucci, 2020) which would enable the pre-existing (but not replicable) scheme to be reshaped from a critical-reflective perspective. By doing so, they aimed at outlining a work plan that could satisfy the new educational needs of pupils and students, investing in the training of all the teaching staff which took up the challenge and gave continuity, coherence, and validity to their professional roles.

The key word, the core concept was flexibility, not dispersion, but flexibility, that is the possibility to add new elements and verify them. Verifying them on-the-spot and discussing them was fundamental. (DS-F-IC)

the school staff, both teachers and ATA employees, responded amazingly [...] because all of them took up the challenge. What was and always will be essential is our ability to face the change and use it as a means to improve. The actual challenge consists in the transformation of this deep change into an opportunity to improve. (DS-F-IC)

we gathered online with teachers and created an operational group in order to find solutions. Actually, what I said to the teachers was [...]: 'Let's try and find another way, obviously we must not lose contact with students, but let's try and find another way'. The first objective was trying not to do the same things we did in presence since they could not be applied to distance learning neither from an operative point of view, nor from the point of view of the objectives and goals we wanted to achieve. (DS-M-IC)

Some principals regarded leadership as a pedagogical tool useful for taking care of teachers, students and families through empathy, active listening, understanding of their feelings, and constructive dialogue. Interpreting the school difficulties arisen during the pandemic through the principle of care (Boffo, 2016; Cambi, 2010; Mortari, 2019) required an insight into the deepest thoughts, feelings and fears resulting from the worry of the unknown in order to encourage the others to regain confidence in their capacities relying on empowerment and agency.

> I told myself [...] I must take care of the teachers as [...] in such a problematic and worrying situation they could get lost in the COVID-19 maze. First of all, I decided to gather with [...] the various groups, coordinators, teachers [...] I took care of their expertise [...] they had to know I was there, and I would support them at any time [...] but they had to be independent [...] be free to work and teach. (DS-F-SSSG)

> I focused not only on the professional responsibilities connected to my position, but especially on taking care of people, students, and staff so that they all could achieve the 'goal' safely. In short, I felt as if I were a team coach that besides training the technical and athletic skills of their team, must take care of the positive atmosphere within it. (DS-F-SSSG)

The new organisational and managerial conditions caused by the lockdown underlined those issues that the principals have been submitting to the policy makers for a long time, that is the many responsibilities with which they are loaded and the need for a middle management (Paletta, 2020) that would cooperate with principals in order to improve quality and equity within the school community.

> The lack of the so-called middle management [...] produces a gap between the principal and the rest of the school staff [...] in school life. In managing responsibilities, we cannot neither discuss, nor receive support from other professional figures, that is the big problem! We are alone when making decisions and this system will not resist much longer since working alone will not get us anywhere. (DS-8-F-SSSG)

> According to me, one of the biggest problems to be dealt with [...] is the one concerning middle management, I mean we ask for the definition of stable carrier paths for teachers that will become the main supporters of school principals. [...] I am not worried about having more students, more classes than I have now as long as in each school there are stable professional figures dealing with problems and freeing us from day-to-day burdens. (DS-16-M-SSSG)

Looking not only at the present situation, but also at the future, a school principal concludes his interview by saying:

> The role of the school principal, today more than ever, is a complex role. We are asked to intervene on many fronts: planning, security, privacy,

accounting, [...], relations with local authorities, trade unions, associations, families [...].

The experience of recent months raises, even more, the need of:
- o adequate training to consolidate and/or acquire new skills useful for managing complex situations and changes effectively;
- o new professional figures to be ensured, if not to individual schools at least to school networks, I am thinking of the school doctor, the psychologist;
- o new curricular planning and evaluation models;
- o a real simplification of administrative requirements to make an otherwise 'plastered' system more flexible. (DS-M-CPIA)

Conclusion

In the last two years of school, which were marked not only by considerable uncertainty (Bauman, 1999) and vulnerability (Ranci, 2008), but also by incredible resilience (Vaccarelli, 2016; Zizioli, 2021), school principals played a fundamental role in the management of educational and organisational school systems proving a strong sense of responsibility and professionalism. According to the principals' narrations, what was crucial was the recruitment of an educational leadership (Barzanò, 2008; Dello Preite, 2018; Domenici, Moretti, 2011; Mulè, 2015) having a proactive attitude and aiming at research, formulation and exchange of ideas, cooperation, and share decision-making. Decisions (that sometimes were even troublesome) had to be made taking into account all dimensional levels (Bronfenbrenner, 1979): from micro- and meso-levels, concerning individuals and the socio-cultural context in which schools are included, to the eso- and macro-ones relating to the peripheral and central system of schools.

Several examples reveal a resilient attitude which, according to Franca Pinto Minerva (2004, 24), «is identified by cognitive dynamism that permits, especially to people in difficult situations, to start a strategic plan aiming at self-regulating deconstruction and reconstruction of their own (cognitive, emotional, relational, and social) competences».

Reflecting on the dynamics and activities with which they had to deal in recent months, principals are sure that after this long 'critical period' their professional expertise will be strengthened, particularly if the educational community takes advantage of what they learnt and experienced with sense of responsibility and awareness.

Undoubtedly, this is a valuable opportunity to implement managerial roles in schools. Nowadays more than ever, managerial figures need an adequate training in order to reinforce and/or acquire competences that can help them dealing with complex situations and changes effectively.

As Edgar Morin states in the recent work he wrote during the COVID-19 pandemic, «The unexpected future is now taking shape. We hope it

will lead to political regeneration, planet protection, and society humanisation: it is time to change» (2020, 32).

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Educating During COVID-19: An Overview of Perceptions, Experiences, Feelings and Strategies in Facing Distance Learning of the Actors Involved

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ABSTRACT: *The health emergency following the COVID-19 pandemic has had an important impact on all the life contexts of the world population, also gripping the school context, where teaching has undergone a profound structural transformation, accompanied by equally important implications on the psychological and pedagogical level (Biondi, Iannitelli, 2020): new rhythms, new spaces, new emotions, new ways of educating. The prolonged closure of schools has increased learning difficulties and favored the likelihood of developing psychopathologies for the various actors involved (Onyema et al., 2020), especially for students of all levels. This work aims to review the points of view of those who have experienced firsthand or more indirectly the reorganization of the school system (Izzo, Ciurnelli, 2020): changes, subjective experiences, the feelings and needs of teachers, parents and students, collected in several national and international studies. It is offered an overview of empirical evidence focusing on the ways and strengths with which the pandemic has spilled over into schools, with a particular focus on the 0-6 age group, highlighting which educational and didactic mechanisms have been suddenly undermined, only to be rebuilt in new ways. Alongside the quantitative survey, this work will also focus on a qualitative survey. Starting from the assessment of the critical issues that emerged in the transition from face-to-face teaching to distance learning, due to technical, organizational and relational difficulties, the research team of the Leggere: Forte! project collected several interviews with educators and teachers of the services and schools participating in the project, which contributed to the production of a manual where 27 techniques to improve reading aloud in educational and school contexts were identified (Batini, Giusti, 2021). Taking into consideration the 55 interviews conducted, an ex-post categorisation of these products was carried out, a process that made it possible to detect a shared feeling: reading-aloud has proved, in addition to an educational practice, a lifesaver for all those educators and for all those students who have had to approach with difficulty and perplexity to a screen-mediated didactics; reading aloud also allowed a better transition and a better acceptance of the distance learning by all the people involved, making possible to create, through the book, a new kind of relationship between educator and pupil.*

KEYWORDS: *Education; COVID-19; Pre-school; Distance Learning; Strategies.*

Introduction

The health emergency caused by the development of the COVID-19 pandemic had a very strong reverb in the school context, where teachers dealt with a huge transformation that has produced psychological and pedagogical involvements. As we know, the pandemic has led schools to take up a new challenge: a radical restructuring of teaching activities, which have had an impact on the psychological functioning and learning of children. However, these consequences do not seem to be so immediately observable, especially if we consider the more strictly psychological dimensions, such as an increase of real pandemic stress (Biondi, Iannitelli, 2020). According to a recent study (Onyema *et al.,* 2020), it is estimated that the impact of the extended closure of schools may have acted on two levels: a more transversal one, with an increase in learning difficulties and the danger of growing social isolation, and a more specific one, with the exacerbation of socio-economic inequalities. The COVID-19 pandemic was an unprecedented event for educational systems, due to which all stakeholders found themselves having to interact with each other exclusively from home and, in this sense, one of the greatest challenges was to provide adequate support to pupils with SEND (Special Education Needs and Disabilities) and prevent their loss of involvement and marginalization (Parmigiani *et al.,* 2021). The health emergency and all related measures have changed children's environment and living habits, as well as their relationships. The parents had to deal with some kind of inattention towards the children because of the need to work at home with the school's closures, as well as an increase of anxiety and fear about the health situation, due to reductions or stops in work, or even they had to deal with painful separations or even hospitalizations. Many teachers faced various forms of emotional distress, and the main deficiency complained was the lack of relational exchanges with students proper to classroom teaching, including emotions, feelings, memories and not just a transfer of knowledge (Casacchia *et al.,* 2021).

1. COVID-19 in the pre-school environment: a focus on students', teachers' and head teachers' perspectives

But what happened at school? What do 'school professionals' think about the impact of the pandemic on the several learning domains of pre-school children? A Turkish study (Yıldırım, 2021) showed that most pre-school teachers believe that the measures due to COVID-19 have negatively affected pre-school education in many ways. We all know that pre-school education is an essential period in which children develop cognitive, affective and psychomotor skills and learn basic concepts. This is where, according to the teachers who have been interviewed, the pandemic has negatively impacted not only on basic concepts, but also on emotional

and mental development, teacher-student interaction, face-to-face education, preparation for primary school and learning by doing. The workload coming from the new contextual framework in the schools didn't improve the quality of the experience during the lockdown. Indeed, the pandemic have accentuated some points of weakness of the educational system in Italy: for example the inadequacy of staffing levels and the prevailing precariousness, the inadequacy of school buildings, the absence or lack of resources, and, last but not least, the lack of or poor quality of network connectivity (Capperucci, 2020). For these reasons, the quality of the experience during the lockdown and the quality of the DAD delivered have been undermined and, for sure, these are the aspects that need to be seriously considered in order to increase the functioning of distance learning and the impact it can have on young people's education.

According to a research led by the Italian Educational Research Society (SIRD), especially in primary and preschools – that are school contexts characterized by greater interactivity – the difficulty of relating and interacting with students through digital means has often led to a regression towards transmissive forms of teaching methods. As often happens in difficult circumstances, the emergency has led many teachers to improve traditional teaching methods already tried and tested, adapting them to the digital medium. In fact, the experimentation of innovative teaching paths has been difficult, as there has been a lack of appropriate resources and training in an emergency situation (Lucisano, 2020). Conversely, some teachers think that the COVID-19 pandemic has improved parental engagement and student-parent interaction.

In order to give a measure of the perception about to remote education during the COVID-19 emergency, another research (Batini *et al.,* 2020) aimed to analyze the open questions of the national SIRD survey by categorizing more than 16,000 teachers from schools of all types and at all levels throughout the country. Results confirmed that there is a common feeling of a poor digitisation of the actors involved and the lack of or inadequate availability of IT tools. However, in spite of this can be considered a critical factor, a lot of teachers have tried to deal with some kind of innovative teaching strategies. As a result, this led to a process of self-training that can be a stepping stone for a better quality of the educational proposal.

On this subject, a Greek study that collected the impressions of 101 elementary school teachers, showed how teachers tried to respond immediately, during the pandemic, through distance learning in asynchronous form, considering it a useful and effective tool in maintaining communication with their students although, and this was strongly emphasized by some teachers, it can not in any way replace live teaching, which promotes active interaction towards knowledge gain (Foti, 2020). An Italian study has highlighted the importance that collaboration and effective communication among teachers and between families and teachers has had in facilitating the transition to successful

online teaching (Parmigiani *et al.,* 2021). Another study (Duran, 2021) reflects on children's perceptions through a projective measure such as drawing. The study and the children's drawings showed how COVID-19 had broken into pupils' daily lives in a big way, causing an increase in anxiety, worry and fear. Parents and teachers were confronted with, among other things, the difficulty in calming the children and satisfying their need for protection.

TAB. 1. *Feelings about COVID-19 Pandemic and strategies adopted to deal with distance learning*

Feelings about COVID-19 Pandemic	Strategies for dealing distance learning
Loss and need of contact	Institutional accounts for distance learning
Sadness	Recording videos
Troubles in restraining	Parental involvement
Faded memories due to lockdown	Creation of educational sheets to send to parents
Difficulty in getting children to understand why contact broke down	Live video reading aloud
Shame of teaching in front of a video camera	Cooperation of all educators even from different classes
Feel the death around	Recording of video-readings
Lack of spontaneity and expressivity due to distance learning	

The impact of the pandemic also had negative effects on the perception of the professionalism of many head teachers, especially in terms of expertise and autonomy, which were strongly challenged by the changes brought by the health emergency. For many head teachers, it has been decisive to reinvent themselves as central communicative and relational mediators between the school environment and the community, so facilitating contacts between teachers and families (Kaul *et al.,* 2020). A study focused on school principals shows that the pandemic exposed the limits of principal's professionalism especially regarding expert knowledge and autonomy, and that the school leadership profession has felt threatened by the uncertainties caused by COVID-19 (Stone-Johnson, Miles Weiner, 2020). Although some principals reported that they felt prepared and self-confident to address and manage changes related to the health emergency, many others reported that their schools did not have the appropriate resources to cope with such changes (Varela, Fedynich, 2020).

1.1. Parents' point of view about pandemic in schools
A lot of parents have supported their children's learning at home through activities such as reading aloud, teaching new words or songs, or other

kind of homework (Barnett *et al.,* 2020). On the other hand, schools have had to update in order to be able to continue to provide distance learning and keep in touch with students and their families, by using online devices and platforms. The pandemic highlighted how it's decisive – more than ever – to consider early education as a near-universal right of children and it must be defended, together with the protection of early childhood workers. The pandemic boosted the concern that children may be at risk of falling behind academically, and the need to shape teaching and developmental support routines from pre-school onwards, adapting to the changes and new demands produced by the health emergency (Samuelsson *et al.,* 2020).

Many formal education's options were not viable during the closure period. However, there is one strategy that we can consider low-tech that is a very effective way to prevent some of the negative consequences of school closures due to the COVID-19 outbreak and to strengthen family bonds: intensive, daily reading aloud. This study (Bao *et al.,* 2020) found that pre-school children, who have a reduced ability to read independently, depend on adults for access to books through reading aloud. These readings provide a more complex language of sentences and school vocabulary than conversations and oral narration. Reading aloud also provides the opportunity to practice reading words and interacting with the text, even if the same book is read several times (because comprehension works in a spiral way, the child needs to return to the text several times to integrate the pattern of the story and enrich it with details). Reading every day to young children helped to counterbalance some of the loss of reading expected during school closures by more than 40%. Reading books to children is commonly used as a strategy to facilitate the development of reading skills and much more.

2. COVID-19 in the pre-school environment: a qualitative analysis

During the first year of the project, numerous semi-structured interviews were collected from educators of nursery schools and kindergartens. Although the primary purpose of the interviews was to create a Manual of Techniques for Reading Aloud with Children Ages 0-6, ex post analysis of the interviews also revealed some evidence regarding the impact of COVID-19 on the educational field.

In particular, we focused on educators' perceptions of COVID-19, strategies implemented to deal with the disruption of classical teaching; then we will focus on reading aloud as a useful tool in facing distance learning.

As far as educators' perceptions are concerned, they report an important loss of contact with their pupils and the need to restore it; connected to this we see the difficulty of explaining to the children the reason for the abrupt interruption of contact with the school context and

in general. Another important aspect concerns the difficulty in restarting, in getting back into activity, connected also to the feeling of shame that some educators have experienced in front of the new educational medium: the video camera. To educate in front of a video camera, according to some educators, transmits a sense of solitude and exposes one to the constant presence of the children's parents, who are also at home with their children.

With regard to the strategies that have been put in place to continue the educational pathways during the COVID-19 pandemic, educators report as good strategies the involvement of parents and the cooperation of all educators in the service, in order to ensure continuity for all children. The main tool to overcome distance is video: educators have used it for every activity that can be done at a distance, in particular to record read alouds.

TAB. 2. *Feedback and impressions of education personnel, children and parents about reading aloud practice during COVID-19*

Reading aloud and education during COVID-19	*Children's and parent's feedback to reading aloud during distance learning*
Reading aloud as an expected ritual	Reading aloud familiar texts was the first request made by the children
Reading aloud is a simple activity that has facilitated the encounter with distance learning	Parents asked for bibliographic suggestions for reading at home
Reading aloud as an activity that meets the health standards of COVID-19	Parents report that children were waiting for video readings from educators
Reading aloud is an activity that does not require any special materials	Parents noted that listening to video readings was relaxing for children
Reading aloud is an activity that has allowed easy cooperation among educators	Parents reported that children were also requesting reading aloud at home
Reading aloud is an activity that can easily be done by parents at home	Children interacted during the read aloud with comments or drawings
Reading aloud allowed to carry content consistent with the historical period	Parents reported that children listened over and over to video readings sent by educators
	Some parents have created a chat dedicated to the exchange of home video readings

Now, in particular, we'll see what the advantages of reading aloud are in the era of distance learning: according to educators, reading aloud is a common practice for children that has made it easier to resume relationships interrupted by lock-down. reading aloud is also a low-tech practice that can be done easily from home and does not require special materials. This makes reading aloud an appealing practice to propose to parents: during the pandemic period, involving parents proved essential; being able to propose practices that are easy and enjoyable to reproduce at home allows for continuity in children's activities. In addition, according to educators, reading aloud was important in easing their

transition to the virtual medium as well: in the face of novelty and uncertainty, reading aloud proved to be a lifesaver that helped educators get to grips with the video. In conclusion, reading aloud has also proved to be a useful means of conveying significant content related to the current historical period.

Conclusion

What has been the feedback from children and parents to reading aloud in distance education? Educators report that many children waited for the read-alouds; many parents began reading in their own homes, picking up bibliographic suggestions. reading aloud catalyzed exchange and relationships among parents who began sharing read-alouds with each other. Finally, some parents reported that reading aloud was a calming and relaxing activity for their children. These impressions prove the role of read alouds on the one hand in maintaining reading levels in children even after the closure of educational services and, on the other hand, in engaging families and many teachers in a practice that is also, and above all, valuable from a relational perspective, especially at a time of low socialization as a pandemic lockdown can be. The added value of reading aloud is that it is a low-tech, low-cost strategy that can be easily performed even in the home environment, so it is a practice deserving of great consideration by educational systems, given the multiple evidence in the literature on the benefits of reading exposure. For many parents, reading aloud, even in the form of video contributions, has proven to be a true resilience tool, engaging and entertaining for children with little cost to parents, and it also acted as a facilitator for teachers in dealing with the sudden digital transition due to the health emergency. In essence, the COVID-19 pandemic has been a tough test for many education systems and it has required a good deal of adaptability for all education personnel. For many teachers and educators it has been an opportunity to question their professionalism, but also to reinvent themselves and adapt their teaching methods to meet the needs of their students, strongly trying to maintain the fundamental communication link with their families. In short, we can see that one of the main shortcomings from COVID-19, complained especially by school staff, was the relationship with pupils. While it is certainly useful to have adequate means and resources to implement a digital transition (and many teachers reported that their schools were not prepared for this aim), nothing seems as important to most school personnel as the relational aspect that is created through live teaching. In light of this, it seems useful to us that future directions move toward the goal of improving the quality of teacher-student relationships and interactions; we have seen how, for example, reading aloud is a medium that can help reinforce this aspect. Give the effectiveness of reading aloud in enabling teachers, pupils and parents to adapt to a drastic change in habits and context and in

strengthening relational ties, we can sum up that future developments could include providing the opportunity for teachers in particular to obtain a durable training on this practice and about how to make it as effective as possible.

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Extracurricular School Activities During the First COVID-19 Lockdown in Italy: Comparative Study with Prior to Lockdown Workshops

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ABSTRACT: *This paper has been developed within the framework of a European Social Fund project, which involved a network of three primary-middle schools in Sicily. The extracurricular activities engaged over a thousand students and the workshops were partially carried out during the first COVID-19 lockdown in Italy (March-May 2020). The qualitative-quantitative evaluation focused on the improvement of students' basic and transversal skills and on the development of an inclusive school environment. The research data were collected by surveying workshops' students, trainers and teachers-tutors about their point of view on the effectiveness of the intervention. The objective of this study, focused on the quantitative dataset, is the comparison of the above-mentioned activities which took place before and during the pandemic emergency and eventually identify any discrepancies.*

KEYWORDS: *School workshops, COVID-19, Distance learning, Skills assessment, inclusivity.*

Introduction: research framework and context

During the last year, a lot of attention has been devoted to the impact of COVID-19 lockdown on ordinary school didactics, both in Italy (Capperucci, 2020; Ciurnelli, Izzo, 2020; Girelli, 2020; Lucisano, 2020; Lucisano *et al.,* 2020; SIRD, 2021)[1] and abroad (OECD, 2020; UNESCO, 2020), but hardly any attention has been paid to the educational extracurricular activities: in spite of they increasingly characterises school's mission, the pandemic emergency has relegated them to the background, even if probably more in the research than in the practice.

The framework of the presented research is a Sicilian POR (Regional operational plan) project of the European Social Fund, called *Leggo al quadrato*[2], which funded a network of three 'Istituti comprensivi' (IC), schools combining pre-school, primary and low-secondary (or middle school) cycles: IC 'Calvino' (project leader), IC 'Di Guardo-Quasimodo'

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[1] See also the monographic issues of two scientific journals published in 2020: *Studi sulla Formazione*, 23, (2), https://oajournals.fupress.net/index.php/sf/issue/view/523 and *LLL – Lifelong Lifewide Learning*, 16, (36), http://www.edaforum.it/ojs/index.php/LLL/issue/view/38.

and IC 'Rodari-Nosengo'. The first two schools are based in the Northern districts of Catania (S. Giovanni Galermo, Barriera and Canalicchio), the third in the nearby town of Gravina di Catania. These peripheral areas are characterized by socio-economic and cultural heterogeneity, with a significant incidence of social deprivation: low levels of education; low or precarious incomes; broken families (separation, divorce, emigration, imprisonment); cultural and housing degradation (particularly around the IC 'Di Guardo-Quasimodo'); only a few essential social services and a few youth centres.

As schools' RAV (self-evaluation reports) highlight, these conditions give rise to several educational problems: low motivation to learn; inadequate development of basic cognitive and socio-relational skills; INVALSI tests (national census tests for the assessment of basic skills) in 2019 below the regional average (especially in Maths at the end of the middle school for all the three schools; in general, more problematic situation at IC 'Di Guardo-Quasimodo'); severe early school leaving at IC 'Di Guardo-Quasimodo'; increasing number of pupils characterised by fragility (disabled, students with special educational needs); considerable growth in the number of foreign pupils (mostly unaccompanied foreign children) and adopted children.

Aims of the POR *Leggo al quadrato*[2] were reducing school failure, drop-out rates and youth discomfort (especially for students with special educational needs). The project explicitly refers to the priority educational objectives according to art. 1 c. 7 of Law n. 107/2015, the so-called 'Buona Scuola' (Good School):

- to improve outcomes in the various disciplines and in cross-curricular learning, in order to foster students' growth and the formation of free and critical thinking;
- to enhance key and citizenship competences, for an effective social and work integration;
- to develop problem posing and problem-solving skills, divergent thinking and self-efficacy;
- to guarantee better opportunities for cultural, economic and social growth, also by strengthening linguistic and mathematical skills;
- to promote educational guidance.

With the cooperation of local authorities and three non-profit organisations, the school network organised and delivered 60 extracurricular workshops, along seven areas of competence as specified in table 1.

TAB. 1. *Number of workshops for school and area of competence.*

	IC Calvino	IC Di Guardo-Quasimodo	IC Rodari-Nosengo	Total
Italian language	4	2	4	10
Mathematics	3	2	2	7
Science	2	0	1	3
English language	4	6	11	21
Digital skills	1	2	0	3
Cultural awareness and expression (art, creative writing, instrumental music, choral singing, theater, regional heritage	6	6	2	14
Physical education, play and mental play	1	1	0	2
Total	21	19	20	60

Each 30-hours workshop was programmed by offering an active and cooperative learning experience to 20 primary or middle school students, for a total of 1,800 training hours and 1,200 places available. The project held between June 2019 and June 2020, but the workshops was interrupted on 2020 March the 4th, due to the lockdown related to the COVID-19 pandemic, then resumed remotely in mid-May (through the platforms Zoom and Google Meet) and so completed at the end of the school year.

1. Research design: objectives, instruments, samples and methodologies

The research approach is inspired by 'fourth-generation evaluation' (Guba, Lincoln, 1989), with the use of a 'utilization-focused' model (Patton, 1997), which can be defined as integrated. In fact, it aims at linking positivist instances (such as the assessment of students' results with respect to the achievement of competence objectives) to pragmatist orientations (such as the evaluation of the workshops' climate according to pre-established quality standards or the students' satisfaction survey) to constructivist approaches (such as the exploration of students' opinions on indicators of school inclusion). In addition, the integration of these three instances also partially intervened at the level of the three survey instruments used, both to favour a triangular control of the results and, more generally, to offer a pluralist evaluation to the committers and decision-makers (Ministry, regional authorities that manage the programme, school leaders involved), who were also provided with qualitative data.

TAB. 2. *Surveyed people, instruments, constructs and administration timeline.*

	Incoming	In progress	Outcoming
Students - Questionnaire on expectations about workshop/aroused interests by workshop and expecially about inclusion at school (12-17 items, depending on the school grade, with Likert scale 1-5)	X		X
Teachers-tutors - Questionnaire to support observation about class' participation and climate during the workshops (14 items with Likert scale 1-6)		X	X
Trainers - Rubrics to assess for each student: incoming/outcoming skills, outcoming participation in group works and quality of peer relationships, outcoming awareness and self-assessment of own skills (4-5 items with Likert scale 1-6)	X		X

Consistent with the mandate given to the external evaluators and considering the complexity of the project (variety of themes, objective-skills, locations, actors), the evaluative research tried to implement a multi-perspective view, through the triangulation of the three most involved points of view: students, schoolteachers in the role of workshops' tutors, workshops' trainers. The qualitative-quantitative evaluation design pursued the following main objectives.

1. Evaluating changes in students' perceptions of inclusion/integration into the ordinary (morning) school-life before and after the attended workshops.
2. Monitoring the quality of student participation and workshop climate.
3. Assessing the development of students' skills through the workshops.

The survey instruments – developed by the external evaluators and based on the most accredited scientific literature about skills assessment (Castoldi, 2016; Trinchero, 2013) and inclusion (Booth, Ainscow, 2002) – were designed in conjunction with the project contact persons in the three schools. They were variously administered through Google Forms in three phases, as specified in table 2, where also the explored constructs are highlighted.

In this paper we do not take into consideration either the qualitative sections in each questionnaire or the final reports of the trainers; nor do we describe analytically the survey instruments and the quantitative results obtained, which are already in the process of being published (Impellizzeri *et al.,* 2021). Whereas the objective of this study is to compare the quantitative results of the above-mentioned surveys obtained by participants to the workshops completed before the pandemic lockdown (until 2020 March the 4th) and workshops completed during it, then through distance learning.

In statistical terms, we expect to test the following two assumptions:
1. the workshops completed during the lockdown (until 50% of distance learning) present significantly lower average scores in the ex-post surveys (=.05), than the workshops completed before the lockdown (totally in presence);
2. the workshops completed during the lockdown (until 50% of distance learning) present significantly greater discrepancy between average scores obtained in the incoming and outcoming surveys (=.05), than the workshops completed before the lockdown (totally in presence).

The hypotheses were investigated through Mann-Whitney U non-parametric test for two independent samples, as described in table 3. Moreover, we verified the hypotheses using the Kruskal-Wallis test for more granular partitions of the samples, based on the number of hours of workshops carried out remotely: three groups (0-5 h, 6-11 h, 12-15 h) and four groups (0 h, 1-3 h, 4-9 h, 10-15 h). Finally, we conducted the tests using the software SPSS 27.0.

TAB. 3. *Samples for collected and analysed data.*

Actors	Respondents (total)	Respondents (in workshop completed online)
Primary school students	774	163
Middle school students	322	76
Total students	1,096 (=91% of the maximum number of places available)	239
Teachers-tutors	50 of 60	14
Trainers	50 of 60 for 1,186 students	15 for 292 students

2. Comparative analysis results

2.1. Students' skills, awareness and participation assessed by the trainers
About the students' skills assessed by trainers through rubrics, the conducted tests suggest rejecting the null hypotheses for the comparison of outcoming averages, as well as of the difference between outcoming and incoming averages, as can be seen in table 4. Moreover, the null hypotheses should be rejected considering 2- (Mann-Whitney U test), 3- and 4-groups comparison (Kruskal-Wallis test). But these results do not mean that the alternative hypotheses should be accepted: since the mean rank tends to be lower in the groups that spent few or no time online (tables 5-6). Deeply, the 4-groups comparison for both the considered variables reveals a fluctuating trend of the mean ranks (table 7).

TAB. 4. *Comparison of results from students' skills assessed by trainers through rubrics.*

Students' skills	2 groups (Mann-Whitney U test)	3 groups (Kruskal-Wallis test)	4 groups (Kruskal-Wallis test)
Outcoming averages	Reject the null hypotesis (U=90131.000 p=.014)	Reject the null hypotesis (H=18.382 p=.000)	Reject the null hypotesis (H=28.949 p=.000)
Difference outcoming - incoming averages	Reject the null hypotesis (U=64843.500 p=.000)	Reject the null hypotesis (H=39.967 p=.000)	Reject the null hypotesis (H=40.586 p=.000)

TAB. 5. *Ranks table of Mann-Whitney U test: 2-groups comparison on students' skills.*

Students' skills	Groups	N	Mean rank
Outcoming averages	Completed in presence	790	509.59
	Completed online	254	562.65
Difference outcoming - incoming averages	Completed in presence	670	432.28
	Completed online	240	520.32

TAB. 6. *Ranks table of Kruskal-Wallis test: 3-groups comparison on students' skills.*

Students' skills	Groups (hours online)	N	Mean rank
Outcoming averages	1 (0-5 h)	837	507.25
	2 (6-11 h)	171	557.85
	3 (12-15 h)	36	709.1
Difference outcoming - incoming averages	1 (0-5 h)	717	432.28
	2 (6-11 h)	158	509.9
	3 (12-15 h)	35	685.59

TAB. 7. *Ranks table of Kruskal-Wallis test: 4-groups comparison on students' skills.*

Students' skills	Groups (hours online)	N	Mean rank
Outcoming averages	0 (0 h)	790	509.59
	1 (1-3 h)	24	668.27
	2 (4-9 h)	176	502.91
	3 (10-15 h)	54	710.44
Difference outcoming - incoming averages	0 (0 h)	670	432.28
	1 (1-3 h)	24	648.08
	2 (4-9 h)	163	468.42
	3 (10-15 h)	53	622.07

Considering the two variables trainers' outcoming evaluation on 'students' skills awareness and self-evaluation' and on 'participation in group works and quality of peer relationships', the Mann-Whitney U test suggests supporting the null hypothesis (2-groups comparison), whereas the Kruskal-Wallis test suggest rejecting the null hypothesis (three and four-groups comparisons), as shown in table 8.

TAB. 8. *Comparison of results on students' skills awareness/self-evaluation and participation in group works/quality of peer relationship, evaluated by trainers through rubrics.*

	2 groups (Mann-Whitney U test)	3 groups (Kruskal-Wallis test)	4 groups (Kruskal-Wallis test)
Students' skills awareness and self-evaluation (outcoming averages)	Support the null hypotesis (U=68772.000 p=.067)	Reject the null hypotesis (H=19.310 p=.000)	Reject the null hypotesis (H=32.692 p=.000)
Students' participation in group works and quality of peer relationships (outcoming averages)	Support the null hypotesis (U=99929.500 p=.922)	Reject the null hypotesis (H=24.271 p=.000)	Reject the null hypotesis (H=42.378 p=.000)

For these two variables too, in the 2-groups comparison we obtained lower mean rank in the group that spend no time online (table 9), even if the Mann-Whitney U test evaluates this difference not significant, as we have seen above (table 8). In the 3- and 4-groups comparison the mean ranks fluctuates (tables 10-11), like in the variables above analysed, except for the 3-groups comparison on students' skills awareness and self-evaluation, where the mean ranks grow progressively in the three samples considered (table 10).

TAB. 9. *Ranks table of Mann-Whitney U test: 2-groups comparison on students' skills awareness/self-evaluation and participation/relationships.*

	Groups	N	Mean rank
Students' skills awareness and self-evaluation (outcoming averages)	Completed in presence	753	468.33
	Completed online	199	507.41
Students' participation in group works and quality of peer relationships (outcoming averages)	Completed in presence	790	521.99
	Completed online	254	524.08

TAB. 10. *Ranks table of Kruskal-Wallis test: 3-groups comparison on students' skills awareness/self-evaluation and participation/relationships.*

	Groups (hours online)	N	Mean rank
Students' skills awareness and self-evaluation (outcoming averages)	1 (0-5 h)	800	467.35
	2 (6-11 h)	116	480.37
	3 (12-15 h)	36	667.39
Students' participation in group works and quality of peer relationships (outcoming averages)	1 (0-5 h)	837	520.08
	2 (6-11 h)	171	486.38
	3 (12-15 h)	36	750.22

TAB. 11. *Ranks table of Kruskal-Wallis test: 4-groups comparison on students' skills awareness/self-evaluation and participation/relationships.*

	Groups (hours online)	N	Mean rank
Students' skills awareness and self-evaluation (outcoming averages)	0 (0 h)	753	468.33
	1 (1-3 h)	24	657.92
	2 (4-9 h)	139	439.99
	3 (10-15 h)	36	667.39
Students' participation in group works and quality of peer relationships (outcoming averages)	0 (0 h)	790	521.99
	1 (1-3 h)	24	737.08
	2 (4-9 h)	176	444.63
	3 (10-15 h)	54	688.34

2.2. Participation and climate observed by the schoolteachers-tutors

About the workshops' climate evaluated by schoolteachers-tutors through a questionnaire for every workshop, we conducted only the 2-groups comparison, because the limited number of cases made the groups that carried out the workshops partially online very small. The Mann-Whitney U test suggests supporting the null hypotheses for both the three considered variables: in-progress average of the scale ($U=199.500$ $p=.256$), outcoming average ($U=103.500$ $p=.096$), difference between outcoming and in-progress averages ($U=155.500$ $p=.896$).

Despite the insignificance of the differences between the groups, the analysis of the differences in mean ranks confirms the trends observed in par. 2.1 about the trainers' rubrics: the mean rank of the group that completed the workshops online is always higher than the other group, even if slightly in the third variable considered (table 12).

TAB. 12. *Ranks table of Mann-Whitney U test: 2-groups comparison on workshops' climate.*

Climate of the workshops	Groups	N	Mean rank
In-progress average	Completed in presence	36	24,04
	Completed online	14	29,25
Outcoming average	Completed in presence	32	19,73
	Completed online	10	27,15
Outcoming - in-progress averages difference	Completed in presence	32	21,36
	Completed online	10	21,95

2.3. Students' self-evaluation of inclusion and interest in workshops

The comparison on the scale about inclusion filled by students supports the null hypotheses for all the three samples schema (2-, 3- and 4-groups comparison) and for both the indicators (outcoming average score and difference between outcoming and incoming averages), as shown in

table 13. With the same previously observed trend, the mean rank of the group that completed online the workshops is higher than the other (table 14). At the same time, the comparisons for 3- and 4-groups show the already noticed fluctuating mean ranks; if even if, this time, the largest groups of those who spent the most hours online (the second group in both 3- and 4-groups comparison) present lower mean ranks than the groups that spent few or no time online (tables 15-16).

TAB. 13. *Comparison of results from students' self-evaluation of inclusion through questionnaire.*

Students' inclusion	2 groups (Mann-Whitney U test)	3 groups (Kruskal-Wallis test)	4 groups (Kruskal-Wallis test)
Outcoming average	Support the null hypotesis (U=51215.500 p=.170)	Support the null hypotesis (H=1.511 p=.470)	Support the null hypotesis (H=4.925 p=.177)
Outcoming - incoming averages difference	Support the null hypotesis (U=46177.500 p=.850)	Support the null hypotesis (H=1.305 p=.521)	Support the null hypotesis (H=2.451 p=.484)

TAB. 14. *Ranks table of Mann-Whitney U test: 2-groups comparison on students' self-evaluation of inclusion.*

Students' inclusion	Groups	N	Mean rank
Outcoming average	Completed in presence	725	433.64
	Completed online	152	464.56
Outcoming - incoming averages difference	Completed in presence	657	399.29
	Completed online	142	403.31

TAB. 15. *Ranks table of Kruskal-Wallis test: 3-groups comparison on students' self-evaluation of inclusion.*

Students' inclusion	Groups (hours online)	N	Mean rank
Outcoming averages	1 (0-5 h)	800	467.35
	2 (6-11 h)	116	480.37
	3 (12-15 h)	36	667.39
Outcoming - incoming averages difference	1 (0-5 h)	837	520.08
	2 (6-11 h)	171	486.38
	3 (12-15 h)	36	750.22

Despite the insignificance of the differences if the average scores on the whole scale are considered, a deeper analysis conducted on outcoming results of single items states that the null hypothesis must be rejected for some of them and for the extra-scale items concerning interest in workshop, as reported in table 17.

TAB. 16. *Ranks table of Kruskal-Wallis test: 4-groups comparison on students'*
self-evaluation of inclusion.

Students' inclusion	Groups (hours online)	N	Mean rank
Outcoming averages	0 (0 h)	753	468.33
	1 (1-3 h)	24	657.92
	2 (4-9 h)	139	439.99
	3 (10-15 h)	36	667.39
Outcoming - incoming averages difference	0 (0 h)	790	521.99
	1 (1-3 h)	24	737.08
	2 (4-9 h)	176	444.63
	3 (10-15 h)	54	688.34

Following the same trend already observed, even for items for which the
null hypothesis is rejected in the 2-group comparison (all belonging to
the scale on inclusion) the mean rank is lower in the group that completed
the workshops in presence than for the group that completed them at a
distance (table 18). Quite the same in the 3-groups comparison of the only
item for which the null hypothesis is rejected ('I often feel satisfied that I
did well in a school task/activity'), where the mean rank is 428.37 in the
first group (N=739, 0-5 h online), 501.14 in the second (N=103, 6-11 h
online) and 480.60 in the third (N=35, 12-15 h online).

About the items belonging to the scale on inclusion, for which the null
hypothesis is rejected in the 4-group comparison, the mean rank tends to
show a parabolic schema: it rises in the intermediate groups (that
completed from 1 to 3 hours and from 4 to 9 hours online), and then it
falls again in the group with the largest number of hours spent online,
settling at similar or even lower values than that of the group that
completed in presence (table 19).

An exception is the item 'The lessons and activities proposed by my
teachers reflect my interests' (included only in the questionnaire for
middle school students), where the mean rank is markedly lower only in
the intermediate group. The previous parabolic schema is replicated even
in the comparison of the extra-scale items for which the null hypothesis
is rejected (table 20).

TAB. 17. *Comparison of items from outcoming students' self-evaluation of school inclusion and interest in workshops (the latter in italics) for which the null hypothesis is rejected.*

Item	2 groups (Mann-Whitney U test)	3 groups (Kruskal-Wallis test)	4 groups (Kruskal-Wallis test)
The lessons and activities proposed by my teachers reflect my interests (middle students only)			H=7.349 p=.025
I am often actively involved in group work with my classmates	U=49314.000 p=.025		
My classmates and I help each other if we are in trouble	U=49966.500 p=.046		
Even if I cannot do something, I'll try again until I do.			H=11.945 p=.008
I often feel satisfied that I did well in a school task/activity	U=46620.000 p=.001	H=10.745 p=.005	H=12.243 p=.007
I respect and take care of my material and that of my classmates	U=48348.000 p=.007		H=14.848 p=.002
The workshop activity I attended was interesting for me			p=.007
Participating in the workshop is making some school activities interesting for me.			p=.041
Participating in the workshop is pushing me to study more, at least some subjects			p=.014

TAB. 18. *Ranks table of Mann-Whitney U test: 2-groups comparison on items for which the null hypothesis is rejected (students' self-evaluation of inclusion questionnaire).*

Item	Groups	N	Mean rank
I am often actively involved in group work with my classmates	Completed in presence	725	431.02
	Completed online	152	477.07
My classmates and I help each other if we are in trouble	Completed in presence	725	431.92
	Completed online	152	472.77
I often feel satisfied that I did well in a school task/activity	Completed in presence	725	427.30
	Completed online	152	494.79
I respect and take care of my material and that of my classmates	Completed in presence	725	429.69
	Completed online	152	483.42

TAB. 19. *Ranks table of Kruskal-Wallis test: 4-groups comparison on items for which the null hypothesis is rejected (students' self-evaluation of inclusion questionnaire).*

Item	Groups (hours online)	N	Mean rank
The lessons and activities proposed by my teachers reflect my interests (middle students only)	0 (0 h)	225	144.77
	1 (1-3 h)	0	
	2 (4-9 h)	21	97.64
	3 (10-15 h)	35	142.76
Even if I cannot do something, I'll try again until I do	0 (0 h)	725	433.56
	1 (1-3 h)	14	530.93
	2 (4-9 h)	88	501.23
	3 (10-15 h)	50	382.63
I often feel satisfied that I did well in a school task/activity	0 (0 h)	725	427.30
	1 (1-3 h)	14	483.54
	2 (4-9 h)	88	509.25
	3 (10-15 h)	50	472.49
I respect and take care of my material and that of my classmates	0 (0 h)	725	429.69
	1 (1-3 h)	14	578.86
	2 (4-9 h)	88	505.17
	3 (10-15 h)	50	418.42

TAB. 20. *Ranks table of Kruskal-Wallis test: 4-groups comparison on items for which the null hypothesis is rejected (students' self-evaluation of interest aroused by workshops).*

Item	Groups (hours online)	N	Mean rank
The workshop activity I attended was interesting for me	0 (0 h)	725	435.60
	1 (1-3 h)	14	562.79
	2 (4-9 h)	87	477.68
	3 (10-15 h)	50	377.52
Participating in the workshop is making some school activities interesting for me	0 (0 h)	697	427.39
	1 (1-3 h)	14	517.21
	2 (4-9 h)	87	428.62
	3 (10-15 h)	50	351.10
Participating in the workshop is pushing me to study more, at least some subjects	0 (0 h)	697	427.07
	1 (1-3 h)	14	539.14
	2 (4-9 h)	87	433.14
	3 (10-15 h)	50	341.57

3. Discussion and conclusion

The proposed study is original in that, while a great deal of attention has been devoted to the impact of COVID-19 lockdown on ordinary school activities, hardly any attention has been paid to an educational dimension that increasingly characterises schools, namely that of extracurricular activities conducted with workshop approaches during an extended school time.

In the previous paragraphs we investigated the supposed differences between groups of primary and middle school students that completed extracurricular workshops in presence or online, due to the pandemic lockdown. The analysis, performed through non-parametric tests for independent samples, supports alternative assumptions only for a few indicators and survey respondents, as summarised in the following points.

- From the perspective of the workshops' trainers, significant differences emerge in the assessment of students' skills (both outcoming and gap between incoming and outcoming), but not clearly in the evaluation of students' participation in group works/quality of peer relationships and of students' skills awareness/self-evaluation.
- From the observation of the schoolteachers-tutors about workshops climate and participation, no significant differences emerged for either the outcoming results or the differences between in-progress and outcoming results.
- From students' point of view about inclusion conditions, no significant differences emerge for either overall outcoming results or the gaps between incoming and outcoming results; however, significant differences emerge in the outcoming results on some specific items: alignment between lessons proposed by teachers and personal interests (middle school only), active involvement in the class group works, mutual help among classmates, tenacity in difficulties, satisfaction in succeeding in school tasks/activities, respect and care of one's own and others' materials.

Surprisingly disproving our assumptions, in all the three perspectives investigated, for indicators with significant differences or not, the outcoming results and the difference between incoming or in-progress and outcoming results (mean ranks) are always higher in the group that completed the workshops online (2-groups comparison). Furthermore, this tendency is also evident in the 3- and 4-group comparisons, although sometimes with fluctuating trends. Important exceptions, showing decreasing mean ranks the more time was spent online, are found in the items outside the scale on inclusion presented in the questionnaire for students and related to the impact of the workshops in terms of interest generated and spin-offs on the learning: interest in the workshop attended, effects of the workshop on interest in some school activities and on stimulus to study.

The interpretive hypothesis is that the reorganization of the project essentially coped with the pandemic emergency, as the school as a whole seems to have done, in spite of the criticalities pointed out, e.g., by the SIRD survey (Lucisano *et al.,* 2021), through an effort sustained more by personal commitment and passion than by previous expertise in educational technology (Ciurnelli, Izzo, 2020). Nor the commitment and organisational effort in reaching distance learners should be neglected, as also shown by the SIRD survey, in which Sicily seems to have acted more effectively than the Italian average about the middle school (Lucisano *et al.,* 2021, 46-47). In this sense, the project, although based on extracurricular activities, managed to complete all the planned workshops and keep most participants engaged, so helping to sustain factors of inclusiveness at a certainly difficult time for all actors and stakeholders in the school, also considering that many of the participants had been selected among the most disadvantaged students in the respective three schools. The study outcomes seem to corroborate the view that when the school offered support to students, by engaging in activities outside of the regular morning curriculum such as in this POR project, it was able at least to meet the challenge of the pandemic, containing problems, keeping critical issues under control and continuing to offer opportunities for inclusion.

Nevertheless, the anomalous situation maybe induced an overestimation of students' outcoming assessment by trainers, in accordance with the SIRD survey which states that «the majority of teachers (73%) in distance learning have changed their assessment criteria» (Lucisano *et al.,* 2021, 40, our translation). The evaluation of workshops' climate by teacher-tutors has moved in the same direction, but we should give both these possible overestimates the sense of an adaptation rather than an evaluative bias. At the same time, from students' point of view, the suffered 'absence of the presence' probably generated a retrospective revaluation of the quality of the time spent in the classroom, with own teachers and classmates.

However, on some specific aspects (e.g., the effects of the workshop on school activities and, particularly, on the stimulus to study) the students who attended more through distance learning and who, therefore, filled out the survey later, have experienced some degree of fatigue and demotivation, which seems to have been reflected in the study of ordinary curricular subjects.

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A Picture, a Lighthouse, a Kite: Metaphors of Emergency Teaching

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ABSTRACT: *This study presents the metaphors that emerged from a group of 22 teachers interviewed about their switch to remote instruction during the COVID-19 pandemic. The main theoretical framework adopted to study the emergency teaching situation (Hodges et al., 2020) was that of smart learning, defined as 'context-aware ubiquitous learning' (Hwang, 2014) and as centred on content, rather than on devices (Gwak, 2010). Primary school teachers from Italy were interviewed about online and smart learning. Following the idea that proficiency can not exist without the ability to reflect on and about actions (Nuzzaci 201), participants were asked to describe their experiences by choosing images or ideas that would represent them. The use of metaphors allowed us to better understand their feelings related to the condition of emergency teaching. Data from the interviews was classified in four emerging themes used by participants: a. distance – picturing themselves as TV characters only available to students through a screen, or as pictures hanging from a wall, teachers felt the weight of barriers over their relationships with classes; b. responsibility and co-responsibility – reflection became an opportunity to question responsibility, as teachers felt like a lighthouse for their pupils, trying to help in overcoming their difficulties; other sea-related metaphors, like that of a lone sailor and a huge storm, or a deep abyss, tell the story of a very difficult situation in which references were lost; on a more positive note, some teachers saw this situation as a possibility for the blooming of new competencies and new co-responsibility links with families – a kite built with pupils but led by a teacher; c. the wasteland – this group of metaphors mostly involved Special Education teachers, who felt disconnected from pupils 'like a rock at the bottom of a river', or screaming in a nightmare depicted as a variant of Munch's Scream; the difficulty or impossibility to have meaningful relationships with children with special needs affected the teachers' morale and sense of fear; d. travelling between two worlds – seeing the remote teaching experience as a journey, teachers felt like abandoning a well-known habitat to explore distant and unexplored worlds, mostly based on an 'analogic vs digital' discourse; many participants felt that this change was non-reversible, as the future scenarios will always have to come to terms with what happened during the pandemic period.*

KEYWORDS: *Smart learning, Narrative thought, Remote teaching, Primary schools*

Introduction

In the period between March and June 2020, Italy found itself, like the rest of Europe and the world, in an unimaginable situation of forced closure due to the COVID-19 emergency. The entire student population «stopped going to school and started receiving telematic communications from teachers or educators» (Pastori *et al.,* 2021). Therefore, for the teaching staff, it was also a sudden change, because they found themselves dealing with a total immersion in digital teaching, driven by the emergency and not by a carefully planned intervention. This study is based on the direct observation of the emergency teaching phenomenon and tries to take a snapshot of it at the moment in which it occurred. This paper aims to be a contribution to an in-depth understanding of the perceptions and experiences of primary school teachers, through the elicitation and discussion of metaphors that have the power to describe the perceptions of these teachers at the time of the health emergency, using semi-structured interviews.

1. State of the Art

As it can be observed in the literature, after the COVID-19 pandemic emergency researchers all over the world have been active in exploring brand new scenarios, based on novel research questions. In particular, about smart and online learning, Todd (2020) observes that «online learning becomes the new norm, the fact that the shift was power-coercitive and unplanned is worrying, even if it was the only option available for continuing education provision». The main theoretical framework referred to in this article is that of Hwang (2014): 'smart learning' is defined as learning that can take place anywhere, anytime thanks to smart devices. They are «the building blocks of the Internet of Things» (Kopetz, 2011), linked together they create a solid structure over imperceptible data and information.

Hwang (2014) also introduces the idea of 'context-aware ubiquitous learning', or 'u-learning', that takes into account the interaction between learners and environments, resulting in a learning environment that makes 'adaptations and provides appropriate support'.

On the other hand, concerning narratives and metaphors in the humanities, Garramone, Lipari and Genzano (2017) define them as a constitutive tool of the «first form of mediation between different realities, being closer to the sensible and the real». Narration is «the first expression of deep learning to shape one's questions and formulate adequate representations of them» (Farahi, 2020) and allows us to understand others, but also, and above all, to understand ourselves (Bruner, 2002). On this basis, it can be assumed that narratives, as well as metaphors, are the only means that «give continuity to our experience of us» and allow «an act of creation of our Self» (Poggio, 2004). As

Eriksson and Pinnegar (2017) argue «metaphors capture the individual identity and specify the plotlines of teaching and the obligations, duties, and responsibilities of the teacher as well as the role of the teacher and others in the teacher's practice».

2. The research project

The fieldwork took place from the second half of May 2020 until the end of July 2020. The research sample consisted of twenty-two primary school teachers: nineteen women and three men, five of them were special education teachers and seventeen curricular teachers. Most of them lived and worked in the North of Italy.

The choice of participants was mainly based on acquaintances of the researchers, but also included four people who were contacted via online communities and social networking websites. It is important to consider that in the initial research design the sample was intended to be made up of twelve to fifteen people, but near the end of the data collection phase, one of the participants spontaneously addressed an unexpected and interesting topic: lifelong learning in the era of webinars. It seemed appropriate to add some other participants so that this new topic could emerge in a relevant and consistent way.

Interviews were conducted on the phone: this choice was dictated by the impossibility of moving due to the national health emergency, and it was hence not possible to take note of the non-verbal and para-verbal elements that give hints about the processes being carried out by participants. This technique allows, in some ways, to replace the face-to-face interview, but some reticence, perhaps determined by the context the interviewed person was in, was quite evident, easily observable. A further obstacle detected by researchers was the use of specific jargon, typical of educators and teachers, which sometimes needed to be clarified to make the answer congruent with the question asked. In this sense, Mantovani (1998) recalls how «the language used by the interviewer must be suitable for the interviewee», because «the meaning that [the researcher] attributes to the terms must be exactly the one that the participant attributes to it».

However, on two occasions videoconferencing could be used, but on one of them it was realised that non-verbal communication could heavily influence the answers received from the participants. For this reason, the remainder of the interviews were conducted on the phone, asking for consent to record the call in advance and guaranteeing anonymity in the transcription phase.

At some point before one of the interviews, it was necessary to create a comfortable and trustful scenario for one of the participants who had some feelings of unease. The subject contacted the interviewer a few days before the interview for fear of not being adequately prepared on the topics of the interview, not so much for the interview itself. In fact,

among the suggestions most often given to those who conduct surveys of this kind is that of saying «a few more words (to clarify a misunderstanding, to show curiosity and respect towards the opinions of the interviewee, etc.) rather than one word less» (Fazzi, Martire, 2010).

2.1. Methods
To conduct this study, we followed a qualitative research approach. As Cecconi (2002) notes, this research paradigm allows us to understand the object of a study «from the perspective of the participants in the phenomenon itself and not from that of the researcher». To explore the teachers' experiences we chose the tool of the semi-structured interview with a series of questions that aimed to explore what was happening to them in that specific period, and particularly: the start of distance learning, the difficulties, the problems, the evaluation tools adopted, the collective reflection, the socialisation, the educational relationship and finally the creation of a metaphor or the proposal of an image that could help the researcher to understand the positioning of the participant with respect to the experience they were living. Next, content analysis was performed on the interview transcripts, which as Erlingsson and Brysiewicz (2017) note is a «continuous process of coding and categorising then returning to the raw data to reflect on your initial analysis». To code and categorise the contents of the interviews, we chose to make use of the NVivo 2012 software, a tool that belongs to the category of Computer-Aided Qualitative Data Analysis Software (CAQDAS)[1].

Coppola (2011) points out that this tool «is designed to assist the work of those conducting research from the beginning to the end of the research process». This is a delicate operation, as it is possible to find a topic within the same textual string initially marked with another code. In this phase, the researcher has a great responsibility because thanks to a careful reading of the transcripts and the re-listening of the interviews, it is possible to catch also the unsaid, opening up new possible interpretations.

3. Results and Discussion

The analysis of the interview transcripts, and especially of the answers given to the last question in the interview script, allowed to define four main emerging themes, appearing with different degrees of concentration. The most present was 'distance', together with 'responsibility and co-responsibility'. A few interviews proposed the topic we labelled as 'the wasteland' or explored the 'travelling between two worlds' theme. What follows is a discussion of the metaphors used by

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[1]   NVivo,   https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home.

participants to describe their feelings, with an attempt at interpreting and classifying them.

3.1. Distance

Among the most common concepts and images summoned by participants in their responses, 'distance' is the most prominent, as well as the presence of an obstacle separating them from their worlds. One of them imagined herself as a character inside a drawing: she felt as she was in a closed place, with an open window; her pupils were in front of her, but she could not make contact with them. This metaphor introduces the idea that emergency teaching caused a huge relational gap, in which the teacher is far away and experiences difficulties in maintaining an effective connection with the class. Moreover, the idea that the educator is inside a drawing could be interpreted as a 'reality surrogate' in which the teacher feels to be trapped.

The concept of 'obstacle' was introduced by another participant: she described a barrier preventing an authentic relationship with her pupils, while another teacher used a stronger image – that of an elderly person in a nursing house, in front of plexiglass protection. These statements brought in the topic of the impossibility to have direct contact and the sense of frustration that derives from it.

Another participant described herself as a TV character, like the ones seen in popular afternoon shows[2]. In particular, she felt compelled to think about all the possible methodologies, ideas and ways to engage children, leveraging their creativity and imagination. The character was described as separated from its public by a screen, with children that could not be questioned.

The last image that falls into this theme was proposed by a teacher who used the evocative metaphor of many hands stretching out to touch each other but never actually being able to make contact. She felt she could not have a 'real' connection with the classroom, she just had a hint of being in contact but ultimately felt the impossibility of authentic interaction.

3.2. Responsibility and co-responsibility

The second main theme that was identifiable in the interviews was that of 'responsibility'. Among the metaphors that fall into this category, the most emblematic is probably that of a lighthouse, used by a participant to highlight the important role she felt she had during the emergency period as a reference for her class and the families of her pupils. Moreover, she recounted moments in which she helped them in overcoming their difficulties, mostly connected to the loss of friends and relatives. The lighthouse is a representation of the teacher herself, entering the households and helping families not getting lost in the storm represented by the COVID-19 emergency.

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[2] The reference here was to Melevisione, a popular Italian TV show for younger children.

With a very similar image, another participant told he felt as a boatman engaged in a journey, a sort of odyssey: in this trip, the educator saw himself in the middle of a storm, together with his pupils, in a sort of Noah's ark. The idea of a storm, or an abyss, appeared frequently in the interviews: another teacher described all the pandemic crisis as 'a very unstable condition'. She used the metaphor of a tightrope walker, saying she was constantly investing in research about teaching and learning, with no assurances or certainties.

Referring to this theme another participant used the metaphor of a tree, or a group of trees, like wood or a forest, bringing in the idea of complexity and reciprocal support: trees in a forest are not alone but surrounded by other trees, hence the teacher in the emergency scenario stood together with colleagues and students. This positive metaphor introduces a variant of this second theme, which was labelled co-'responsibility'. Another participant proposed the idea of a circle of children: she was at the centre of it, with all the pupils around her. In this metaphor children, parents and teachers are mutually supportive, just like the trees in the previous one.

One last metaphor that was classified under this theme was that of a rose. This flower has two different meanings for the participant who proposed it. The first one was connected to the thorns, which represented the difficulties and issues that she encountered, as well as her doubts regarding the new methods imposed by emergency teaching. The second one referred to a personal 'blooming' in terms of abilities and competencies, especially those related to digital teaching. The participant's system of beliefs was overturned: something that she was suspicious of became interesting and useful for her practice, empowering her and changing her perception of responsibility towards students.

3.3. The Wasteland

Only a few respondents described their experience using images that could be classified as pertaining to the theme of a 'wasteland', expressing a sense of disorientation in their role as special education teachers. One of them told about how he felt 'like a rock in a river', unable to reach out to pupils with disabilities. The river in this metaphor represented knowledge, and the stone referred to stillness and to the impossibility to act, generating frustration. Similarly, another participant felt as if she was inside *The Scream*, a famous painting by Edvard Munch, living a nightmare experience. A picture book titled *Il buco*[3] inspired another metaphor, as the main character of that story has a very huge hole in her stomach, from which monsters exit.

These metaphors were interpreted as the representation of participants' fears during the emergency teaching experience, mostly

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[3] *Il buco* is a picture book by Anna Llenas, distributed in Italy by Gribaudo. Original edition: A. Llenas (2015). *Vacío*. Granada: Barbara Fiore Editora.

generated by the uncertain future and by the lack of proper training, tools and infrastructure surrounding them.

3.4. Travellers between two worlds

Part of the sample used metaphors referring to a 'journey' between a real world and a virtual one. The clearest image in this sense is that of a bridge, linking remote places and habits. One of the participants imagined crossing it, while thinking about the sea underneath, with all the risks and the mysteries hidden in it. One of the interviewed teachers described this bridge as a connection between two worlds: in one world there are remote places and distant habits, while in the other one everything is known, and teachers had to cross the seas and overcome all the difficulties and risks. The only certain thing was her change at the end of the journey: this was described as inevitable by another participant, and only coming after a mutual, shared change.

Similarly, the metaphor proposed by another participant was that of diving in the sea, explained as a way to find and try out new teaching methods, with the help of a lot of webinars and online resources. Besides connections between land and water, there were also metaphors connected to the idea of a double nature of teaching: analogue and digital. One metaphor proposed by a participant involved a picture representing a man, walking down a road that gradually turns into a photograph. She connected this to the idea of being in a liminal territory, the digital one, that helped her in connecting with her pupils.

Conclusions

The metaphors presented in this paper only offer a glimpse of the experience lived during the first season of distance teaching in 2020 and reflect only a part of what was the effect of a sudden and radical change in the practices of teachers. They were used to working in the presence of others and to carrying out work that thrives on constant and multi-level human relationships.

The themes that emerged from this study offer a faceted view of the complex array of experiences that characterized the professional life of teachers during the pandemic crisis in 2020. They felt distant yet did not forget their responsibility, often acting as a reference for their pupils and their families. They travelled through wastelands and between worlds, learning things that would have required far more time.

It would be interesting, as a follow-up study, to interview the same people a few years from now, to see to what degree their perceptions and representations will change or remain the same, considering the unpredictable nature of the scenario they lived in.

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Training Educational Professionals During the Pandemic: Impact, Learning, Strategies and New Didactic Challenges Faced by the University Traineeship

Online Traineeship: Which Educational Chances? Changes From Live to Online Model in TFO Experience

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ABSTRACT: *For several years, the Master's Degree Course in Pedagogical Sciences at the University of Milano-Bicocca has been offering students an apprenticeship course (TFO, 'Tirocinio Formativo di Orientamento'; Orientation Training Apprenticeship), which includes 60 hours in educational services, and 27 hours in classroom (with a tutor) throughout the academic year. In this context each student has to carry out research about pedagogical functions in educational services. To do this, the classroom course supports both students to build an overview of pedagogical functions and the Pedagogue, and to exchange knowledge and experiences, allowing the construction of a richer epistemological heritage. This proposal of traineeship has been structured on work in presence, both in the classroom and in services. The health emergency brought by COVID-19 suddenly blocked the pathway, which had to be redefined, using online work and opening the challenge of building experiences in services and group knowledge almost exclusively with the help of technological tools. Referring to the pedagogical epistemological frame, which highlights the importance of links between time, space, bodies and rules in the learning environment, this research has the goal to analyze in which way the passage from presence to online model can influence the learning process. Therefore, with a qualitative design, we want to explain the facilitating and hindering aspects of online training working. The research has two phases: in the first (March-April) we did 36 written structured interviews in order to collect students' point of view about significant aspects of this experience. In the second one (June-July), we are conducting a focus group, aimed to deepen some ideas that emerged from the interviews analysis. The 36 TFO-students of the sample are education professionals who are asked to reflect on their own educational path, becoming in some way co-constructors of the learning process. The very research work is participatory, as some aspects of the research were developed together with the students themselves. The data and reflections will be useful to reformulate the traineeship pathway beyond the health emergency, identifying the elements that can facilitate the online training. The results will offer the students point of view about central aspects of the learning and training experience, relational components and also sustainability of the process in order to reflect on educational challenges which pandemic opened.*

KEYWORDS: *Traineeship, Online learning, Students' perspective, Pandemic, Educational challenges*

Introduction

In this paper we want to discuss the changes that happened in the structure of apprenticeship course of Master's Degree in Pedagogical Sciences at the University of Milan-Bicocca (we called it as TFO, 'Tirocinio Formativo di Orientamento'; Orientation Training Apprenticeship), due to pandemic.

In TFO students are divided in small groups with a tutor and have a program structured in two parts: from October to June, once a month, there is a group meeting (27 hours at all) in which they discuss about pedagogical functions and roles, they learn research methods and work out again their stage in educational contexts; from March to April a stage takes place in educational services (60 hours) in which they have to realize a qualitative research about pedagogical functions or roles; eventually students are asked to write a paper describing and reflecting on their experience (Galimberti *et al.,* 2016; Knowles *et al.,* 2008; Schön, 2006). The course aims to examine pedagogical functions played in educational contexts (Iori, 2018).

This academic year, from September 2020 to June 2021, there was structural change in this learning experience indeed the meeting groups were all online (except the first one); also the stage in educational contexts had many on line moments such as staff meetings.

Regarding epistemological reference to pedagogical frame highlighting the importance of material and symbolic rules in learning environment (Barone, 2001), this research aims first to known which elements supported or hindered this new experience, then to understand in which way the switch from presence to online model can influence the learning process.

1. Research design

In a qualitative design (Bove, 2009; Lucisano, Salerni, 2010; Kivunja, Kuyiny, 2017) we planned two steps: in the first one, from March to May, we did written interviews and used semi structured model (Milani, Pegoraro, 2011) with the goal to explore students' perception about elements that support or not the online experience as well as elements that could facilitate or hinder the stage in educational services; we also collected students' point of views about three macro components that have changed in the online experience: space, time, relationships. In the second step, from June to July, we realized a focus group of selected students to deepen some themes.

In this work we just submit the analysis results of the first phase, in which we involved 36 students, mostly women, not only to know their perspective but also to ask them to think on their own educational path, becoming in some way co-constructors of the learning process.

For participants, their age is between 23 and 51 years old, however the majority is under 35. The young age is linked to another aspect: only 17% of these students have children. About this sample, we want to underline two elements that are important to read some results: first of all most of these students have a job, part time (42%) or full time (25%); second they take a long time to travel to University (43% between 30 and 60 minutes, 37% more than 60 minutes).

2. Space and time: life and learning

Among the main issues that emerged from the analysis, there are the topics of space and time: they are relevant in many answers and they seem related to many questions and linked together.

The first consideration, and perhaps the most obvious, is that online meetings allow students to save space and time due to travel and, therefore, they can better manage their organization between private life, work and study. This result is more significant if we consider the sample features, since many students work full-time and take a long time to travel to University.

We can say that, on a personal side, this year was less tiring and permitted to gain more vital energy, however, and it is interesting, we don't find the same results on learning side: some students acknowledge that without travel time, there is no separation between private life/job and study and, therefore, they missed time to prepare themselves for the group meeting. The lack of separation also causes more weariness and more concentration difficulties during lessons because this continuum hinders mental rest between daily activities.

Under a pedagogical approach, this year there wasn't any gap both for students and us between life and learning space, a gap we use to think as a fundamental element in every educational experience (Massa, 1997; Orsenigo, 2008); the lack of distinction, happened in this year, allow us to reflect and to discuss with students about the importance of threshold time and threshold space.

At first, staying at home is certainly comfortable, especially when it is compared to be in the University, with masks and other limitations; however this space is often non privy: it is not *A Room of One's Own*, to quote Virginia Woolf (1929/2004), a room where you can be free not only to listen without interferences, even to express yourself spontaneously with your group. In many cases, taking lessons from home required a negotiation of domestic spaces, and while for some this was an opportunity to make their students' activity visible and concrete to the family, for others it generated conflicts and misunderstandings.

Then, referring to a pedagogical point of view, we want to underline how this home-space is also the space which could protect you from the experience, a student says 'I can be there, without being there'; however if this seems to facilitate at the beginning then this continuum space can

hinder the quality of the experience because, without going out, the adventure dimension (Agamben, 2015) is missing and students feel less emotional and cognitive involvement.

3. The use of technology and the problem of materiality

We asked students to give feedback about the use of technology.

On the whole, students feel that technological tools bring several advantages: they allow them to keep track of both classroom meetings and the steps of the course, and they make documents, meetings and experiences accessible from everywhere.

It is easier to meet up to work together, to collaborate on texts, to exchange thoughts and information and to build group knowledge.

Technologies also help to focus attention, facilitating some aspects of research work. Finally, through the use of these tools, students' digital skills are enriched.

Negative aspects, on the other hand, are the possibility of the student to 'disappear', thus to participate less in the group work, the difficulty to stay focused for long periods in front of the computer and the reduction of spontaneity facing the screen.

In addition, according to some students, the use of computers hinders the construction of group knowledge and it is not a suitable device for carrying out research.

Another interesting theme is the link between real and virtual, which emerges especially when students imagine the field research phase.

In a virtual classroom, a positive aspect of the use of technologies is seeing everyone's face at the same time, which is not always possible in the university classroom. In general, there is a sense of 'loss' of elements that would help to structure the experience and that could be grasped in presence.

Focusing on the expectations about the field research part (which was not yet in progress at the survey time), the distance does not allow to explore the context (considered as a set of relationships and materiality) nor to choose the observing position.

The perception is that the boundaries between the real and the virtual are gradually blurring.

Remote field research is defined as an 'oxymoron', not allowing the virtual to capture the real.

4. Relationship

From a technical point of view, the use of technology in TFO is functional: students recognize the educational gain that the course brings and the possibility of building individual and group knowledge, also in distance learning mode. In addition, there are many advantages such as being able

to connect from anywhere, saving money, making it easier to manage study and other work and personal commitments.

The element perceived by all as negative and on which a strong sense of loss is expressed is relationship: this is the huge limitation in online experience.

Although the screen provides an advantage over classroom work, i.e. the possibility of seeing each other's faces at the same time, in general the use of the computer is experienced as an obstacle in relations with the tutor and fellow students and in emotional participation in the group.

Students express the importance of aspects that we usually consider irrelevant, such as the coffee break and everything related to the presence in the classroom, all occasions of meeting, cohesion, relationship and exchange, which contribute to the learning experience and make up the university adventure as a whole (Massa, 1997; 2000).

According to some students, it even becomes difficult to perceive the other as an individual and many of them express a sense of loss that takes on the characteristics of alienation (Quaglino, 2004).

Some participants also claim, however, that the sense of belonging to the group is also created through shared work and mutual listening and that it is supported by the motivation of each student and tutor, indicating the centrality of the individual approach in the way of living the experience.

5. Traineeship online: which educational changes?

5.1 Traineeship online: between absence and presence.
Moving to a meta-interpretative level of emerged data, with the idea of identifying possible thematic cores to be deepened in the focus group, we can use some of these as a guide to read the students' experience.

The first core to be explored concerns the students' representations that the online experience produces, in relation to the theme of presence. In the students' description about the online experience, a recurring element is there is always something missing, something that is hard to name, but that is clearly and emotionally felt by almost all students (the experience isn't 'never perceived' as 100%). This offers the possibility, that maybe is a necessity, to take care about this lack, and by naming it, to help students to unravel the elements which compose the presence.

Another recurring image is linked to the technical instrument which, as well as forcing us to experience time and space in a new way, carries functionality standards in the relation and it demands new forms of presence. In this historical period, whoever uses ICT devices to connect to the world, is subject to its functionality and availability patterns (like to be always connected). So you consider yourself and are always considerate as a student or as a tutor (24/7), with all the performance anxiety that it brings.

The last recurrence about the new mode of participation in academic training life is that the online model polarizes perceptions about situations and feelings. For example, involvement and exclusion are the only opposite poles which students use to think about themselves and their classmates' presence in the 'new' virtual classrooms. In the research data one can observe the students' own responsibility in building relational patterns, as well as the need to rethink their own way of being a student or of participating to the classroom relational model through the new instrument. It's a tutor's responsibility to re-discuss the learning and attendance methods, especially with students in educational courses who can easily understand how the learning process is made up.

5.2 Traineeship online: it's a gaze's matter

A second thematic core, aggregated from the interpretations of the students' answers, is connected to the researcher's gaze. First of all is prevalent the idea that the lack of the body in the physical place of research, causes a depowering (till nullification) of the instrument of observation. The prevailing idea is that the body, behind the screen, is unable to observe the research context. As a consequence many students, thinking about the field experience, show the fear of not being able to observe everything. If on one hand this is obviously true, on the other hand this perception of lack makes evident the power of the pedagogical perspective. This gaze is always complete, because it's meta-cognitive (even in the act of recognizing what's missing). This gaze is always capable of naming what happens, through the re-modulation that the online experience carries even.

On the other hand, the research gaze cannot fail to note that the technical element is a filter, which potentially modifies all the components of the pedagogical dispositive in every educational context. In the training trajectory it is necessary to recognize that its presence establishes new ways of relating, discussing the limits and opportunities that this 'filter' imposes.

5.3 Traineeship online: 'connection problem'

A third thematic core is related to what we could paraphrase as 'connection problems'. Not only what is linked to the problems in malfunctioning of technical devices, but rather consequences derived from the use of technical devices as a medium in the relationship.

Exploring students' answers, the fears described could be an adaptation of what the psychological world calls FOMO (fear of missing out) (Przybylski, 2013). The technical instrument increases the anxiety of social exclusion: the same happens when it stands between the students and their place of research or training, increasing the fear of being excluded from the educational scene. The expression of this apprehension (which can compromise the relationship with the group and the research's place) can help students to recognize the impossibility to fully manage the research scene and also their educational scenarios.

Conclusion

Reviewing research results as a whole, the first finding is that TFO structure was able to accommodate the changes made necessary by the mandatory use of the online aspect, both about training objectives, group creation and knowledge sharing.

In particular, this year's situation made it necessary to deeply think about many elements that characterize the TFO experience, elements (space, time, material and immaterial tools, relationships, etc.) that the online mode has modified, making it necessary to discuss them again. This dialogue between tutors and students proved useful in making them more liable on the training action, a process which could also be sound for future years (regardless of the online mode).

From a theoretical point of view there is the need to focusing on what is real and what is virtual, as the online experience has changed meaning and boundaries of these concepts: this way of naming the elements of research, which emerged as central and unexpected from the students' words, opens up new trajectories of investigation.

Lastly from an educational perspective, changes of movement due to technical instrument become an absence or reduction, in symbolic terms, of the movements in the whole educational process. «If the world comes to us, we are not in-the-world» as Heidegger's famous expression goes (1978), but «just consumers [at own domicile] of the world» as Galimberti would say (2009).

For this sample of students, heavily influenced by the online experience, the biggest educational change and challenge remains how to produce the shift from being consumed by the internship experience in an online way, and how to create the necessary movement to the research or learning place, while remaining at home.

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Which Trajectories to Train 'Second Level' Educational Professionals? Reflections about a University Traineeship Facing COVID-19 Pandemic

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ABSTRACT: *The university traineeship programme could represent a fundamental place for synthesis and composition (Galimberti et al., 2016). The Master Degree Course in Advanced Educational Sciences of Milano Bicocca University elaborated a programme meant to enhance the learning potential for students, firstly carried out in A.Y. 2015-2016 and labelled Tirocinio Formativo and di Orientamento (TFO) or Traineeship and Guidance Programme (Galimberti et al., 2015). The University traineeship programme for second level educational professionals will be presented, highlighting its pedagogical assumptions. Particularly, a specific focus will be dedicated to activities of research (Fook, 2002; Koustoulas et al., 2019) in an educational service setting with the aim to explore the educational second level professional functions being implemented there (Gambacorti-Passerini, 2019).The path, proposed for the first time in the 2015-2016 academic year, has been further refined year by year also referring to focus group discussions conducted with the students at the end of the full year of operation of the training. Important changes in the traineeship have been caused by the COVID-19 pandemic: a peculiar focus of the presentation will be also oriented to expose them and the educational reflections that justified them.*

KEYWORDS: *University traineeship, Master Degree in Advanced Educational Sciences, Second level educational professional, Didactic changes in COVID-19 pandemic, Research as training gaze.*

Introduction: working in education at a 'second level'

The paper aims to propose a specific reflection about the 'second level' educational professionals' training, with a specific focus on the changes of a University traineeship caused by the COVID-19 pandemic.

Referring to a 'second-level' educational professional we mean a professional who is trained to act as a supervisor, trainer, evaluator, coordinator, or counsellor in the field of education, and who has therefore acquired a 'second-level' perspective on educational work.

Educational professionals working at a second level are involved in activities such as designing, managing, and evaluating educational

services in different contexts of intervention. These functions allow us to introduce the professional figure involved in education at a second level, who, in Italy, with the achievement of the Master Degree, has acquired the second level of specialist in training processes (Mancaniello, 2011).

At the legislative level, in the Italian context such a professional is defined as a 'pedagogist', including in this term the various functions he or she can perform. Within this formulation, in fact, coordination activities, complex planning, supervision, consultancy, training of educators and trainers, research can be included (Galimberti *et al.,* 2018). These activities, regardless of the specific function performed, act at a level that requires knowing how to use what has been learned in the training path to re-read and orient the practices carried out in the services, the logic that orient and build them, both referring to theories, and both knowing how to use elements and ideas coming from the educational reality. In this sense, the second-level educational professional should be characterized by an ability to signify what has been done in educational contexts, accompanying and encouraging educators to such a reflective habit and a research gaze. Developing such skills represents a challenge for university didactic because it entails a strong connections between thinking and acting (Schön, 1993), instrumental dimension and meaning making, theoretical and practical knowledge (Riva, 2011).

With respect to the normative and legislative definition, it should be noted that, both at a first and at a second level, educational professionals in Italy have long suffered from an uncertainty and non-definition that has contributed to weaken and make their professionalism little known and clear, also creating extremely precarious work situations (Perillo, 2017). Furthermore, such indeterminacy is also fueled by the complexity that distinguishes both the educational activity and its contexts of intervention and both the knowledge that should guide its action (Iori, 2018; Calaprice, 2017).

At this regard, the Italian context has seen in recent years a tiring and complex institutional path to arrive at defining professionalism in the educational field and the training that must distinguish it. This action is contained in the Iori law proposal n. 2656, and condensed in paragraphs 594-601 of art. 1 of law 205/2017.

Moreover, after about one year, the regulatory intent has further returned to integrate the provisions with respect to the training courses and areas of intervention of educational professionals, through an integration of paragraph 594 of the 2018 budget law, carried out pursuant to of the art. 1, paragraph 517 of the law of 30 December 2018, n. 145 (budget law 2019). This integrative effort underlines the intent to train 'non-improvised' educational professionals, trying to make more evident how defining educational work it's a complex effort, also with respect to its training, to the skills to be built and to the areas of intervention.

Following these trajectories, the contribution will focus now on a training proposal for 'second level' educational professionals, also thematizing the changes in it due to COVID-19 pandemic.

1. How to train 'second level' educational professionals? The traineeship programme of the Master Degree Course in Pedagogical Sciences of Milano Bicocca University

The formation of 'second level' educational professionals, therefore, basing on what we wrote before, can only be articulated in a complex experience, which tries to connect theoretical and practical instances.

Thus, on the one hand, it must be oriented to provide multidisciplinary theoretical perspectives to critically read and interpret what is happening in the world of services in the light of the changes affecting the contemporary world, identifying possible strategies for action and innovation. On the other hand, it must offer opportunities for knowledge and experimentation that put students in contact with the professional world, forcing them to enter a proactive professional dimension, in which research and the construction of their own possible professional trajectory become central.

From this point of view, the traineeship represents an extraordinary and necessary opportunity for the Master Degree Courses in charge of educating the 'second level' educational professional.

While it can connect the academic world with the world of work (Boffo, Moscati, 2015), on the other hand, it is a protected (Sandrone, 2013) and guided place for experimenting actions, skills, attitudes, looks, techniques and methods which, once practiced and acquired, will build the skills of future professionals. Furthermore, from a pedagogical point of view, the traineeship is configured as a place for learning by doing, a practice that does not involve so much being thrown into experience, but the possibility and need to 'learn from experience' (Mortari, 2003), refining those reflective skills that will allow the future professional to face complex, difficult and critical 'open minded' situations.

In order for the traineeship to actually be a bridge between the world of academic training and the professional world, capable of promoting active learning from experience, it must be designed in such a way as to promote particular teaching, of an experiential and laboratory type (Galimberti *et al.,* 2016); it also has to be effectively integrated into the curricular training activity of degree courses and, finally, it has to open to the world of work, assuming the confrontation with services and professionals as an essential element for planning and evaluating the proposed training.

The Master Degree Course in Advanced Educational Sciences of Milano Bicocca University devoted a particular focus on traineeship since its foundation in a.y. 2008-2009 and, starting from a.y. 2015-2016, it defined a traineeship path called *Tirocinio Formativo and di Orientamento* (TFO), or *Traineeship and Guidance Programme*, still in force, whose structure, pedagogical choices and the most peculiar aspects will now be highlighted.

The TFO program engages students for the period between October and June of the second year of the Degree Course, for a total of 150 hours

corresponding to 6 ECTS, divided as follows: 27 hours of classroom work with tutors, 60 hours for the field research, 43 hours of individual work, 14 hours of work on the virtual Moodle platform, 6 hours of participation in workshops. The participation of students is compulsory on all the time divisions indicated, while only for the hours in presence in the classroom with the tutor there is a 25% of the hours of absence allowed.

Students are divided into groups of about 15 members, each of whom is accompanied for the entire duration of the TFO by a reference University tutor. In particular, the main objective of the work desired by the tutors is to establish a setting characterized by high reflexivity (Scandella, 2006), paying attention to accompanying each trainee's learning both on the basis of their own experience, both on the basis of what each colleague shares within the group. What the TFO path would like to propose to students is, therefore, a tutor figure that leads to experimenting with an intentional reflection on the experience (Bastianoni, Spaggiari, 2016; Cunti, 2018), making it formative (Zannini, 2005).

The establishment of tutoring groups, instead of an individualized tutoring service, is conceived as a possibility to experience a learning environment (Contini, 2000) that stimulates a non-passive posture, not dependent on the tutor and aimed at building learning in a collaborative and cooperative way.

Between October and December, through face-to-face work at the University and with the guidance of the tutor, each group explores and analyzes the functions of second-level educational work, creating a written document that retraces what is thematized. In this way, each student can have sufficient foundations to approach the design of his/her own personal research project that will be developed in the next phase. In fact, starting from January, students will be called upon to carry out their own research project within an educational service, aimed at exploring a function of second-level educational work. In addition to the work in the classroom with the tutor, the path of each student is supported, since a.y. 2015-2016, by a virtual Moodle platform on which it is possible to intervene, ask questions, answer other people's questions, upload materials, in order to discuss other students' research projects even remotely.

Students are asked to carry out their research work by writing a report that will be delivered first to the University tutor and which, after his/her approval, will be returned to the service. This step is intended as a chance to offer to services a concrete restitution of students' work, but also to create the conditions for a formative discussion between students and professionals about the report.

In the next phase, between April and May, the TFO path includes participation in workshops conducted by professionals operating in the services, aimed at presenting and outlining further aspects of second-level educational work, strongly anchoring them to professional contexts and practices. At the end of each workshop, the group of participating

students is invited to create a shared writing that documents the work done, connecting it with the theoretical knowledge learned during the University courses addressed up to that moment.

Finally, in the last part of the internship, students are accompanied by the university tutor, during some classroom meetings, to reflect on their current professional identity. They are offered a self-assessment of their skills to identify strengths, criticalities and possible spaces for action in view of creating a personal development and professional growth project.

On the occasion of the last meeting, each student is asked to offer a return to the group and to the tutor of their training path during the TFO. This delivery is not provided exclusively in written form, but it is proposed to students to use any communicative and expressive tool to involve the group in crossing the meaning and significance that everyone has attributed to the months of work together and to their personal and professional growth.

On February 2020, the TFO traineeship was going on through the research phase in educational services when the COVID-19 pandemic appeared and caused a reconsideration of modalities and practices to continue students' training (Premoli *et al.,* 2021).

2. Facing the pandemic in March 2020: the traineeship in the first phase of emergency

In Italy, starting from the 22nd February 2020, all the didactic activities in University were stopped, including traineeship paths. In that moment, students attending TFO were focused on the research phase in educational services, that is the part of the traineeship where an immersive experience in practical contexts was particularly wished for.

In the first days, students' activities in the services were stopped, while thinking about how to let them continue their traineeship notwithstanding pandemic conditions (Bruant, Crowther, 2020).

So, initially, a hard work was conducted, mostly on a bureaucratic level, in order to understand how to authorize online working modalities. When this step was completed, the Coordination of TFO asked University tutors to undertake an arduous effort, working with students in order to re-discuss and re-define their research questions. This new definition was necessary because research questions were thought to be explored on the field and then, due to the pandemic restrictions, research questions had to assume a focus to be explored via online instruments (Hora *et al.,* 2020). Professionals of the services where students are inserted were also contacted to understand if they were able to tutor students' researches via online modalities. Where conditions for activities in smart working were not possible, a new context for students' projects was found.

Tutors started a new way to lead students' groups, working about research questions: the meetings, in fact, were not allowed to be carried

out in University, but they were scheduled on virtual platforms. The coordination of TFO devoted specific attention in taking care sf students' fragilities in using technologies and online instruments to manage meeting and training.

In this first part of dealing with emergency, the coordination of TFO acted quickly decisions, in order to allow students in going on with their traineeship, their research projects and, in the same time, creating the conditions for tutors to work with them in online modalities.

A specific focus of redefining TFO in facing the COVID-19 first emergency was oriented to workshops: previously, these appointments were organized in University or in the educational contexts but, for the edition of May 2020 they must be totally and quickly redefined through an on-line modality.

At this regard, the coordination of TFO tried to reflect about how to simplify this redefinition without losing the possibility of a learning chance for students. Following these directions, engaging tutors in sharing ideas and points of view, the coordination of TFO foresaw the organization of only 6 workshops (instead of the 25 of the previous year), giving custody of their management to professionals that are already expert in organizing online training events.

Because of the scant offer of workshops, the number of students attending was superior than 20 for each of them: in this sense, the Coordination of TFO undertook a specific reasoning about the shared writing as the final task at the end of the workshop. This writing was thought as a collaborative process for a small group of students, focused on a shared and reflexive re-elaboration of a common experience. The conditions of the 2020 edition during the pandemic didn't allow to pursue the educational objective of the shared writing, so, exceptionally, this task was removed from the path for the TFO experience in 2020.

Surely, this stole a formative step from the traineeship, but the effort of TFO coordination was oriented in maintaining the possibility of taking part in a workshop managed by educational professionals, notwithstanding the pandemic conditions.

After the workshops and the last students' meeting with tutors, the TFO edition of a.y. 2019-2020 ended, but an intense work started for thinking about the traineeship of the next year, that involved the coordination of TFO, the President of the Master Degree Course, University tutors, educational services involved in the path.

3. Projecting the traineeship for the academic year 2020-2021: working in pandemic conditions

Starting from the very beginning of September 2020, the Coordination of TFO undertook a great effort in thinking about how to manage the TFO path for the a.y. 2020-2021, because of the uncertainty due to the persistence of pandemic conditions (Gill, 2020).

A first step was dedicated to involve University tutors and professionals working in educational contexts in thinking about how to organize the training, with a particular focus on the research phase in services, considering the emergency conditions and difficulties.

First of all, the focus was on how to manage the meetings between students and University tutors. While projecting to maintain an online working modalities for students' groups with tutors all over the a.y. 2020-2021, it was decided to anticipate the first meeting in September 2020, in order to manage it in presence in University, taking advantage of the favourable ongoing of the pandemic in that period and of the fact that courses were not yet started, allowing an easier use of classrooms. This allowed the students and the tutor to know each other in presence, before starting an online modality of work due to the continuation of the pandemic during autumn and winter.

Tutors and professionals of the services involved in the path were also asked to think about how to organize workshops and the students' research projects during a year of health emergency. After an animated and interesting debate, the decision was to propose a changing in the usual time-table of the TFO, with the aim to position the research activities in the spring time, thinking this could have facilitated their management mostly on the field: so, workshops were anticipated in January 2021 and the research phase was foreseen between March and May 2021.

Soon, the projecting of workshops with educational professionals started. Thinking to propose them on January, in fact, meant to imagine an online modality for their management, due to the ongoing pandemic during autumn and winter. Involving professionals in this planning work since September 2020 allowed to foresee a substantial number of workshops, making possible the final task of the shared writing for the groups of students attending to them. In fact, finally 18 workshops were realized online in January 2021.

The research phase started on March 2021 and most of the students undertook their projects in the services, at least for a part. The online modality was used to face closures due to quarantine or restrictions in particular moments of the pandemic.

While the academic year was going on, the coordination of TFO and the group of tutor reasoned on how, in the difficult conditions that characterized the pandemic period, it was really necessary to assume a research gaze in order to question how the events were managed, the educational thinking that guide didactic choices about TFO, the effects of them on students' learning and the lived experience of this particular year, both for students, both for tutors.

A last happening confirmed these thoughts: in May 2021 the University opened the possibility to propose events in presence for small groups of students at the end of the semester. The coordination of TFO, in agreement with the President of the Master Degree, told tutors about the possibility to propose the last meeting with students in University and

not via virtual platforms. The tutors' and students' reactions were a mix between enthusiasm, happiness, relief, but also anxiety and strain.

In this sense, the possibility of returning in University for the last meeting showed how the changings and difficulties due to the pandemic were becoming habits, generating learning and routines. Assuming a research gaze was so significative to question the experience of the pandemic years, thinking about the effects of the re-organization of the traineeship and on 'how it worked' for students and tutors.

Following these directions, research actions were undertaken by the Coordination of TFO and by the tutors in order to implement a continuous thinking work on TFO to improve its proposal.

Conclusion

What is reported in this contribution was made possible by an aspect that has accompanied the research and traineeship activities since the start of the Degree Course, namely the attempt to take a research gaze on this experience by the people engaged in TFO path over the years.

The research posture as the ability to take a critical and curious gaze on the educational phenomena that is proposed to the trainees was also thought of as an attitude to be taken by the coordination group, by the tutors and by the Degree Course Delegate to traineeship activities, particularly during the facing of COVID-19 pandemic conditions.

In this way an attempt was made to keep the curiosity awake about the effects that the changing in the modalities of traineeship activities produced, even carrying out small research actions, still ongoing, to explore the experiences and perceptions of the students. By following this direction it was therefore possible to reflect about the structure of the path during pandemic conditions, about how to implement and modify its structure for the a.y. 2020-2021, with the aim of improving the proposal.

While proposing to students to undertake a research gaze in their traineeship, also the coordination of TFO and the group of tutors tried to assume a research posture which, articulated on an open and not rigidly pre-defined path, has led to reflect on the changings due to the pandemic conditions. In this sense, it allowed to consider the pandemic experience of TFO traineeship reflexively, generating thinking and new possibilities of training.

Such an attitude, proposed to all the people who over the years have alternated in the management of the TFO, proved to be a fruitful opportunity to undertake and implement a path of continuous exploration and reflection on the TFO itself, allowing to highlight some aspects that, little by little, can be further points of investigation and traces for continuing to think and search.

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Raising Awareness of Students' Professional Identity. An Online Internship Path for Future Educators at the University of Catania

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ABSTRACT: *The COVID-19 pandemic has drastically changed the educational systems at all levels, demanding rapid adaptation to emergency remote learning. The closure of many educational centres and the restrictions resulting from the spread of the virus have therefore required the need to rethink internship activities. The universities are forced to switch from their pre-planned 'face-to-face' model to alternative models, mainly on-line, to allow the students to experience their future work settings and to encourage reflective thinking about the internship experience. The abstract presents an online internship proposal designed and tested by the Degree Course in Educational Sciences (L-19) of the University of Catania. The design of the activities was mainly guided by the idea of self-directed learning, aimed at raising awareness of professional identity of students, through reflective and self-guided practices. More specifically, three courses have been designed: for early childhood educators, for community educators and for prison educators. Although the professional profiles are different, each path is divided into 4 modules that aim to promote analysis, planning and reflective skills. Activities are related to knowledge of the national and regional legislation, to the analysis of case studies related to educational planning, to video analysis of educational contexts. The last module is aimed at producing graphic or video material regarding students' professional identity as educators. Through the use of the Eduflow platform, 143 students accomplished their online path from January to March 2021. The contribution presents the results of the final survey of the participants' perception of the effectiveness and functionality of the on-line module. The data allow us to detect critical issues, but also the potential of a possible self-directed path device that allows students to learn how to manage themselves in their professional development.*

KEYWORDS: *On-line Learning, Self-directed learning, Professional identity, Early childhood, Community and prison educators*

Introduction

Since March 2020 national quarantine measures forced all the Universities to move their lessons on-line. The reaction of the University of Catania, like all Italian universities, in responding to the emergency of

COVID-19, is immediate. The goal is that no student should miss classes and examinations: in a week, in the University of Catania all teaching activities continue through distance and on-line solutions.

While departments are immediately closed to faculty, technical-administrative staff, PhDs students and postdoc students cannot access to continue their research activities, undergraduate students can meet their teachers or tutors only through the online platform. All the academic activities are delivered only in 'remote' mode, while sports facilities and university canteen shut down. The plan for 'distance learning' of the University of Catania, rapidly set during March 2020, provides that classes are recorded and are available online. Guidelines are rapidly prepared for organising alternatives to on-site exams and students' graduation. Reasonable alternatives are planned to support students with special needs Virtual open days for school students are organised. All strictly online (Piazza, 2020).

Curricular and extracurricular internships on regional, national and international territory are suspended, as well as post degree traineeships at regional, national and international level. Internship or practicum and laboratories are allowed only if delivered online. However, because these practical activities can hardly be replaced by distance activities, the University of Catania suggests to reduce the amount of hours devoted to internship, practicum and laboratories and allow degree courses to organize them autonomously.

The University of Catania act swiftly in response to the emergency, although the Athenaeum is not used to work remotely before the quarantine. Before COVID-19, no courses were delivered online. However, the situation is not dissimilar in the rest of Italy, where among the 96 universities, only 11 are distance learning universities and only 21 traditional universities provide courses – 131 in total – which can be attended remotely. As the data from a survey conducted by CRUI (The Conference of Italian University Rectors) show, to detect the progress of the universities relating the transition to online teaching (https://www.fondazionecrui.it/primo-piano/corona-virus-strumenti-per-la-didattica-digitale/), in March 2020 88% of the courses are offered remotely. Just over a week after the university shut down, many universities move to online-only classes, testifying to the enormous effort made by the national tertiary education system to deal with the emergency.

The transition to a distance learning system can be considered an unprecedented educational experiment in Italy. Moving quickly, and without adequate preparation, to a system unknown to most, was not the best way to facilitate faculty transition for a new delivery system. Those universities that already provided distance courses before the pandemic were even able to increase the number of courses provided benefitting from it. For those universities not still ready to deliver on-line courses, their lacking in management often «resulted in 'learning by doing' approaches or attempting to imitate what would have been the face-to-

face way of proceeding, yet using distance mode» (Marinoni, van't Land, 2020, 13).

1. Re-planning internship activities

1.1. Starting from the ground up

As well as for the internship activities, the situation caused by the spread of the pandemic makes it impossible to start or complete the activities that are a significant part of professionalism of educators (activities related to observation, planning, documentation, training, meetings with the working group, meetings with the institution's teams are largely impracticable)

The Degree Course for Childhood Educators and Community Educators of the Department of educational Sciences of the University of Catania (http://www.disfor.unict.it/corsi/l-19) seeks to find solutions to remotely redesign the internship which is mandatory for students.

Our first attempt is to plan the remote activities – despite the fact that the Department had no previous experience of distance learning – trying to keep alive their value for the creation of the professional identity of the students.

Organizing the internship appears immediately complex. In the majority of Italian universities, due to the lockdown, the practicum is suspended or organized as online lecture, study cases analysis, group discussion, since it is impossible to access all the educational centres (formal and non-formal). However, this organization drastically reduces the value of the practicum as an opportunity for students to increase their knowledge of their future work settings, to engage in continual dialogue with their workplace supervisor, to share ideas, receiving formative feedback, to encourage reflective thinking about the practicum experience (Piazza, 2020).

The degree course group in charge for the internship, composed of 6 faculty and 1 staff members, then decide to identify associations in the area that have managed to continue their activities remotely. A survey is conducted on the number of educational centres (nursery schools, kindergartens, community centres for teenagers, disabled people, elderly, refugees, etc.) to verify whether they were open to the public or they were able to provide online activities. Less than 5% out of educational centres interviewed were available to organise online internship with students.

Not being able to rely on educational centres in the regional context, the working group decide to re-design activities, trying to keep alive their value for the creation of the professional identity of the students. The hypothesis of online traineeships implemented by the working group starts from the assumption that these activities should include all the standards for good quality traineeships. They must have a clear description of field experience activities; a defined and constant tutoring;

well-defined assessment tasks; the recognition of the learning path; constant cooperation and efficient communication between faculty and students Activities should also allow students to know and navigate professional contexts and be able to promote self-reflection and self-directed learning in students.

1.2. The self-directed learning path

An on-line path is created on the idea that each student is autonomous in self-directing the learning process. The creation of online courses probably does not represent a novelty in the national panorama (e.g. see Galimberti *et al.,* 2019; Premoli, 2021), but the significance lies in having created an original path in a context – the specific one of the course of study but also of the Department – which he had never experienced remote activities.

The purpose of the activity is to promote analytical skills and critical and reflective thinking, through study, personal reflection, analysis of the documentation provided and the consequent drafting of a final report.

The internship provided is divided into three different paths which correspond to the three main professional profiles that the Degree course train:
- for educators in childcare services;
- for community social educators
- for educators in prison.

Each course is organized in 4 modules and the duration of the activities is 50 hours per module.

TAB. 1. *The modules*

Module 1 *The institutional context* (50 h): it is related to the main laws and regulations for each specific educational context (infant education, social education, prison education).
Module 2 *The pedagogical and the educational project* (50 h): students learn the characteristics of the educational and pedagogical project; they are required to analyse samples of pedagogical and educational projects carried out by local associations.
Module 3 *The operational context* (50 h): Students are required to watch and analyse different videos that film moments of work within different educational structures. There is also a guided video observation of the educators' work in the nursery, kindergarten or community facilities.
Module 4 *Connecting theory and practice* (50 h): The module is based on the production of videos, power point presentations and brochures to describe roles and tasks of the educators. Trainees are asked to make a product that serves for guidance in secondary schools.

Not being able to rely on a flexible University learning platform, we used Eduflow, that is a tool to build and run different kind of learning experience online (https://www.eduflow.com/). It combines a wide range of learning activities together in a learning flow, including videos, submissions and peer reviews.

All the modules are introduced by a 'Scheda' that defines the aims of the activities of each module; the contents to be read and analyzed; the

stimulus questions; and the assessment test. Each test is always organized as a reflection on what has been learned with the aim of increasing students' awareness of the educator's professionalism.

The path ends with the Final Report, which unites and integrates the different relationships written at the end of each module. Students are required to submit a reflective diary that includes their personalized comments on the institutional context; the design of education projects; the operational context. Students are also asked to fill in a section entitled 'What have I learned', in which they highlight the strengths and weaknesses of the path taken.

Students are also asked to share their final products (PPT presentations, videos, short stories) with their colleagues in order to encourage peer evaluation At the end of the modules, the trainee is asked to fill in a questionnaire on the quality of the experience achieved. The compilation of the questionnaire is mandatory.

2. Methods

2.1. Participants

From January to May 2021, 375 students of the degree course in Education started the online internship. Most of them followed the path of early childhood services (Tab. 2).

TAB. 2. *Number of students by type of path*

Path	N
community social educators	38
educator in prison	25
educator in childcare services	312

2.2. Instrument

At the end of the online mentorship, a self-reported exit survey was conducted through a structured online questionnaire using Google Forms. This survey was done compulsory and anonymously by each students, and informed consent was obtained.

The survey consists of both open and closed questions grouped in three parts:
  – context information (gender, path followed, and number of hours)
  – analysis of the internship experience
  – self-assessment related to the objectives of the on-line path

The first part of the survey included questions related to gender, path followed, and number of hours.

The second set of questions involved perception of the differences between the experience of the internship in presence and at distance, a general evaluation of the path and reflections on expectations, experience and possible future developments.

The third part of the survey is a self-report assessment. Students were asked to rate as either poor, fair, good, very good or excellent the level of the objectives achieved through the distance learning path.

3. Results

The obtained data from the questionnaire was uploaded to SPSS 26 for descriptive statistical analysis.

3.1. Students characteristics/context information

A total number of 143 students completed the path, and then answered the questionnaire. Of these, 104 (72,7%) followed the educator in childcare services path, 24 (16,8%) followed the community social educators path, and 15 students (10,5%) the educator in prison path. There was a higher proportion of females (97,2%) compared to males (2,8%).

Some documented educational experiences carried out outside the university context have been recognized to some students who therefore have completed a different number of modules, on the basis of the number of hours recognized. In particular, only 4 students (2,8%) attended only one module, 7 students (4,9%) followed two modules, 8 students (5,6%) followed three modules and the remaining 124 (86,0%) followed the entire path (4 modules).

3.2. Analysis of the internship experience

Data analysis highlights a good general evaluation of the online internship path (FIG. 1), which in most cases (87,4%) met the expectations of the students.

FIG. 1. *Overall assessment of the traineeship (%)*
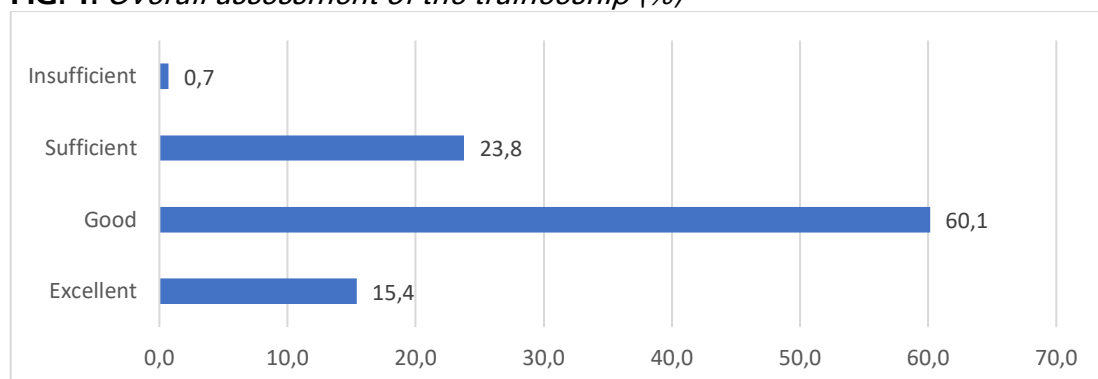
The usefulness perception of the path in relation to various areas is reported in Tab. 3. Overall, many students found the path very useful, not only for the acquisition of new knowledge (62,3%, 'always' plus 'very often'), but also for the reflections requested (58,8%, 'always' plus 'very often'). As expected, fewer relapses were reported with respect to the development of skills (22,4%, 'rarely' plus 'never').

TAB. 3. *Perception of usefulness of the path in relation to the various areas (%)*

	Always	Very Often	Sometimes	Rarely	Never
knowledge acquisition	25,2	37,1	35,0	2,1	0,7
skills developed	14,7	24,5	38,5	20,3	2,1
professional identity development	22,4	24,5	39,2	12,6	1,4
interest aroused	23,8	32,2	37,1	5,6	1,4
reflections solicited	18,2	40,6	32,2	7,7	1,4

Among the most appreciated aspects about distance training, it is worth noting the possibility of conducting the internship at one's own pace (11,9%), but also the possibility of carrying out the internship also in the pandemic phase (75,5%) without interference of any other work activities (8,4%). Students also highlight the possibility of critically reflect on different aspects of educational practice and the possibility of being able to deepen different realities, for example different and geographically distant kindergartens or communities for minors, foreigners, the disabled, the elderly. Previously, during the internship experience in presence, it was possible to come into contact only with one type of service.

From the analysis of the data, the distance path is instead less appreciated for the lack of interaction with mentors (46,2%), for the commitment required in the use of digital tools (18,2%) and for the difficulty of the proposed material (9,1%). Additional aspects were added by 26.5% of the students. Trainees report the impossibility of interacting directly with the users of educational facilities, the significantly lower involvement in practical activities and the need to spend hours in front of the PC. Students also look forward to greater interaction with tutors and mentors and greater collaboration with colleagues.

Students were also asked to indicate any aspects of the online internship that they deemed useful to maintain even after the end of the emergency period. Among the traits reported there is more the desire to keep a part of the online path for aspects that are considered complementary to the experience that can be carried out in the presence. Specifically, some trainees refer to the last module for the possibility of stimulating the creativity of educators in educational contexts, others to videos of different and often distant realities, still others the same modules 1 and 2 for the possibility of addressing issues considered very useful for their professionalism.

3.3. Self-assessment related to the objectives of the online path

In the last part of the questionnaire, students were asked to self-evaluate their path in relation to the degree of achievement of certain objectives. As can be seen from the data reported in Tab. 4, students considered particularly useful for the development of their professionalism the guided reflections on the videos observed (item *o*, 70,7% 'to a great extent' plus 'a lot'), the study and analysis of proposed materials (item *l*,

67,2% 'to a great extent' plus 'a lot') and material production for users of educational services (item *p*, 60,2% 'to a great extent' plus 'a lot'). Surprisingly, the contribution of the online internship path to the development of IT skills is considered to be lacking (item *b*, 30,01% 'a little' plus 'not at all').

TAB. **4**. *Online internship self-assessment in relation to the achievement of specific objectives (%)*

	To a Great Extent	A lot	Somewhat	A little	Not at All	Not applicable
deepening and analysis of educational contexts related to the academic knowledge of the degree course	18,2	39,9	37,8	4,2	0	0
computer skills	8,4	18,9	42,7	25,9	4,2	0
analytical skills of educational projects	16,1	40,6	36,4	6,3	0,7	0
skills related to educational design and training interventions	10,5	36,4	38,5	14	0,7	0
reports drafting	9,1	26,6	39,9	21,7	2,8	0
pedagogical and contextual skills	16,8	37,1	40,6	4,9	0,7	0
educational setting applied skills	14	39,2	37,1	9,1	0,7	0
reflective analysis of the acquired knowledge	22,4	36,4	35,7	5,6	0	0
ability to use theoretical knowledge in the context of work	11,2	28	39,9	17,5	3,5	0
resolving problems that could occur in different educational contexts	10,5	28,7	36,4	18,9	5,6	0
study of the national and regional legislation	22,4	30,8	30,1	16,1	0,7	0
study and analysis of proposed materials	27,3	39,9	28	2,8	0	2,1
drafting of analysis sheets of educational projects of some structures of the territory	18,2	36,4	27,3	9,1	1,4	7,7
structured observation of video	38,5	32,2	16,8	2,1	0,7	9,8
guided reflections on the videos observed	33,6	37,1	17,5	2,1	0,7	9,1
material production	28,7	31,5	26,6	5,6	0	7,7
readings and insights	16,8	25,2	42	7,7	0	8,4

peer review	23,1	28,7	22,4	12,6	0	13,3

Finally, the students' evaluation of the online internship (Tab. 5) underlines the great contribution of the path in provide hints on how to apply the knowledge and skills acquired during the internship (item $z19$, 94,4% 'strongly agree' plus 'agree'), several thoughts on peculiarity of specific professional contexts (item $z18$, 92,3% 'strongly agree' plus 'agree') and prompts on how to document educational interventions (item $z29$, 90,2% 'strongly agree' plus 'agree'). Also, students assessed positively the possibilities offered by the platform with respect to better time management (item $z11$, 84,7% 'strongly agree' plus 'agree') and self-directed learning (item $z16$, 84,6% 'strongly agree' plus 'agree'). A critical aspect is related to the possibility of imagining some possible solutions to the problems that may occur in the related educational contexts (item $z7$, 32,1% 'disagree' plus 'strongly disagree').

TAB. 5. *Student evaluation of online internship specific aspects (%)*

		Strongly agree	Agree	Neither agreement nor disagreement	Disagree	Strongly disagree
z1	the goals developed met my needs	8,4	58,7	23,8	9,1	0
z2	the objectives of the internship were fully met	13,3	44,1	27,3	13,3	2,1
z3	the contents of the internship proposal correspond to the proposed objectives	9,8	71,3	14,7	4,2	0
z4	the contents were presented clearly	28	47,6	18,2	5,6	0,7
z5	the methodologies used in the internship were adequate for the acquisition of the desired skills	14	55,9	23,1	4,9	2,1
z6	the methodologies used allowed the application of the acquired knowledge	13,3	60,1	16,8	8,4	1,4
z7	the methodologies used have allowed the resolution of real problems relating to professional practice	8,4	39,2	29,4	20,3	2,8
z8	the materials provided were helpful and provided adequate information	26,6	62,9	9,1	1,4	0
z9	the duration of the internship was adequate	15,4	55,2	18,9	9,1	1,4
z10	the duration of each module was adjusted	13,3	44,8	24,5	16,1	1,4
z11	the path allowed me to better organize my time	36,4	48,3	7	6,3	2,1

z12	the tutor was helpful in resolving doubts	27,3	46,2	23,1	2,8	0,7
z13	communication with the tutor was smooth	29,4	45,5	18,9	4,9	1,4
z14	the structure of the platform was clear, logical and well organized	28	51,7	13,3	7	0
z15	I was able to easily access the platform for carrying out the activities	39,9	49	7	3,5	0,7
z16	the resources offered on the platform allowed for adequate self-learning	25,2	59,4	14	1,4	0
z17	what learned in the internship could be easily applied in professional practice	21	51,7	22,4	3,5	1,4
z18	the internship path provided me with several ideas and hints on professional contexts in which to apply my knowledge	30,1	62,2	7	0,7	0
z19	I intend to apply the knowledge and skills acquired during the internship	39,9	54,5	5,6	0	0
z20	the internship has contributed to my professional development	25,9	55,9	15,4	2,1	0,7
z21	the path offered me the opportunity to learn how to manage an educational context	12,6	51	27,3	7	2,1
z22	the path offered me the opportunity to improve my ability to analyse an educational design	12,6	73,4	13,3	0	0,7
z23	the path helped me to foresee the possible problems that can occur in an educational context	14	62,2	18,9	4,2	0,7
z24	the path allowed me to use the technology properly	19,6	56,6	15,4	7	1,4
z26	it bored me	44,8	2,8	16,8	35,7	0
z27	got me involved in difficult tasks	2,1	16,8	30,8	30,8	19,6
z28	the path allowed me to effectively use digital technologies to improve my professionalism	16,8	52,4	19,6	9,1	2,1
z29	I have acquired ideas on how to document one's own educational action;	15,4	74,8	7	2,1	0,7
z30	I have acquired useful	12,6	72,7	12,6	1,4	0,7

	skills for the design of educational actions					
z31	the path allowed me to foreshadow possible obstacles and problems in educational contexts	11,2	71,3	14,7	2,8	0
z32	the path allowed me to think about the preparation of adequate intervention strategies	10,5	70,6	15,4	2,8	0,7

Conclusion

The considerations on the path achieved can be traced back to two dimensions, relating to the results of the path and the role of the degree course.

The results of the online course successfully record that around 150 students have completed their internship at a time when it would have been impossible to do it in person. While the proposed activities cannot fully replace the internship in the presence, however some activities – especially the video analysis – allow the students to know different geographical contexts and different educational practices. This would obviously have been impossible, if done in person. Furthermore, as recognized by the students themselves, not all learning contents would have been acquired in the face-to-face internship, such as the knowledge of national and regional laws and regulations, or the acquisition of the correct observation methodology.

The aspects to be reviewed concern the students' unfamiliarity in managing online learning, which would have required more constant tutoring in guiding them through the different steps of the path. Another element reported by the students as limiting was the lack of acquisition of practical skills (except with regard to the practice of observation or the creation of information products).

Finally, the recourse to the practice of cheating among some students, who often avoided the most demanding tasks by copying the work of others, is penalizing. The students were obviously sanctioned, but the question of whether and to what extent the students perceive the training path as useful for their professional growth remains open.

As for the role of the university, the impact of COVID-19 positively affected the degree course, that was able to react more promptly to the crisis and profit from new opportunities offered by the critical situation. Our experience shows that the pandemic gave faculty 'a better understanding of our current education systems' vulnerabilities and shortcomings' (Kandri, 2020); at the same time, according to what has also been highlighted by other national (Agrati, Vinci, 2020; Del Gobbo, Pellegrini, De Maria, 2020; Premoli *et al.,* 2021) and international researches (Kim, 2020), it gave the degree course the chance to re-thing educational practices and find new ways of planning activities for

students. This confirms the importance of higher education for society, that can offer a valid contribution in the crisis debates (Marinoni, de Wit, 2020), helping to minimize the severe risk of growing inequality through greater attention to the design of educational activities, responding to training needs of students.

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The Internship of the Bachelor's Degree Course in Education of the University of Milano-Bicocca in Time of Pandemic

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ABSTRACT: *In March 2020 the lockdown for the diffusion of the virus COVID-19 obliged to redefine the university teaching and consequently the internship activities of the Bachelor's Degree course in Education. The didactical coordination, responsible for student's internships, had to face the crisis arising from emergency through two supportive strategies: ensuring the continuity of the training course and helping students in crossing and pedagogically rereading what was happening. It has been possible to achieve these two goals thanks to the specificities of internship of the Bachelor's Degree course in Education, that regard: the presence of a didactical coordination; its collaboration with the university institution and with some educational experts (pedagogical supervisors); the constant involvement of local educational services. Despite the pandemic brought the impossibility to live the university and forced isolation and social-formative distance, this multiple level (triple level) of dialogue offered to the students a continuity in terms of relationships, activities and learning.*

KEYWORDS: *Internship, Didactical coordination, Supervision, Educational services, Pandemic.*

1. The model of internship in the Bachelor's Degree Course in Education

The reflection proposed in this paper is an embryonic and a choral reflection. It is an embryonic reflection because it is born from the first observations of the meeting between training paths in the Bachelor's Degree Course in Educational Sciences of the University of Milano-Bicocca and pandemic situation. In addition, it is a choral reflection because it is born from the constant dialogue between members of the Internship Office, who coordinate all internship paths in Education, and some pedagogical supervisors, who coordinate the groups of trainees in this course and who carry out or have carried out a profession that «students in training have chosen to carry out in future; they know and

are able to master skills, contradictions and specificity of this job» (Tramma, 2018a, 63).

As Francesca Oggionni and Cristina Palmieri have already explained in 2019, the traineeship in Education at the University of Milano-Bicocca runs over two academic years and is articulated in two steps: it starts at the second A.Y. with the 'Preparatory Activities', and ends with the 'Internship in host socio-educational organization', during the third A.Y. Differently to the other university activities (similarly only to some laboratories) students attend the whole traineeship programme working in small groups

> that are conceived as situated learning contexts, where about twenty students, leaded by a pedagogical supervisor, can experience the generative potential of dialogue and comparison among colleagues, by sharing ideas, doubts, questions and experiences; during the two years each student belongs to the same group. Therefore, students experience the 'pedagogical supervision', an effective training method that creates learning situations based on exchange and confrontation, with the aims of stimulating a collective reading of educational contexts, cultures, values, prejudices, referred to both informal and formal experience; of enhancing the group learning, and of sharing strategies of intervention. […] The main aim of these activities is concerned to put each student to the test, experiencing a particular and 'quasi-professional' role [arriving at the entrance] in an educational context, and improving the ability to critically reflect on his/her practice, linking it with the theories learned at university. Therefore, going back to the supervision at university allows students to detach themselves from their involvement in services, and to think about what they see and live, with the contribution of the group and the supervisor. Thus, a pedagogical reflection on actions sustains the research of specific and transversal professional skills, tools and methodologies (Oggionni, Palmieri, 2019, 53-4).

At a closer look, the plural voice of this paper is matched with the plural voice of this model of internship in Education at the University of Milano-Bicocca (Palmieri *et al.,* 2009; Oggionni, Palmieri, 2019). Actually, the didactical coordination has a triple level of dialogue.

It dialogues with the university institution, because, as we have said, the internship is a mandatory path intertwined with the Bachelor's Degree course in Education. In fact, during the second year in Education, students are included in a propaedeutic group of internship (the first year of internship, called 'Preparatory Activities'), coordinated by a pedagogical supervisor, while in their third year in Education they continue their internship in services. Also, the students' experiences in services are accompanied by the pedagogical supervision in group, that is the same of the previous year.

Another level of dialogue of the didactical coordination is with the educational services, that become privileged witnesses of students. During the propaedeutic path, students encounter educational services,

that are partners of the university and that introduce them to the educational world. In fact, in the 'Preparatory Activities' students have different occasions to meet professionals through the university context: two symposiums and two visits to educational services; in addition, each student has to carry out an individual visit. In the second year of internship, some of the educational services, encountered the previous year by students, host the trainees.

In addition to the constant confrontation with institutional context and with educational services, the last level of dialogue of the Internship Office is with the pedagogical supervisors, who encounter students during the two academic years of internship and who allow them to mediate between training and organizational needs

2. The pandemic situation as a factor of pedagogical crisis/opportunity

This need to mediate between training and organizational needs became more evident in the pandemic situation, that disrupted – as all crisis (Tramma, 2018a) – all formative system and called everybody to restore a balance in it, ensuring the continuity of the training course and crossing and pedagogically rereading what was happening.

In this period, students have continued to stay in supervision group, but in a different way. During the 'Preparatory Activities' they have continued to question themselves about the specificities of the educational work. Also in time of pandemic, the pedagogical supervision, that has become online supervision, has been planned once a month. It has aimed «to stimulate the students' ability to observe and ask questions on educational work, on the role of materiality, on the way to organize an educational setting, and on the transformation of the ideas into actions, that has to be coherent with recipients' specific needs» (Oggionni, Palmieri, 2019, 53-54). The supervisors' competence has enforced the adoption of new ways of managing distance activities, that were functional to the objectives of the internship.

During the second year of their traineeship (third AY of the Degree Course), called 'Internship in host socio-educational organization', students usually enter in an educational service: «students spend almost 200 hours in the field and have 30 hours of a parallel pedagogical supervision at university» (Oggionni, Palmieri, 2019, 54). Also during this pandemic situation, this possibility has been guaranteed by a close collaborative relationship with the university institution and with the educational and social organizations, that have hosted trainees right after the lockdown and the 'red zones'.

In fact, to ensure the continuity of the training course, the triple level of dialogue of the Internship Office turned out to be fundamental. The dialogue with the university institution allowed to understand the legislative framework and the limits, but also the possibilities to act in accordance with the aims and the model of internship in Education. This

dialogue with the university-level institution, through administrative machinery and punctual indications of the rectory decrees, enabled to have a clear framework within which to move and thus ensure the acquisition of the achievement of the training objectives. The dialogue with the educational services allowed to understand the availabilities and unavailabilities to collaborate in the time of the pandemical crisis. It allowed to redefine the terms and the possibilities of services to host trainees. This constant dialogue was important to understand the possibility to ensure the implementation of the internship in the complexity of the emergence. At the same time, it was useful to detect difficulties, needs and transformations within services and consequently of educational practices. Finally, the dialogue with pedagogical supervisors allowed to mediate between training, organizational and health needs (the health needs led to online supervision of groups, as all the university didactic). In fact, the relationship with pedagogical supervisors made possible a constant monitoring of students' needs to guarantee them support to face training, problems and toils.

However, the pandemic turned out to be a pedagogical occasion to underline once again, with the university institution, the specificities of the internship in Education. It was an occasion to question once again on the sense, opportunity, but also the responsibility of the hosting of trainees in educational services, trying to preserve the sense of all formative path. Finally, it was an occasion to bring pedagogical supervisors to defend the sense of pedagogical paths also in a time of crisis, to discover the educational potential in it and to conduce students to accept the inevitable critical issues and losses.

3. Some critical issues, losses but also formative occasions

As regards the inevitable critical issues and losses, the retreat of the university as a meeting place has brought to lose the informal dimension of learning (Tramma, 2009) and the possibility to cultivate the sense of belonging. In fact, Simona, a student who experienced online most of the pedagogical supervision, has underlined how the distance imposed by the COVID-19 made her feel a sense of defeat and a strong limitation, and how the distance has not favoured the sense of belonging.

> The distance that the pandemic has imposed on us has made me feel defeated and strong limited. I am a person who likes to feel the energy of others and the contact in presence; seeing my colleagues and my tutor through the screen of a computer did not favour the sense of belonging that I had experienced at the beginning of the path (Trainee Simona, final internship report, 2021).

Another critical issue regards the anxiety for the organization, linked with the mandatory hours of internship in services, that have hosted trainees

in a fragmentated way, depending on closures and openings of the services: «the fear of not being able to finish all the mandatory hours because of this pandemic» (Trainee Martina, final internship report, 2021).

At the end, the observative possibilities have been resized because of pandemic. The propaedeutic group could not go in territories and in educational services to encounter privileged witnesses, and it could not activate the first participant observation that allows to record educational issues beyond the declared by educators, met online. In addition, the students in the services have had some resized experiences. The daily life in educational services was perturbed and some usual practices weren't made in place in this moment. As Piera has said, many aspects changed, «such as activities, spaces, times, the presence or not of some figures» (Trainee Piera, final internship report, 2021).

However, the pandemic also turned out to be a magnifying glass on purely educational matters. It highlighted some aspects that in different historical moment probably would not be considered or would not emerge in this way

> Overall, I believe that my experience in the service is even more formative because I had the opportunity to highlight and reflect on some aspects (in the first-place relational approach, flexibility and the ability to adapt to change) that in a different historical moment I probably would not have considered (Trainee Simona, final internship report, 2021).

For example, the pandemic situation has highlighted the link between educational work and the social changes, that arises some new needs (Oggionni, 2019): contemporary or future needs, for example the need of relationship and the fear of it, or the necessity to contrast some new and problematic 'normalities' and learnings with new intentional educational projects. In fact, the pandemic situation has educated everyone in an informal way and educational services have to unveil the 'new normalities', that it has produced. They have to discover this new way to stay in the world and in relationship with others and they have to 'take a stand' in front of these new learnings (Tramma, 2018b).

Trainees could observe all these educational issues in an evident way and in a protected context, without the exposure to the crisis and its management, which instead concerned educational figures in services. They could observe «the dynamic transformations of contemporaneity [which] impact on the educational work» in a protected atmosphere and from a 'privileged position': «new needs emerge, modifying the boundaries of the educational intervention and the educators' professional skills» (Oggionni, Palmieri, 2019, 53).

> We were able to enjoy a privileged position within the experience of the pandemic, because we could closely observe the educational structures and dynamics within them, the impact of the pandemic on children and

> adults, but without the responsibility that has been experimented by educators. What I have learned is that if educational work was already in continuous movement and transformation, now the skills to reinvent oneself are even more important to ensure a service that is up to the expectations despite all the difficulties (Trainee Chiara, final internship report, 2021).

> This emergency situation […] will leave an indelible mark on the lives of all of us […]. It is necessary to read and understand the situation in a formative way, opening the possibility to re-invent the daily life in services: the spaces, the tools, but also the projects and the formative paths, that allow to […] understand and give sense to this atypical situation (Trainee Sofia, final internship report, 2021).

The pandemic has also highlighted the risk of educational services to adapt uncritically to the contemporary changes, becoming collusive with the contemporary educational atmosphere (Boarelli, 2019; Sinopoli, 2019).

For example: the production of videos or photos for children and families by educators approaches the caregivers with the educational services, but also it legitimates the neoliberal link between transparency and control (Landri, 2018) by families themselves, who are increasingly considered as costumers and not as citizens.

Moreover, the use of technology in early childhood is problematic and, in some cases, it has brought educational services to became necessarily and uncritically «techno-enthusiasts» (Ripamonti, 2017/2018, 4, translation by the authors), accelerating a process already ongoing before the pandemic outside the educational services.

Another collusive issue regards the total adhesion on health dispositions, that in some cases has legitimated the simplification of the daily life in services, despite the educational aims and sense of the practices. In certain cases, the pandemic was used to simplify the daily life in services.

> Another critical aspect that I would like to highlight is the dispositions of the ATS in Bergamo, which, in my opinion, limit children's possibility to experience their autonomy. In particular, I am referring to the use of water bottles during lunch (only the educator can touch the water jug and pour it into the water bottles). I am also referring to the toys and materials positioning not at child height and to the children's possibility to use only two kinds of games during the day. Could there be other solutions to contain the contagion but at the same time to allow the development of the children's autonomy? […] I therefore wonder if it is done for the educators' convenience and in general of the service because it is difficult to clean the games of all classroom at the end of the day (Trainee Anna, final internship report, 2021)

Where the dispositions were critically applicated, the pandemic has underlined how it is necessary to mediate between external

rules/regulations and educational realities/needs in the educational work. An external rule could not be considered as «right in itself» regardless of «the concrete social relations between human beings» (Tramma, 2012, 30). For example, as Anna has said, in some educational services «the distance, imposed by pandemic», is impossible: there are some «moments of care» and some «gestures that [...] are impossible to eliminate» (Trainee Anna, final internship report, 2021).

The pandemic has also shown how a crisis could become an educational opportunity, that unveils some inedited issues for the educational work. In fact, the pandemic, in some cases, has brought to increase interrogation about the meaning and the aims of the practices. In addition, for example, some operators of educational youth centres, closed because of pandemic, have gone to meet the youngsters in the territory, sustaining the logic of street, even if they aren't street services. Finally, the smaller groups, have allowed to focalize more on individualities and their needs: «probably this pandemic has allowed a more attention to the children in the class, thanks to the reduced dimensions of groups» (Trainee Martina, final internship report, 2021)

4. The group as a protection factor

All these issues emerged in training groups, that are first of all pedagogical supervision groups. Also in time of pandemic, this group experience allowed to test a fundamental issue for the social and educational work, where «supervision consists of a process of reflection, learning, evaluation and control, that is developed through the relationship between an expert professional and a worker or group of workers seeking professional support» (Oggionni, Palmieri, 2019, 55; Oggionni, 2013). Therefore, pedagogical supervision is an essential formative context (before and during the educational work) in order to promote reflexivity as a professional complex skill: through reflection, future educators can try to «gain a deep understanding of the underlying intentionalities in [...] educational agency, and [...] to identify the generative elements of [...] practices» (Striano, 2017, 181).

Despite the distance, the group became a protection factor in front of the pandemical isolation, that has amplified and accelerated the widespread process of individualization (Beck and Beck-Gernsheim, 2001), which also involves the production of knowledge: «the group has never felt abandoned or unable to achieve its goals» (Trainee Martina, final internship report, 2021).

The university became again a 'small territorial training laboratory' (Tramma, 2003), that has allowed to open spaces for discussion, despite the emergency.

> It was a path of growth and enrichment through our discussions, comparisons and learnings. Sharing my point of view on the topics

covered, reflecting on the point of view of others and opening spaces for discussion was possible despite the emergency (Trainee Simona, final internship report, 2021).

This issue and students, their reaction during the pandemic, reconfirm the 'goodness' of the model of internship in Education at the University of Milano-Bicocca (Oggionni, Palmieri, 2019). In this direction, for example, Sara has said that the «internship is a valuable tool: the pedagogical rereading of one's experience, at the same time as the placement in a service, is the most useful experience that a university can offer» (Trainee Sara, final internship report, 2021).

Also in pandemic situation, the supervision of the groups and this model of internship have allowed to face the complexity. They have allowed to sustain the formation of future educators as «reflective professionals» (Schön, 1993), who could «recognize the different factors that influence the contexts» where they will work, and «to deeply understand them, by linking the theories they have learnt with the practices they have developed» (Oggionni, Palmieri, 2019, 57) and with the pandemical observation they have done in educational resized services during a time of social-economical-health-educational crisis. Therefore, the internship has allowed to sustain – also in this emergency situation – the possibility to critically thinking, to reflect on the most suitable intervention and on the possibility to balance skills learned by experience with theoretical knowledge (Oggionni, 2016).

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Inspiring and Preparing a Comprehensive View of the Professional Role of Educator: A Simulated Traineeship Experience

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ABSTRACT: *The simulated traineeship experience that inspires this text has involved second and third year-students of the Sciences of Education Course in the field of the nursery and childcare services during the first COVID-19 lockdown. It has followed a 'Simulated Educational Enterprise' model that has been successful in high schools in the first years of 2000. In this case, a training space has been set up, that was preparatory to the opening of the service (legislation, regulations, planning); as well as a dialogue with pedagogically trained educational professionals, that are already engaged in early childhood education, concerning activities in which University trainees are involved. A theoretical/practical education has been developed concerning aspects that the trainee, in reality, seldom or only on an executive level confronts, since he/she more often uses, in real traineeships, theoretical and physical materials that are already fitted by structured educators. Therefore, the simulated traineeship experience has been shaped as a sort of incubator for developing a solid connection between science, practice and legislation. In this paper the strong and the weak points of the simulated traineeship are discussed, as well as further opportunities of development, in order to save some positive aspects and include them in the future pre-service training for educators.*

KEYWORDS: *Simulated traineeship, Pre-service training, Early child education and care, Narrative research.*

Introduction

COVID-19's health emergency has imposed several challenges to the education system. Avoiding the mere transposition of the traditional didactics into a web-based learning has been the main objective both of schools and universities. In Italy, as the wide participation in the session E.4.1[1] of Scuola Democratica's Second International Conference demonstrated, university departments of education paid close attention to the quality of the traineeship, in order to allow students to experience

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[1] The title of that session is *Training Educational Professionals During the Pandemic: Impact, Learning, Strategies and New Didactic Challenges Faced by The University Traineeship*.

the practical learning and, consequently, to preserve the connection between the theoretical knowledge and the practical skills that characterize the educator's professionality.

Therefore, several alternatives to the traditional traineeship have been designed, starting from the Virtual Internship (Agrati, Vinci, 2021) and Virtual Labs (Alioon, Delialio lu, 2019) where trainers mostly blend together webinars, and the practices of the Simulated Learning Environment (Bosman, 2002; Kaufman, Sauve, 2010; Dalla Rosa, Vianello, 2015; Pensieri, Alloni, 2019; Landon-Hays *et al.,* 2020), that are already steady in sundry field of the professional training, primarily in preservice medical training (Martins *et al.,* 2012; Hau *et al.,* 2020).

In the University of Cagliari, the simulated traineeship experience involved second and third year-students of the Sciences of Education Course in the field of the Early Child Education and Care (ECEC) during the first COVID-19 lockdown.

It has been inspired by the 'Simulated Educational Enterprise' (Moise *et al.,* 2014), that is a training model that was successful in high schools of business in the first years of 2000 and that came again to the fore in the context of School-Work Alternation (Consolini, 2012; Greco, 2018).

In the case that is going to be introduced, the training space has been set up like a preparatory environment where tutees could experiment the phases that precede the opening of the educational service and face personally the responsibility of being prepared for that. Preliminary aspects included were the study and reflection upon national and regional legislation, internal regulations, and standard for the planning; then the dialogue with pedagogically trained educational professionals (that are already engaged in early childhood education) was fostered. Furthermore, tutees were asked to design some activities they could have provided if they had been engaged in a real service, including the manufacture of the related educational tools.

1. General objectives and formative objectives

Principally, this simulated traineeship tried to meet students' difficulties in starting or completing their traineeship during the first wave of COVID-19 pandemic. Nonetheless, this was the opportunity to correct some problems that arise during the traditional traineeship[2] such as:
- The students' need of deepening and comprehension about several theoretical and practical aspects that trainees, during the traditional traineeship, seldom confront with or that they play on an executive level;

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[2] Qualitative data about the traineeship are collected at the end of every traineeship by the faculty's traineeship board, through questionnaires and final reports filled/written by both students and host tutors.

- Student's poor awareness about the foundation of theoretical and physical materials that, in the real traineeship, are already fitted by structured educators;
- The sometimes lacking close and continuous connection between the university's tutorship and the trainees.

Despite of the emergency situation, the main educational objectives were preserved. They can be classified in six categories:

1. Knowledge about ECEC legislation;
2. Knowledge about ECEC's services organization (professional roles, spaces, daily activities);
3. Analytical and reflective skills concerning education needs of ECEC beneficiaries;
4. Analytical and assessment skills about internal regulations and education plans;
5. Educational design skills and implementation skills;
6. Social skills.

2. Organisation, tutor inputs, educational methods and trainees outputs

The first concern was the organisation of the simulated traineeship, in order to ensure to the tutees the same level of engagement and the same ratio between the starting possibilities and the educational effects then a real traineeship. Moreover, the optimal balance among tutees' engagements and between tutor's and tutees engagement were strongly wanted and pursued. Indeed, one of the main risks was overburdening students with all the difficulties and responsibilities of being trainees in the pandemic emergency, and, consequently, making them perceive a sort of unfairness. In fact, the perception of justice, among other factors, can contribute to carry out deviant workplace behaviours (Syaebani, Sobri, 2013).

As the model of the Simulated Enterprise require (Costea, 2010), the climate of this traineeship was similar then in the reality, as well as the organization was similar then smart working one (working hours, discipline, working situations, tasks development).

Tutors planned two meetings per week: one at the beginning of the week, in order to provide students with the preparatory instruction about the task, and one at the end of the week, in order to foster the dialogue, the exchange of ideas and results, and to encourage students' assumption of responsibility.

Tutors also created a chat group on an instant messaging application and invited tutees to participate in the daily interactions, during which instant support was given from 9am to 5pm, each week from Monday till Friday.

Furthermore, other inputs, as the teaching materials (Lei, 2018), the individual support for the comprehension of the difficult topics and tasks, the coordination of the working groups, the mentoring moments (Colvin,

2015), and the using video-tutorials (Bonaiuti, 2010), strengthened the general perception of being a work team in training.

Methodologically, the single activities that composed this simulated traineeship were inspired by:

- Mastery Learning[3] (Bloom, 1973);
- Jig Saw[4] (Aronson, 1978);
- Flipped classroom[5] (Bergmann, 2014);
- Analogy and Analogical Reasoning method[6] (Gentner, Smith, 2012);
- Learning by doing[7] (Dewey, 1986; Smart, Csapo, 2007);
- Reflective workshops[8] (Peters, 1991; Ruch, 2002; Baldacci, 2005);
- E-mentoring[9] (Ensher, Murphy, 2007);
- Project-based learning[10] (Kilpatrick, 1918);

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[3] At the beginning of the preparatory activities, tutees were asked to read the articles about the first steps of child development and the growth indicator, that are published on Bambino Gesù hospital's website. Then, they had to integrate the information with peer reviewed articles they found in selected search engines and annotate the most important aspects. Finally tutors invited them to link the information they found with the Developmental Psychology theories they studied during their university career.

[4] During the first week trainees had to download to their devices the documents concerning the whole set of rules about ECES (national and local legislation/regulations) that tutors uploaded on the Moodle page of the course. Students were divided into groups, each of which had to study an assigned part of the documents according and make a presentation to share with the other groups.

[5] In the second week, after a brief presentation of what a Treasure Basket by Elinor Goldschmied is, including some benefits for baby's development, like fine motor skill, hand-eye coordination, foundation for conceptual learning and independent play (Hughes, 2015), tutor asked tutees to search for the foundation theory of this tool and the criteria for including the objects in the treasure basket. Then tutees had to realise their own Treasure Basket at home and, finally, make a deep presentation of their tools, giving the scientific justification of every choice, like they were training the colleagues.

[6] In the web, trainee had to search for an internal regulation document and an education program of a Sardinian ECEC service. Then, they had to convert those documents into a Microsoft word document and underline with different colours what of each document was referred to the national and/or regional legislation, what was referred to the knowledge about the child development and needs and what was referred to the internal methodological peculiarities. Finally, each tutee was asked to write a short review of those documents, in order to facilitate the discussion with the colleagues.

[7] Among the other practical workshops, in Tactile Path workshop tutees were asked to build their own Tactile (or sensorial) Path, a tool for sensory and motor development (Cooke, 1999), using natural materials like grass, stones, leaves, water, sand, gravel. In addition, they were invited to make a Plant Box (for +24 months aged children), sowing the seeds, loosening the roots, planting the basil, the parsley, and other aromatic plants.

[8] At the end of each activity, collective reflection where encouraged. The main topic of the reflective workshops was the link between theory and practice; the ethical issues of the education in ECEC services; the adequacy of the ECEC's legislation; the consistency between the business plan and the educational project of ECEC services.

[9] In addition to the constant support, students had the opportunity to meet video-conference application several experts who work in the field of ECEC's services. That was important for promoting the mirroring, exchanging of narratives, and reducing some student's fears regarding issues that are related to the work practice.

[10] During the week called 'Music week', inspired to the Music Learning Theory (Gordon, 2003), trainee designed some activities they could propose to the children. Therefore,

- Metacognitive workshops[11] (Arredondo and Rucinski,1994);
- Video observation and annotation[12] (Sørenssen *et al.,* 2019).

The whole organization, as well as the methodological frame we have just introduced, aimed to make evolve the concept of 'simulated experience' that is the foundation of common simulated training into 'experience of simulation', that means creating a real experience starting from a condition of experience deprivation, namely deeply embracing the foundation of the active learning in the professional training field, despite of the pandemic, and experiencing a tangible example of resilience as a guiding attitude for the future working and social life (Csikszentmihalyi, Schneider, 2002).

Full-time trainees completed their traineeship in a month, while part-time trainees did that in forty-five days. At the and of the training they wrote a final report, where they described their individual training narratives related to the simulated traineeship. Further research will analyse with a comparative approach the data collected through these reports and the reports written after the face-to-face traineeships.

3. Qualitative analysis of the simulated traineeship

The strong points of the realized experience have concerned the chance provided to the educators to-be, to look at their professional role in its foundations: deepening the theoretical perspective from which it descends; taking part in the planning of the simulated activities, by shaping the specific materials for these (an important manual construction that leads to the understanding of the object's pedagogical meaning); examining the normative perspectives and offered possibilities; developing an entrepreneurial look on their activity.

The weak points lay intrinsically in its status of simulation:

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they were asked to make a project work, in accordance with Parmigiani and Traverso guidelines (2011). They had three options to develop:

1. Listening education. Through the association between the sounds and the images of the producing object/subject, educator furthers fine listening skills and trains children in the recognition and the discrimination of the sounds.
2. Playing music with children using self-made drums. Educators make the drums shown in a tutorial and set up an educational activity concerning the concepts of sound, rhythm and tempo.
3. Singing meta-music songs (songs that make reflect about music). Educator chooses a song whose lyrics and melodies help children in understanding the concepts of musical notes, volume, intensity. Educator can do some exercise to warm up the voices with children.

[11] Trainees were involved constantly in the reflection about their own learning processes. At the end of each activity tutors shared with tutees the knowledge of the methods they applied, in order to provide to them the skills they can use as trainers.

[12] During the week called 'Week of the Nature', inspired to Bortolotti's principles of Outdoor Education (Bortolotti et al., 2020) trainees observed the video recorded during the project *Educational Garden*, powered by Municipality of Florence, and annotated the most important aspects (educators' inputs, children outputs).

1. the impossibility of a real interaction with young children and their families and with colleagues represents an objective limitation in obtaining an approach's validation.
2. the limited real work circumstances hinder the 'reflective professional' in developing the implicit and internalized knowledges (Palmieri *et al.,* 2009; Mortari, 2012) that are part of their education.

Conclusions

Since it is often pointed out that University traineeships are not embedded in a comprehensive perspective of the professional role of educator – whereas this perspective would entail the educator effectiveness, in terms of an authentic professional and general education (Oggionni, Palmieri, 2019; Cornacchia, 2020) – it is possible to suppose that the described simulated traineeship approach could be valued as a preparatory step to the real traineeship, on the model of the teaching indirect traineeship (Bolognesi, D'Ascenzo, 2018).

Possible threats that can affect the achievement of this development are the shortage of university tutoring staff, and the difficulties in managing the whole process, from the indirect traineeship to the real traineeship.

Nevertheless, a Peer-tutored traineeship, in accordance with peer tutoring theories (Gordon, 2005) can be designed. This would mean engaging master's degrees students, which are studying to be pedagogists, that are coordinators of educational services, in the Bachelor's Degree traineeship organisation, management, implementation and assessment.

As Watson points out (Watson, 2003), the University as institution, needs a continuous reworking of its specific and general goals, towards two different directions: its connection with other social institutions, in particular in the pedagogical filed, a tight alliance with other educational services and settings; its connection with the students' vocations, ambitions and perspectives, that may change for cultural and historical reasons in the course of time. Both objectives must be steadily interconnected and balanced. The simulated traineeship experience that has been presented in this text could have been a way to maintain this fundamental task over the difficult time of the first wave of the COVID-19 pandemic and to show a renovated approach to face it in the future.

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Challenges and Weaknesses.
Differentiation, Digital Transformation,
Professionalism, Autonomy

The Remote Learning Transition at the University of Bologna: Student Experiences and Expectations for a Post-Pandemic Future

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ABSTRACT: *The outbreak of the COVID-19 emergency has deeply affected the university institution, contributing to significantly change the student experiences. Starting from the first week of March, a few days after the suspension of classes, the University of Bologna has transferred online – in synchronous mode – most of its teaching. This transfer, therefore, did not fit into a path already structured and oriented to online teaching: it was quite a necessity to implement, in an emergency situation, tools and practices for remote teaching. Starting from data deriving from the survey 'Living and studying at the time of COVID-19', carried out within the Permanent Laboratory on Student Housing in Bologna – HouslNgBO, which made it possible to collect over 16,000 questionnaires (equal to about 20% of students enrolled at the University of Bologna), the paper highlights the heterogeneity of the population under investigation, paying particular attention to non-resident students, bearers of peculiar experiences in living the relationship with the city and the university, and for whom the University of Bologna represents a privileged observatory. Focusing the attention on the experience of online teaching allows to deepen the different orientations shown by students characterized by different status (residents, off-site, commuters) and backgrounds. Some aspects of this new type of teaching, in fact, were particularly appreciated by a specific target of students and to a much lesser extent by others. Investigating these aspects is useful in view of the questions that the post-pandemic future will reserve for the whole field of education and, in particular, for higher education: how this experience, once the emergency phase is over, can it be effectively enhanced?*

KEYWORDS: *COVID-19 Pandemic, Higher education, Emergency remote Learning, University students.*

Introduction

Starting from March 2020, the global spread of COVID-19 has led society to face completely new challenges: if the pandemic has mainly affected, from a strictly health point of view, the elderly and fragile population, its effects concerned, in terms of socio-economic consequences, the entire population (Eurofound, 2020), deeply affecting also the education

institutions and the universities, and contributing to significantly change the living conditions and experiences of students (Aristovnik *et al.,* 2020).

Starting from the results of a survey on the conditions of the students of the University of Bologna conducted during the lockdown, the paper focuses on students experience of online teaching. The pandemic has had peculiar repercussions on college students – characterized by a heterogeneity of socio-cultural characteristics, living conditions and paths (Bristow *et al.,* 2020) – resulting in a profound transformation of the entire university experience for students whose daily life had been marked up to a few months earlier by the usual attendance of classrooms, libraries and meeting places.

The heterogeneity that characterizes the university student population has meant that the pandemic has an impact on it in a different way: variables such as the student condition (full-time vs part-time students), the student status (off-site students, commuter students and students residents in the city where the degree course is located) and the characteristics of the house in which the confinement period was lived significantly influenced the way in which remote emergency teaching was experienced and assessed. Understanding the strengths and weaknesses of this 'new' teaching method, as well as the needs and requirements of students, makes it possible to adopt – and recalibrate – support interventions and to implement ad hoc services for an extremely heterogeneous and differentiated population, in order to increase its effectiveness.

In the next paragraph some useful elements derived from the research literature will be introduced to problematize the transition to remote teaching and the different distinctive features that characterize the university student population; the second paragraph will illustrate the survey tool, the measures and the analyzes carried out, deriving from the 'Living and studying in the time of COVID-19' survey, promoted by the University of Bologna in collaboration with the Urban Innovation Foundation, the Student council and student associations; in the third paragraph the main research results on the preference for online versus face-to-face lessons will be discussed; the concluding reflections are completed by a look towards a post-pandemic future in the last paragraph.

1. The remote learning transition and the great heterogeneity of the university student population

The health and social emergency linked to COVID-19 pandemic has forced a significant change in the educational offer provided at all levels of education, including higher education, leading to a necessary and sudden transition to distance learning. The interruption of face-to-face lessons has upset the habits of students and teachers within all

universities on a global scale, forcing them to turn to remote lessons to guarantee, at least potentially, the right to the education.

However, the emergency adaptation to the online modality differs considerably from a careful and intentional redesign of the courses in alternative modalities. Talking about online education means discussing about multiple solutions, characterized by several designs (distance teaching, distributed teaching, blended teaching, online teaching, mobile teaching, etc.). With reference to the teaching put in place following the outbreak of the COVID-19 pandemic, it is perhaps better to talk about emergency remote teaching (Hodges *et al.,* 2020), so as to differentiate it, even from a terminological point of view, from the most more general online teaching, which can count on a large body of studies (Means *et al.,* 2014) and which is characterized by an articulated programming, necessarily absent in an emergency situation that led to the transition to this mode in a few days. Adopting synchronous or asynchronous modalities, working on the types of interaction allowed, and on the resources made available to students has in fact a decisive influence on teaching methods implemented.

Bearing in mind this distinction, proponents and supporters of the move to online underline several strengths that would derive from it: among all, the approach to the idea of an university education capable of reducing costs and expenses (of teaching and learning) and the consequent possibility of making this type of education accessible also to those engaged in contextual work (or care) activities. Online education, in other words, would be characterized by greater adaptability to different student profiles. Furthermore, from a purely technical point of view, the online environment could make it possible to avoid the implementation of some dynamics that create imbalances in participation: inhibitions and social reticence would be more evident in presence than remotely. At the same time, online there would be a greater possibility of a discussion that does not remain anchored to the physical space of the classroom: in other words, it would be easier to reach a process of building collective knowledge. Finally, remote teaching would open up to a new time frame: if university education has always been traced back to a specific individual's life span, remote learning could lead to an increasingly accentuated lifelong and lifewide learning (Kalantzis, Cope, 2020).

At the same time, in the pedagogical educational debate, despite partially conflicting research results, remote learning has the stigma of teaching of lesser quality than face-to-face lessons. A central function of the education system has always been that of social and cultural formation: what kind of sociality is possible when students meet their universities only in the digital space? In the online, there would be a reduction in interactions and collective learning methods, for which physical presence is fundamental. Equally relevant are obviously the issues related to access inequalities within the new educational spaces. Furthermore, there is the doubt that the online option could become, according to a neoliberal economic perspective, an economically

advantageous option for universities (or, more generally, institutions) merely interested in increasing their degree of attractiveness (and, consequently, their number of students) (Peters, Rizvi, 2020).

To try to correctly assess the impact of teaching methods on students, we cannot ignore an assumption, consisting of the multiple lines of distinction that characterize the university student population.

A first aspect concerns what we can define the condition of the student in a broad sense: being a full-time student or part-time student (as a worker or mainly a worker) significantly changes the way of living the university experience. Those students who are forced to reconcile their student experience with other areas of everyday life must find a way to reconcile the different roles they cover: high levels of Work-Study Conflict can negatively affect the well-being and quality of life of student-workers (Brunel, Grima, 2010; Capone, 2018). And switching to online mode could in some cases be an advantage for certain categories of students.

A second, extremely relevant difference concerns the student status. In general terms, three different profiles can be distinguished: off-site students, commuters and residents of the city where the degree course they are enrolled in is located. This differentiation involves several aspects, including economic ones: university fees and life outside the home (or commuting) represent a considerable expense, and distance learning could provide an alternative solution capable of facilitating, at least in part, those students who experience economic difficulties. At the same time, however, the university experience is strongly intertwined with the building of meaningful links with colleagues and teachers: these relationships represent fundamental resources for accessing information, cultural codes and support networks that affect the progress and success of educational courses. These relationships represent an even more significant element for off-site students, constantly engaged, in addition to educational activities, in the construction of meaningful social networks, in the discovery of a new urban context and in the organization of a daily life that are progressively independent from the family of origin. In other words, the relational dimension assumes a central role: attending classrooms, libraries and study rooms, as well as the social, cultural and political realities located in the city where the course takes place, means living a university path that is not aimed only at achievement of the degree certificate, but which is a source of educational and personal growth (Bozzetti *et al.,* 2021). A growth that, online and remotely, may not take place, or which would be at least severely limited. Furthermore, success and greater degrees of preference of face-to-face lessons highlighted by several surveys would be linked not only to the quality of face-to-face teaching, but also to a whole series of services that characterize the university experience: access to libraries, housing aspects, services reserved for students. Again, aspects that mostly need a physical presence.

Finally, a third dimension can play a key role in influencing the opinions and determine the preference for one type of teaching each

other: the housing condition. Following the measures adopted to contain the COVID-19, the spatial, temporal and organizational boundaries associated with the domestic environment have become more fluid: the educational, working, recreational and relational dimensions were less distinct, certainly from a spatial point of view. In particular, classes and didactic activities have no longer been limited by rigid spatial and temporal boundaries in classrooms, libraries, study rooms. The need to '#stayhome' has not only blurred these boundaries but has also made it necessary to increase the multifunctionality of the environments themselves (Stokols, 2018). In other words, we were faced with a new model of residential life, which has become extremely pervasive. At the same time, taking lessons from home implies a transition between different ways of 'being': the transition from being a member of a family unit, own or acquired through cohabitation with roommates, to being an online student implies a real ontological challenge (Quay, 2020). The influence of living spaces on the wellbeing is reported in the literature also in relation to the contingent situation and to the university students (Amerio *et al.,* 2020). The study environment can therefore strongly influence the preference, or aversion, for a specific type of teaching: as already underlined by several surveys conducted over the last few months (Aristovnik *et al.,* 2020; OVE, 2021) the possibility of using adequate spaces in which to follow the lessons is essential.

The aim of this paper is therefore to analyse if and to what extent students' orientations towards remote learning differ according to their status and conditions and way in which they live the university experience. Specifically, it is possible to specify three different hypotheses:

- first of all, it is hypothesized that the greater flexibility offered by online lessons may make them more appreciated by those who are part-time students: it would be easier for them to reconcile the different roles of everyday life and limit the Work-Study Conflict;
- similarly, it is hypothesized that the student's status may also be relevant. Indeed, students who usually benefit to a lesser extent than their peers from the daily sociability of university life may show higher degrees of satisfaction with the online mode. This may be especially true for commuting students, who may also benefit from not having to travel to attend classes. In other words, and to connect these first two research hypotheses, the space-time barriers that often force many students to give up, in spite of themselves, to participate in lessons could be broken down through online;
- finally, given the importance of the adequacy of the living spaces, it can be assumed that some structural characteristics of the house (availability of spaces in which to follow lessons and to study without being disturbed; presence of a fast and stable internet connection) may have influenced the way in which the lessons were

conducted in online mode and, consequently, the preference for a particular learning method.

2. Materials and Methods

To answer these research question, we focused on a specific case study, that of the students of the University of Bologna, useful to investigate in particular the case of non-resident students, which were equal to 57.0% of the over 63,000 students enrolled, taking into consideration only the courses based in the city of Bologna (Gentili *et al.,* 2018).

In detail, we will refer to the survey 'Living and studying in the time of COVID-19', part of the broader *HouslNgBO project*, promoted by the University of Bologna in collaboration with the Urban Innovation Foundation, the Student Council and student associations, mainly aimed at deepening the students' housing conditions and, more generally, the broader aspects of student life. The involvement of the Student Council aimed to better defining the areas to be explored and the way in which this could be effectively done, through a co-construction of the survey tool with the students themselves. In this way, we wanted to ensure that the research had as little self-referential cognitive cultural framework as possible: the main challenge for the academic world, we believe, is to try to imagine, in a situation of uncertainty such as the current one, research tools and possible solutions capable of preserving the peculiarity and diversity of the experiences of university students, starting from the point of view of the students themselves.

From the first week of March 2020, a few days after the stop of classes, the University of Bologna transferred more than half of the courses online – in synchronous mode – and then passed within two weeks to distance learning in almost all courses. It was not, as already pointed out, to implement an already structured project of online teaching, but to build a set of tools and practices for remote emergency teaching (Hodges *et al.,* 2020; Colombini *et al.,* 2020).

The empirical study was carried out through a mixed methods technique: the survey, carried out between May and July 2020 with the CAWI method, was conducted by administering an anonymous online questionnaire to the students, which made it possible to collect over 16,000 responses, equal to about 20% of students enrolled at the University of Bologna. Through the interviews, carried out online between the end of April and the beginning of July 2020, the experiences of 48 students were deepened from a qualitative point of view.

2.1. Measures
To analyze students' attitude and expectations towards remote learning, we investigated several dimensions: difficulties, level of satisfaction, participation, previous experiences of online teaching, available devices.

TAB. 1. *Socio-demographic characteristics, university related aspects, student condition, student status and housing conditions of the survey respondents, absolute and percentage values, preferred learning method (and standard error).*

Variables	Number	%	Lesson Mode Preference (and Standard Error)
Gender			
Female	7.075	68.9	0.378 (0.004)
Male	3.227	31.3	0.381 (0.005)
Country of birth			
Italy	9.651	93.7	0.377 (0.003)
Foreign Country	651	6.3	0.401 (0.012)
Family Educational Qualification			
No Degree	6.297	61.1	0.390 (0.004)
Degree	4.005	38.9	0.361 (0.005)
Cycle Degree			
First Cycle Degree	5.582	54.2	0.374 (0.004)
Master	2.994	29.1	0.366 (0.005)
Single Cycle Degree	1.726	16.7	0.417 (0.007)
Year of Enrollment			
Freshman	3.207	31,1	0.349 (0.005)
No freshman	7.095	68.9	0.392 (0.004)
Disciplinary Area			
STEM	4.401	42.7	0.385 (0.005)
No STEM	5.901	57.3	0.374 (0.004)
Average Grade			
<25	1.406	13.6	0.442 (0.008)
25 / 27	4.017	39.0	0.397 (0.005)
28 / 30	4.879	47.4	0.346 (0.004)
Scholarship			
Yes	2.623	25.5	0.354 (0.006)
No	7.679	74.5	0.387 (0.003)
Active Participation in Online Lessons VS Face-to-Face Lessons			
Lower	3.425	33.3	0.238 (0.004)
Similar	4.341	42.1	0.393 (0.004)
Greater	2.536	24.6	0.543 (0.006)
Condition of the Student			
Full-time student	9.556	92.8	0.366 (0.003)
Part-time student	746	7.2	0.541 (0.012)
Student Status			
Resident	1.440	14.0	0.389 (0.008)
Non-Resident (“Fuori-Sede”)	5.934	57.6	0.335 (0.004)
Commuter	2.928	28.4	0.463 (0.006)
Difficulties: Connection			
None	4.959	48.1	0.425 (0.004)
Some	2.942	28.6	0.354 (0.005)
Many	2.401	23.3	0.315 (0.006)
Difficulties: Available Spaces			
None	5.322	51.7	0.432 (0.004)
Some	1.894	18.4	0.358 (0.006)
Many	3.086	29.9	0.299 (0.005)
Total	**10.302**	**100.0**	**0.379 (0.003)**

In this paper we focus on the preferences expressed by students towards possible, future, educational modalities. In particular we asked students which would be the best solution for them on a scale from 0 to 10, where 0 refereed to face-to-face lessons, 10 to online lessons and 5 was a balanced blending of online and offline lessons. Investigating this aspect means investigating something different than a simple comparison between online learning and face-to-face classes: it is a question of identifying, for each respondent, the modality that best suits his needs, starting from his personal history and characteristics.

About half of the respondents (49.3%) prefer a didactic modality that implies a prevalence of face-to-face interaction; 30.3% of students prefer an equal combination of the two; the remaining 20.4% prefer a prevalence of online dimension. Making the preferential dimension values between 0 and 1 (the closer the values are to 0, the greater the preference for face-to-face learning; the closer the values are to 1, the greater the preference for online teaching), the average value is 0.379.

Table 1 shows the variables included in the linear regression models defined with the aim of analyzing the preference between face to face or online lessons: several socio-demographics variables, university career-related aspects and variables related to the student's experience, student's condition (full-time or part-time), student's status (distinguishing between three different profiles: resident student – already before – in the city where his degree programme is located; commuter student and off-site student). Finally, as already mentioned, attention was paid to several aspects relating to housing conditions, as they are considered important in determining the way to participate in online lessons.

3. Results

Table 2 shows the linear regression models on the preference for online versus face-to-face lessons. Three models were created: in the first one, variables related to socio-demographic characteristics, those related to the student's career and university experience and those related to the student status (whether a part-time or full-time student) were taken into consideration.

As can be seen, most of these are relevant. Remembering that the 'plus' sign approaches remote teaching and the 'minus' sign approaching face-to-face lessons, it can be emphasized that remote lessons are particularly appreciated by international students, by students enrolled in master's degrees, by students attending degree courses in the STEM (Scientific-Technological) field and by those who emphasize how online lessons have increased the chances of actively participating, through questions and speeches, during lessons. On the other hand, having graduated parents, having high grades, being freshmen and receiving scholarships correlates with a preference for face-to-face teaching.

Dwelling on the first variable on which we want to focus, we see that, as hypothesized, the condition of part-time student correlates very significantly with the preference for remote learning. In other words, if full-time students prefer face-to-face teaching, working students prefer online lessons, probably due to the higher flexibility that characterizes them.

TAB. 2. *Parameters ( ) and standard errors (( )) of linear regression models on the preference for online versus face-to-face lessons.*

	Model 1		Model 2		Model 3	
	β	σ(β)	β	σ(β)	β	σ(β)
Gender (ref. Female)						
Male	+0.008	0.006	+0.009	0.006	+0.001	0.006
Place of Birth (ref. Italy)						
Foreign country	+0.040***	0.011	+0.046***	0.011	-0.047***	0.011
Family Educational Qualification (ref. No degree)						
Degree	-0.018**	0.006	-0.011*	0.006	-0.013*	0.005
Cycle Degree (ref. First Cycle Degree)						
Master	+0.019**	0.007	+0.027***	0.006	+0.027***	0.006
Single Cycle Degree	+0.036***	0.008	+0.042***	0.008	+0.041***	0.007
Year of Enrollment (ref. No freshman)						
Freshman	-0.021***	0.006	-0.018**	0.006	-0.019**	0.006
Disciplinary Area (ref. No STEM)						
STEM	+0.013*	0.006	+0.010·	0.006	+0.007	0.006
Average Grade (ref. < 25)						
25 / 27	-0.037***	0.009	-0.037***	0.008	-0.037***	0.008
28 / 30	-0.068***	0.009	-0.068***	0.009	-0.072***	0.009
Scholarship (ref. No)						
Yes	-0.023***	0.006	-0.014*	0.006	-0.006	0.006
Active Participation in Online Teaching versus Face-to-Face Teaching (ref. Similar)						
Lower	-0.152***	0.006	-0.148***	0.006	-0.130***	0.006
Greater	+0.139***	0.007	+0.135***	0.007	+0.130***	0.007
Condition of the student (ref. Full-time student)						
Part-time student	+0.127***	0.010	+0.108***	0.010	+0.105***	0.010
Student Status (ref. Resident student)						
Non-resident student - "fuori-sede"			-0.028***	0.008	-0.024**	0.008
Commuting student			+0.065***	0.009	+0.064***	0.009
Connection difficulties (ref. None)						
Some					-0.032***	0.006
Many					-0.039***	0.007
Difficulty of available spaces (ref. None)						
Some					-0.042***	0.007
Many					-0.072***	0.006
Constant	0.429***	0.009	0.420***	0.011	0.466***	0.012
N	10.302		10.302		10.302	
R²	0.177		0.194		0.211	

*** $\alpha < 0.001$; ** $\alpha < 0.01$; * $\alpha < 0.05$; · $\alpha < 0.1$

In the second model we have introduced a further dimension of interest: the student status. Reference category is that of students previously residing in the city where their degree course is based: according to our research hypotheses, the greatest differences should be found between off-site students and commuter students. These two sub-groups of students are characterized by different ways of living the university

experience, and therefore we imagine they can approach teaching methods in a different way.

Indeed, data show this aspect: the status of off-site student strongly correlates with the preference for face-to-face teaching; being a commuter student correlates significantly with a preference for remote teaching. Those variables relevant in the first model continue to be significant in the second model as well.

Finally, in the third model, we have introduced two variables closely related to the housing condition: the possibility of using adequate spaces to study and follow the lessons and the presence of a stable and fast network connection. In other words, we wanted to verify how the preference for a teaching method could also derive from the student's environmental conditions. And data seem to confirm it: increasing difficulties (in terms of connection and spaces) correlate with the preference for face-to-face lessons. In this third model the significance of some variables is lost: the disciplinary area and the presence or absence of a scholarship, for example, are no longer relevant.

Similar empirical evidence is also illustrated in Figure 1, which depicts the predicted means: the several dimensions on which we focused on are represented on the y axis; the x axis shows the preference for teaching methods, face-to-face (on the left) or online (to the right). The vertical, dotted, line indicates the average value (0.379). In other words, the more the value is shifted to the right, the greater the preference for online; the more the value is shifted to the left, the greater the preference for presence.

As anticipated, on one side, international students, those enrolled in masters' courses, those with lower average grades, those who actively participated in online lessons, part-time students, commuters and those with good housing conditions are more inclined to online lessons.

On the other side, freshmen, in particular of first cycle degrees, those with higher grades, those who think that online mode limits active participation, off-site students, full-time students and those who have difficulty in terms of space and connection prefer face-to-face lessons.

FIG. 1. *Predicted means estimated from the third linear regression model on the preference for online versus face-to-face lessons, with 95% confidence interval.*
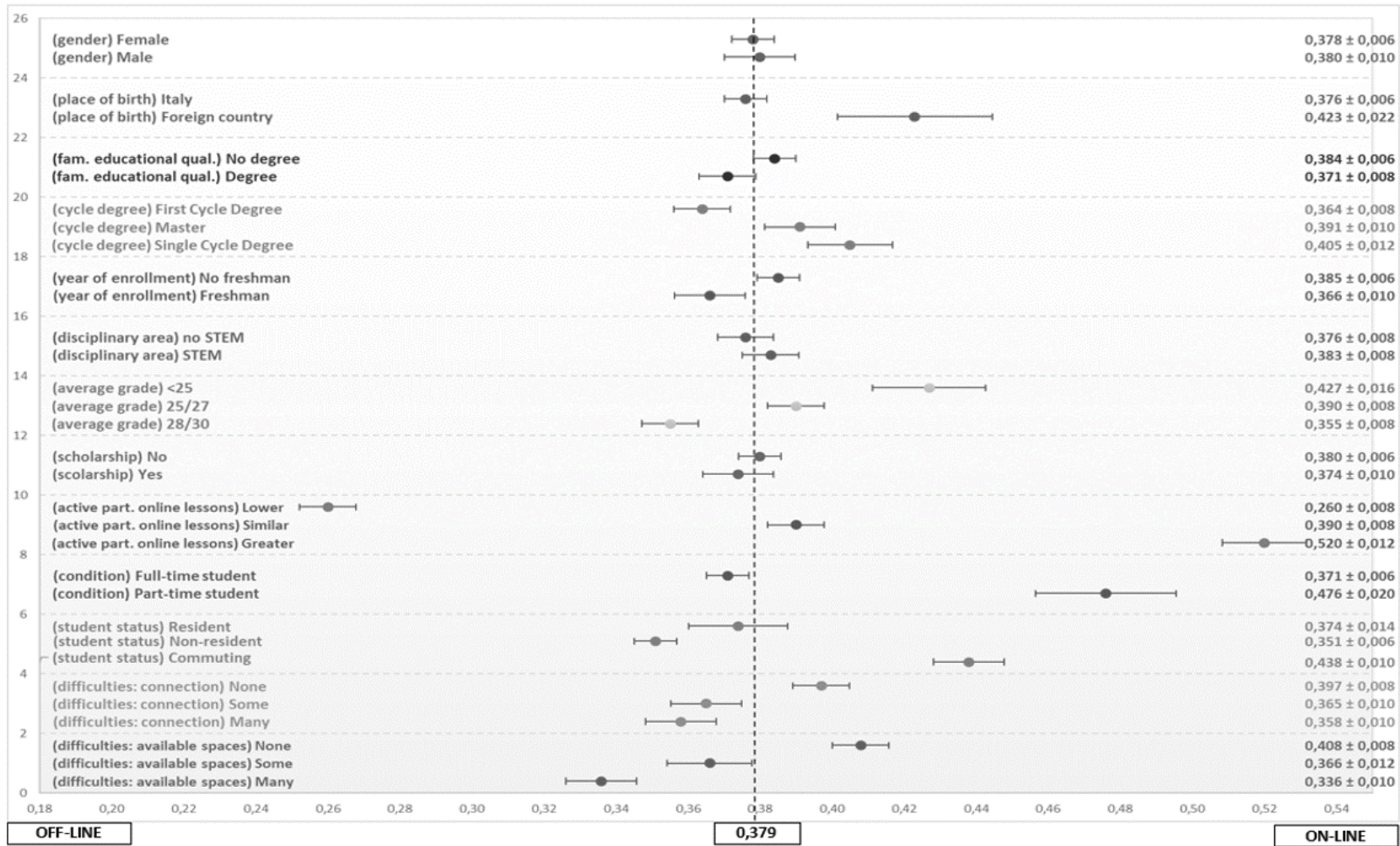
Conclusion

Analysis have shown that starting hypothesis are confirmed: student condition, student status and housing characteristics influence the preference towards a type of learning modality. This highlights an extreme heterogeneity of conditions within the population of college students. It is therefore important to think about a diversification of teaching methods, through learning and teaching methods as learner-centered as possible, in order to offer learning opportunities suited to different needs and opportunities (Gover *et al.,* 2019).

The construction of teaching practices suitable for different needs and different contexts appears to be extremely urgent: the debate on university learning is first and foremost the confrontation on didactic innovation itself, on new models of knowledge and on digital processes that are changing the ways of being and to think of our present (Corsi *et al.,* 2019). In other words, recourse to distance learning cannot be a substitute for traditional learning, but it can be a possible ally towards an innovation that aims to make more efficient resources, spaces, time and teaching methodologies (Di Palma, Belfiore, 2020).

Furthermore, the transformations in teaching methods that have taken place over the last few months, in exceptional circumstances, did not allow many of the advantages to be exploited deriving from the opportunities offered by the online learning: although online can be read as a way to expanding access to learning opportunities – avoiding, for example, the costs of mobility or off-site living, or facilitating those students who, at the same time, carry out a work activity – the transposition of remote lessons risks highlighting other dimensions of inequality: areas characterized by unstable internet connections, students with unsuitable computer equipment to actively follow lessons, inadequate housing conditions that prevent from connecting without being disturbed, and so on (Burbules, 2020). Access therefore risks being a very diriment challenge: it is assumed that students are able to connect without problems and with adequate tools. However, having the necessary devices and a fast connection, as well as being able to rely on private and comfortable spaces, are expensive resources. This is why these changes in teaching and learning methods must be accompanied by the implementation of welfare policies and measures that place the needs of the students at the centre. The implementation of ad hoc measures and the strengthening of services that already exist are essential to guarantee the right to study of university students. «As the world goes online, many get left behind» (Jackson, 2020, 23): if we do not pay attention to these aspects, what can be gained from expanding access to learning opportunities for some, risks being counterbalanced from a loss of opportunity for others.

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University 2030: Thinking About a Structural Change

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ABSTRACT: *A structural divergence has opened up between Universities (as other educational and heritage institutions) orientation, forms and cultures and the mature dynamics of the Network Society (Castells, 1996). In summary: the dominant model of knowledge construction is based on dematerialization and decentralization in millions of networks, producing and reusing billions of 'content' every day, mainly concentrated on large global platforms (Van Dijk et al. 2019). We are facing gigantic processes of globalization, virtualization, media convergence, based on connectivity/relationship on the web; consequently substantial breaks in continuity must be previsioned (and governed) also for the traditional twentieth-century forms of education and research institutions. Great changes are under way: towards permeability – opening up to the flows of digital life; towards creativity – the investment necessary to make online subjects active and not passive; and towards the most difficult, the network reorganization, implying a strong change in the structure and mentality. Can we still discuss an answer to this divergence and suffering in terms of reform? Ruberti (1990) and Berlinguer (1998) overturned the old organizational forms by playing on a European dimension, and putting Italy back in an advanced position in addressing the transition to the knowledge economy. While today the processes are global, all institutional forms are in crisis, confidence in a reform policy is low. In this contribution, taking into account the discussion in recent years on some crucial issues, it is proposed to design a new model, counteracting bureaucratization/corporatization, vertical teaching transmission, uncertainty about missions, excessive isolation and self-referentiality of structures and individuals.*

KEYWORDS: *Network society, University, Polarization, Differentiation, Bureaucracy, Reform.*

1. A structural divergence

Ten years ago we analyzed on *Scuola Democratica* (Ragone *et al.,* 2011) some different sides on which a structural divergence had already visibly opened between the orientation, the forms, the material cultures of our universities and the mature dynamics of the Network Society, considered as the epochal change based on a new ('informational') mode of production, which has accompanied the transition to today's globalized world since the 1990s: new technologies, new forms of culture and economy, and a massive restructuring of social relations (Castells, 1996;

2002). A context in which the institutions responsible for innovation and transmission of knowledge are facing, often unprepared, the new centrality of information flows – which are now the raw material of production, services, communication and social life. In the virtual-real space of flows, all spheres of activity are increasingly converging: working, living everyday life, but also learning and research, involving increasingly similar actions, typical of networks: remediation, reproduction, collective and connective conversation, transmedia translation. Actions and perceptive, relational and cultural forms that are only partially new, indeed often recovered from the past, from craftsmanship and the cultural industry; but now based on global supply chains and platforms, hosting reticular organizations in which individual products and research are integrated. Even the dominant model of knowledge processes – such as the model of consumption processes – is in fact based on dematerialisation and decentralization in millions of networks, producing and reusing billions of 'content' every day, largely concentrated on global platforms (Van Dijk *et al.,* 2019). The entire human environment (technologies, culture, social relations) takes on the continuously accelerating features of globalization, virtualization, media convergence and connectivity/reticularity. For some time, therefore, a looming break in continuity has been evident, in various respects already affecting the forms of education and research, inherited from the twentieth century, now facing the three great challenges that 'digitization' presents for all institutions: permeability – openness to the flows of digital life, creativity – the investment necessary to make network subjects active and not passive, and the most difficult, reorganization in network systems, which implies a strong change in the organizational structure and individual mentality (Capaldi *et al.,* 2012; Ragone, Capaldi, 2019).

Ten years later, how did that structural divergence develop? It can be observed, at least as regards the molecular and bottom up changes, that the delay in facing the three challenges tends to slowly decrease as a result of the generational turnover of the actors. In this regard, we can point out for example: various researches on students' opinions (for instance Capaldi, Ceccherelli 2021) and on digital processes in research activities, or some initiatives for experimental didactics based on a 'constructivist' imprint (for instance the *Rewind* project at Sapienza University of Rome). More generally, it is evident that all educational actions (schools and universities are in this sense homologous to heritage institutions) are gradually being permeated by aesthetic and representation/narrative forms that pass through multimedia and spectacular virtualizations and through the Internet, in an inextricable intertwining between formal and informal activities. Even more generally, it can be said that in a disruptive way – especially in the last fifteen years, with web 2.0 and social networks – technologies, the infinite availability of objects, and the new relationships between places and flows have substantially changed the way where collective identities and knowledge are formed: no longer just referring to a canon made up of

works and authors, and of established theories and procedures; the canon is in fact very relativized, since we rely mainly on mainstream currents, based on media and technological infrastructures, within which multitudes of actors are learning, projecting imaginaries, constructing information flows, in relation to each other and in a predominantly indistinct past-present. Therefore, the paradigms according to which culture and science must be transmitted by institutions to their 'recipients' tend to be overturned. These reflections have recently led to valid new attempts at general elaboration on how and why to change educational models in the digital age (Balzola, 2021).

2. Facing a new age of virtualization

It is also necessary to consider the substantially new environment induced by the new phase of virtualization. Even up to half a century ago, learning through the written word and the daily press marked the collective imagination and the orientation capacity of the educated upper class. Today, learning and debating with digital technologies, but also the immersion of convergent audiovisual media, and above all the Artificial Intelligence applications, are influencing the entire life of individuals of every social class and every level of education. There is a substantial change in cognitive processes, with attenuation of classificatory and deductive activities, accentuation of associative and analogical activities, hybridization of the more stable structures of knowledge with the imaginative faculties. And new interpersonal skills are required: in order to function and not to fall into self-imprisonment (bubbles, echo chambers), a positive opening towards every actual or potential interlocutor becomes essential. In summary: the communicative and cultural centrality of the web has made the idea of an individual construction of knowledge, based for centuries on texts, classifications, disciplines, definitively obsolete. Knowledge is now developing mainly in connection with the imaginative and logical faculties of millions of people, whose contributions can be traced on the web – a connection incorporated in the search algorithms of browsers. Its main pattern – at least apparently – is the dialogue between peers in social networks. If one is able to avoid self-imprisonment and self-serialization, he can learn and research bottom up, and online, elaborating his materials individually, but with the intention of communicating, sending messages and opening up to counter-proposals. By not imposing a closed product. Consequently: not only for the delocalization and detemporalization typical of the space of flows, but also and above all for the network model, the pair 'teaching'/'control', is no longer central (with all due respect to the pedagogical obsession for evaluation and feedback tests). It becomes just one of many possible variations. The common pattern within which we – all – find ourselves is no longer that of a knowledge already built

and to be transmitted, but that of a knowledge to be rebuilt, re-discussed, re-mediated, re-created.

It's an epochal revolution, which cannot be faced in a purely defensive way – as shown by the low quality of the response to the pandemic emergency that forced most of schools and universities' activities to move online, accelerating the digital transition in 2020-2021, and bringing to light new contradictions, but also new demands towards a life that the virtual environment could make easier, more enjoyable, richer and more equitable. In this context, the current challenge is solving the stratified and encrusted blocks that historically afflict in Italy the issues of education, skills, starting work, research, without dramatically aggravating them. The actors of the world of education (but also museums and other public institutions, while companies will reconvert faster) tend to 'resist' around their unique anchorage with physical places, rules, individual groups and unions of intellectuals and managers, while a planned and negotiated reconversion is needed, identifying reticular and open structures where most of the functions can be carried out through collaborative practices. The necessary change does not concern only the teaching/control couple, but all the traditional forms of distribution of power in the academic institution, and must be faced by enhancing new, more open 'figures' of social interdependencies (Elias 1969). Moreover, all international institutions and observers have been showing for years awareness of the absolute centrality of learning as a necessary factor for the survival of every subject, culture, organization and business; the more necessary the faster the transformation of the environment is proceeding. Only by enhancing education it is possible to build the foundations for any innovative design in any sector (that action which in turn determines all other knowledge management activities aimed at fulfilling specific social mandates). Moreover, it is fundamental to base education on those communities of practice, and of mutual commitment, indispensable for individual self-construction and generating collective identities, which can be the key factor for inclusion/exclusion in the network society (Castells, 2001).

In Italian universities, the issues of structural, organizational and other changes, necessary to reduce the structural divergence with the new forms of culture and society, and to guarantee quality and equity in the digital transition, are still substantially removed. Discussions and scientific works usually analyze substantially obsolete processes, without assuming a structural transformation. The current forms of governance (on the topic: Capano *et al.,* 2017, Fumasoli *et al.,* 2019) in fact derive for better or for worse from the historical phase in which we tried to make our institutions more entrepreneurial and faster in research and training initiatives, through a centralization of the internal command, using a corporate model. The current forms of evaluation (of universities, structures, individuals) are consistent with the attempt to subordinate every action (organizational and individual) to the top-down command of the governances – which more than anything else conforms to the input

of the system of evaluation, with perverse effects of a vicious circle and self-reference of powers. On the other hand, I believe that a holistic re-thematization is ripe, which directly pursues the objective of addressing and reducing structural divergence. Visionary and propulsive in this sense were the reformist phases interpreted by Ruberti (autonomy) and Berlinguer (the European integration of the system, the articulation and pluralization of training courses), despite limitations and strategic errors; high-level, moreover, were the intellectual and scientific groups that supported and implemented their reforms. Then funding cuts, bureaucratization and academic habits took over the field again. Through what new ways, in a completely different political context from that of the big parties that acted as brains or representatives/mediation of collective interests, will it be possible to reorganize the system?

3. The bureaucratization

Bureaucratization is probably the main obstacle. Especially in the last ten years, an intense process of bureaucratization has permeated the university, as the main support of an obsolete organization and powers. Apparently, everyone agrees: it is a cancer that must be eradicated, the main enemy of any innovation, capable of killing the diversity and evolution of systems, etc. Its weight in the practices of the teaching/researcher profession is now overwhelming, subtracting vital time and energy for core activities, not to mention the more experimental ones; useless, for the insiders, to describe the innumerable sides. It is perhaps more useful to thematize the problem on a more general level. According to Weber's classic scheme (1922), the bureaucracy builds a top-down chain of command, exercised 'in the name' of a non-bureaucratic power; in theory, the bureaucratic apparatus is aimed at producing speed, forecasting, 'dehumanized' impartiality, controllable documentation, certainty of the legitimacy of each act, etc. at the 'service' of a power, whatever it may be; but in practice the bureaucracy tends to assume power on its own. It plays on its own expertise, with respect to which politicians are often quite inexperienced amateurs; it invades every aspect of society, and suffocates the spaces of freedom and movement. 'Living machine', according to Weber, it comes to provoke – especially in the presence of a politics in collapse – the powerlessness and impossibility of democracy itself.

As Mannheim (1929) already noted, «the fundamental tendency of all bureaucratic thought is to transform every political problem into a simple administrative question». But perhaps even more important – regarding an institution like the university that has innovation as its mission – is the other aspect of Weber's theory: that is, the bureaucracy needs to transform us into bureaucrats. Think of Franz Kafka's impressive metaphor in the *Castle*: all the inhabitants of the village are reduced in different and absurd ways to the role of insane carriers of the bureaucratic

virus that emanates from administrative officials in the service of an evanescent (perhaps even non-existent) power; and the environment is filled with absurd and violent practices, in a stupefying void where new systems of totalizing but meaningless rules are always generated. Weber's theory on the 'spontaneous' sharing of the intermediate layers in the bureaucracy was recently revived by David Graeber (2016), according to whom the dynamics of capitalism imply from the origins «the gradual fusion of public and private power into a single entity bearer of norms and rules with the ultimate aim of extracting wealth in the form of profits»; since the 1990s, the acceleration of the process has led to an era of total bureaucratization, through a co-optation of the middle class. «The bureaucratic tools (performance evaluation, focus groups, time allocation surveys…) developed in financial and corporate circles have invaded the rest of society – school, science, government – to permeate practically every aspect of daily life». To those who suffer it, the idea that bureaucracy may have something to do with rationality or efficiency may sound strange. But seen from above it is not: the mathematical formulas and algorithms through which the world is evaluated become not only measures of value, but its very origin.

> The main activity of bureaucrats is to evaluate: they are continuously committed to measuring, checking, comparing and weighing the merits of different plans, proposals, questions, lines of action and candidates for promotion. The culture of evaluation is particularly rampant in the hyper-credentialized world of professional classes, where accounting control dominates and nothing is valid if it cannot be quantified, pigeonholed or inserted in some type of interface or quarterly report. This world is the natural extension of financialization.

The oppression of bureaucracy as a system of power, therefore, concerns in every organization and more generally in every society the relationship between the small but very powerful dominant layer and all the intermediate and subordinate layers. As Abruzzese (2020) wrote, each person is inscribed as a modern 'subject' in systems of power that demand the sharing of a particular 'subjectivity'. Opening spaces, restoring balance in the person-subject relationship, also guaranteeing free creativity is a necessary condition for a recovery of energy without which a university re-design project is not imaginable. Are there today the cultural and social premises sufficient to support real political actions in an anti-bureaucratic sense?

4. University 2030: I have a dream…

In 2011 some lines to work on were already evident: a) by redesigning universities as networks of laboratories and research groups, place-based/web-based, open to students, external experts and other subjects

(not like the current departments, which are aggregates of individuals and services/administrative procedures); b) by designing digital infrastructures for the management and development of knowledge, interoperable at least with those of other universities and with other institutions and entities (the open access standard has recently become widespread, but does not in itself guarantee accessibility and collaboration); c) by developing didactic paths in collaborative and project-based blended learning on the laboratory model, aiming to integrate learning activities and innovation activities in the research environment; d) in general, by hybridizing/integrating institutional research/training activities, scientific and technological innovation activities in the public and private sectors, in productions (especially high tech), in services and in the third sector. In short: abandoning closed structures, closed 'products', classroom teaching as a transfer of notions, and above all the self-referentiality in every ganglion of the entire institution.

Of course, in ten years something has moved, especially on the last point (see for example Secundo *et al.,* 2016 on the 'third mission'). But it is possible to go further. The following scheme, as will be evident to readers, tries to shift the terms of the discussion on universities. In fact, I believe that the core issues should no longer be identified in the issues discussed for 30 years and now established as valid principles, namely the need for a reward in national public funding and of the external evaluation. Instead, it is now a question of rationalizing the hypothesis of an overall re-design. The question is: assuming that the objectives are the reduction of the residual structural divergence between the academic system and the environment of the network society, and the opening of spaces free from bureaucratization, if we moved in 2031, what would be the most desirable features of a new academic landscape?

The proposals concern the following points:

- Since it is necessary to answer differentiated social questions, and no teacher/researcher is able to do a good job at the same time on all fronts, an internal Polarization of the universities is needed. At least large universities, or university aggregations reaching a defined critical mass, should be divided into 3 poles:
  - The pole of advanced, interdisciplinary research departments. The actions are aimed at scientific and result objectives (with growth plans and indicators). Researchers work in teams and teach only in integrated modules. The department is made up not of individuals but of structured research groups, where the researchers are free to participate in more than one. The groups rely on a departmental administration. Democratic forms of self-management are guaranteed and self-regulated. CNR research groups should also be integrated.
  - The didactic center, made up of teachers who for at least 3 years during the first 30 years of career must devote themselves to coordination and redesign of study courses. These are

educational structures with budget and administrative autonomy, which choose departments or district administrations to rely on, in dialogue with the other two poles.

- The cluster of districts, made up of researchers who during their career dedicate themselves for defined and renewable periods to developing the third mission in terms of technology transfer, non-curricular training, territorial development. In the district structure, additional researchers/professors with annual or multi-year contract are recruited with mixed funding between the Region, companies and other entities, and the Government, for a total body equal to at least one third of the researchers/tenured professors. The districts have administrative autonomy and self-regulate.

- An articulation and differentiation in the national system is functional to the pursuit of particular vocations. Medium-sized universities can replicate the same polarization as large ones, but for advanced research they select determined and specific areas/objectives, referring to adequate concentrations of researchers. Areas/objectives should be agreed with the Government and the Region, following external evaluation. Small universities should join networks or specialize as universities with a didactic and territorial vocation, with super-specialized exceptions.

- All universities should participate with at least 10% of their researchers, on a rotating bases, in the growth of a national/regional system of technical-scientific higher education, including an adequate number of ITS with two-year undergraduate degrees, and should implement the 'bridging steps ' of ITS graduates in academic study courses.

- Teaching should be fully reconverted into paths based on project work, individual or group, in blended learning or in the laboratory, under the guidance of researchers, in integrated modules between several researchers. Theoretical classroom lessons must be limited and functional to project-based learning. The planning of teaching in the integrated modules should not be subordinated to regulatory rules constraining the type of activities.

- The career of researchers should necessarily include 3 years abroad (through exchanges) and 3 years of teaching management or ITS, while the periods of work in district clusters could be voluntary, but valued in new career systems.

- To ensure a radical de-bureaucracy and an effective technical-managerial enhancement, all administrative procedures within the departments, teaching structures and districts should be fully computerized and online; the control of procedures should be attributed to a departmental, or educational structure or district governance of no more than five researchers with an administrative manager; the administrative staff must be massively reconverted

towards the didactic or research management, and limitedly towards assistance at the help desk for researchers; for every newly hired researcher in a department or district, a specialist technician or manager should be hired.

- The conversion of universities towards the new organizational, didactic and administrative models should be planned by an elected commission, which manages a continuous experimentation; the governance structures must be freely determined autonomously, with the sole constraint of the presence of a Rector (elected), an academic Senate and a Board of Directors, elected for at least 80%, and a Director General (on contract); the structures of the department, educational center, and district must self-regulate.
- It is necessary to build common digital infrastructures for research, in open access and interoperable for the whole national and European state system. The infrastructures should be financed by the state and built with tenders between the best universities.
- In the NRPs of the MUR, 50% investment in regional techno-scientific districts should be guaranteed, with mixed State-Region funding, with the aim of achieving shared third mission objectives, specific to each Region.

These are first guidelines, however based on real and momentary processes, such as digital transformation, the tendential hybridization between formal and non-formal learning, the diffusion of the research group as a standard model in the organization of work, the evolution of the third mission, the growing demand for universities to be involved in the effort to restart Italy after a period of stagnation and crisis.

But are there subjects capable of opening a new chapter in the almost millennial history of our universities?

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The Hard Path of Academic Stabilisation into a Neoliberal European Academic Framework

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ABSTRACT: *In the past two decades, the early career academics have faced increasingly difficulties to stabilise their position in the European academic systems. Currently we can identify similarities in the academic recruitment as results of neoliberal policies (Deem, Brehony, 2005; Ball, 2012; Bozzon et al., 2018) adopted by the European governments that contribute to the academics precarity. The process of entering and stabilizing the academic career has always been long and complex. Spending reduction policies have also exacerbated the difficulties and competition among aspiring academics. In UE countries, the 'new academic regime' (Normand, 2016) produces a new stage of academic capitalism. This situation has produced various effects. The push to 'publish or perish'' has strongly raised average productivity, placing aspiring academics under tremendous pressure. Furthermore, it is possible to identify several effects at the individual level: the fragmentation of the career path has reflected on life paths, on forced mobility, on parenting choices, on psycho-physical well-being. Starting from a set of semi-structured interviews carried out in the fields of education sciences, sociology, physics, biology and medicine, this paper shows the effects of the changes listed above, also taking into account the differences between the various research sectors. The interviewees live and work in Italy, several European countries and the United Kingdom. We investigate the figure of 'new european researcher' who build is academic and private identity (Djerasimovic, Villani, 2019; Colarusso, Giancola, 2020) following the ideas of mobility, new mode of knowledge production (Gibbons et al., 1994), performativity, accountability. The early career researcher (ECR) has to face several trials such as: the balance of private and professional life, instability, penury of fundings and jobs vacancy, the managerialization of academic profession (Normand, Villani, 2019). In addition, ECR needs to combine individual strategies for academic survival in a context that impose the oxymoron of competitive partnership. Finally, we analyse the path of the real researcher that struggles constantly with all difficulties imposed by the new academic regime.*

KEYWORDS: *Academic research, European higher education space, Academic careers, Work-life balance in academia, New academic identity.*

Introduction

The past thirty years have seen a profound transformation of academic work conditions in the European Higher Education Space. It is possible to identify three elements that characterise this change: first of all the

implementation of New Public Management (NPM) (Clark, 1998; Enders *et al.,* 2013) that produced the institutionalisation of the University Managerialism (Clark, 1998).

Secondly the NPM introduced the new mode of Governance (Maassen, Neave, 2007) that influenced all the European countries producing, on one hand a mechanism of isomorphism, and on the other hand each country generated national specificities. The European academic systems have been organised differently in the countries from North to South. The universities define their organisation in a 'new academic accountability regime' based on the delegations of the decision-making process.

Thirdly it is possible to identify top-down policy initiatives aimed at standardising the processes and outcomes of higher education (HE) (Djerasimovic, Villani, 2019; Colarusso, Giancola, 2020a).

At the beginning of the twenty first century, the isomorphism mechanisms in the several European countries contributed to spreading and implementing national and transnational policies that created and formalised the European Higher Education Area (EHEA). It is possible to identify two elements that contributed to the creation of EHEA: The Bologna Process and the Lisbon strategy (Djerasimovic, Villani 2019).

Furthermore we identify in the 'new academic regime': a new mode of knowledge production (Gibbons *et al.,* 1994) based on the production-mediation-use triangle (Weiler, 2009, 2011).

In the contemporary European Higher Education systems the knowledge production is a key issue because it has an impact on all the aspects of the academic profession. Nowadays academic professionals cope with the pressure of the university managerialism which profoundly changed their work practices. The new features of knowledge production influence the academic path of the professionals (Djerasimovic, Villani, 2019), furthermore they determine the sources of research funding. The knowledge production process in the HE system is a political mechanism which defines not only the quality of the contents, but also determines the rules of the system. It is possible to identify a shift in the HE scenario which implied changings in the «legitimacy of its mission, organization, functioning, moral, foundation, ways of thought and resources are thrown into doubt and challenged» (Olsen, 2007, 28). According to Maassen and Stensaker (2010) the European HE space changed following the new policy logics. They described a European HE system in which the research standardisation, the promotion of innovation and of networks created the European Paradox – «the claim that EU member states play a leading global role in terms of top-level scientific output, but lag behind in the ability of converting this strength into wealth-generating innovations» (Maassen, Stensaker, 2011). Knowledge production, evaluation, and accountability produced a triangle that created a new system of trial for academic professionals (Normand, 2016). Nowadays European HE systems are implementing a knowledge-based policy education paradigm (Normand, 2016). This new mode of governance is transforming the role of knowledge and producing new rules, tools and

practices in the academic world. The academic profession changes in relation to the transformation of university mission.

In the EHEA we assist a new mode of recruitment that is directly related with the NPM and New Mode of governance. The criteria used to evaluate and to recruit early career researchers (ECRs) have been operationalised into measurable standards (Bozzon *et al.,* 2018). These criteria directly influence the individual paths and careers of ECRs (Deem, Brehony, 2005, Ball, 2012; Bozzon *et al.,* 2018). The use of standards to evaluate and recruit intensifies the publish or perish regime that creates competition between peers (Colarusso, Giancola, 2020a).

Furthermore, the reduction of funds and job positions produces a stable precarisation of ECR (Toscano, Giancola, 2017).

Julia Evetts (2011) argues that the academic managerialism produced an 'organisational professionalism' as a replacement to the historical 'occupational professionalism'. The latter founded its bases on trust between equals, on the contrary the organisational professionalism is based on quality assurance and accountability. The organisational professionalism uses standards, evaluation and procedures as tools to improve efficiency and to guarantee the achievement of the University outcomes (Normand, Villani, 2019).

It is possible to identify a growth of external control on knowledge production over academics by national and supranational agencies which creates a tension between innovation and education (Massen, Stensaker, 2011). The separation between teaching tasks and research activities within universities produces a tension between education and research (Massen, Stensaker, 2011).

Meanwhile, the concentration of funding for research cannot stimulate or develop sustainable networks in innovation, and it generates a tension between research and innovation (Massen, Stensaker, 2011). We are witnessing a new configuration of academic work, in which the teaching and researching practices change to fit with the rules of 'new spirit of academic capitalism' (Normand, 2016).

1. The Research Method and Field

In this work, we present the results of a research on early career and precarious researchers in five different fields: Physics, Biology, Medical Sciences, Sociology and Education. We conducted semi-structured interviews with European and extra European researchers, mainly in the Italian Higher Education system.

The use of a non-standard approach allowed us to deeply investigate the biography of the ECR. Through our data we had the possibility to highlight each individual narrative, but at the same time we found similarities produced by the HE policy framework. To reach our interviewees we used the internet (for the biology, physics, medicine

sciences) and we resorted to our research network (for the sociology and education field).

TAB. 1. *List of Interviewees*

Field	Number of interviews	Position	Country
Physics	14	Post Doc, Fixed term researchers without tenure 'Rtd A', Fixed term researchers with 'Rtd B'	Italy
Biology	16	Post Doc, Fixed term researchers without tenure 'Rtd A', Fixed term researchers with 'Rtd B'	Italy
Medical Sciences	11	Post Doc, Fixed term researchers without tenure 'Rtd A', Fixed term researchers with 'Rtd B'	Italy
Sociology	27	Post Doc, Fixed term researchers without tenure 'Rtd A', Fixed term researchers with 'Rtd B'	Italy
Education	13	PhD, Post Doc, Lecturer, independent researcher with an hybrid background ' sociology of education', 'education'	Italy, Finland, Cyprus, Romania, Portugal, Hungry, England, Denmark, Russia, Belgium

We used 'purposive sampling' and a snowball sampling method (Chaim, 2008) to access a particular social group and one where participants with an extremely busy schedule would be likely to respond and give time to our research. We conducted face to face interviews and online interviews, they were carried out in English, Italian, Portuguese.

2. Physics Field

In the case of researchers belonging to the various disciplinary sectors of physics, a clear profile emerges in which precariousness seems almost institutionalised. The interviewees are characterised by a high level of international mobility (mainly for doctoral and postdoctoral periods). After the mobility period(s) at the international level, there was also a strong national mobility between various universities. This mobility is also characterised by a strong contractual fragmentation that, paradoxically, is reconciled with a strong continuity in disciplinary and research interests. In this regard, it is important to underline how a strong disciplinary identity emerges, beyond academic placement (in terms of contract and academic structure of afference). This identity can also be found in the scientific production that appears to be largely international, with a high level of co-authorship (both with peers and with senior researchers or professors), in line with international trends.

The academic biographies collected in this field show a strong early academic socialisation to evaluative criteria (evaluation as 'second nature'; see Colarusso, Giancola, 2020a) that are discussed on the merits (e.g., regarding the issue of citation thresholds, which in the Italian case

are linked to the processes of obtaining the qualification in order to access academic structuring) but not in the mechanism that is accepted as a career component.

This disciplinary field, as well as that of biology, appears to be one in which instability and mobility are experienced as the norm. Respondents have incorporated the rules of the game typical of the field and seem to know how to use them (even if the impacts on private life are strong). An example of this is the willingness for international mobility even for researchers who already have a 'tenure track' position. In this process of sense-making there is, on the one hand, a strong awareness that the field in which one moves, lives and works entails strong constraints, but it is safe to assume that the interviewees operate an ex post justification in a process of signification of individual paths that helps them reconcile expectations and aspirations with systemic constraints.

3. Biology Field

In the field of biological sciences, we can observe from interviews strong elements of correspondence with the field of physics, even if with some specificities. The interviewees of this disciplinary field show a medium-high level of international mobility (mainly for doctoral and postdoctoral periods). However, it is very common to return to the academic institution of departure after the mobility period. Mobility is therefore often linked to training or research on specific issues. Also in this area the scientific production is largely international, with high level of co-authorship (both with peer and with seniors researchers or professors). A specific feature of the sector is, however, the strong connection to the senior researchers in graduate or doctoral institutions or to the advisor/tutor professor. This seems to justify the paths of mobility and subsequent return narrated by the interviewees. There is therefore a strong institutional identity to which, however, is also linked a strong disciplinary identity, especially linked to sub-sector specificities (e.g. biochemistry, genetics, bioengineering, etc.).

Another characteristic element is the strong openness to the non-university world both for fundraising and for future employment positions in the labour market.

In terms of the relationship with existing evaluation policies, the criticisms are mainly related to the problem of the interdisciplinary nature of the field, which is difficult to reconcile with the system of scientific disciplinary sectors. The borderline nature of many of the subjects of study of the interviewees makes it difficult for them to fit exactly into a specific scientific disciplinary sector (as required by the Italian university system). In the words of the interviewees, it is evident how this national specificity is an element of great constriction; this often involves a sort of 'normalisation' and alignment with university rules which is experienced as a factor of great deprivation and constriction.

4. Medical Sciences Field

The academic biographies collected in the medical field show a significant divergence from the two fields previously described. In contrast to what was originally assumed, the level of mobility is medium-low (and it's often a short-term mobility). This finding is linked to the very close relationship that is often established between the researcher and the institution of reference. This leads to a very strong internal selection within the individual university institutions (and hospitals/clinics connected to them). Many interviewees highlight this as a highly critical node in the path to academic placement in the medical field. The effects of this intra-institutional link can be observed in the scientific production, which, although both national and international, shows a high level of co-authorship and very frequently with the professor of reference in the academic institution of belonging, just as frequently with the full professor ('prof. Ordinario') of the disciplinary sector in the institution.

For the interviewees of the medical group, a strong professional identity emerges (even more than disciplinary identity, as in the cases of physicists and biologists). These respondents (except for researchers with tenure) show a strong openness to the non-university world for fundraising or external works *extra moenia* (since physicians can combine clinical and research work with work outside the university).

The strong professional identity, prestige and social recognition associated with the medical profession make the researchers interviewed more secure (or relatively less insecure) about their future. Non-university outlets (even at a relatively older age) act as 'insurance' against the possible impossibility of continuing academic activity (this obviously applies to researchers who do not yet have a stable position), even if this option seems to be experienced with great frustration. In this regard, it should be noted that the typical training path of those interviewed in this sector appears to be particularly long. After graduation (with a formal duration of six years), there follows a specialisation course (accessed through a competitive procedure and lasting, on average, three or four years) and only finally does one arrive at the Ph.D., a step preparatory to formal entry into the academy.

Finally, turning to the relationship with evaluation, there emerges a strong criticism of evaluative criteria in general. This strong criticism is especially directed at selection and career mechanisms that require strong compliance and 'loyalty' to the professor and the institution to which he or she belongs. The link with the institution of origin thus plays an ambivalent role in the academic histories in this field. Entry for outsiders appears to be very difficult, but also for 'insiders' the path is very complex, to the point that several of the interviewees use the metaphor of the 'survivor' or that of 'natural selection' (which obviously has nothing 'natural' about it, since it is the result of sedimented and informally institutionalised practices).

5. Sociological field

The sociological field, compared to the previous ones, shows a very strong discontinuity. This field has undergone very strong changes in relation to new evaluation policies (Colarusso, Giancola, 2020a). As it emerged from a large-scale research on the academic precariat in Italy (Giancola, Toscano, 2017), all fields have been strongly shaken from the foundations by the new policies of selection, stabilisation and career progression due to the reform policies, but the field of humanities and social sciences has been particularly vulnerable, both for its consolidated internal arrangements and for a poor recognition of disciplinary specificities in relation to the policies implemented.

Academic biographies in this field show a low level of national mobility and reduced international mobility (even if the youngest interviewees show a positive difference in this sense). This relative 'localism' is accompanied by a largely national scientific production, with some exceptions since the publication strategies are in rapid transformation especially among younger researchers and those in the process of affirmation and/or stabilisation.

For the purposes of publications, many respondents state the importance of having a strong connection to the professor/advisor and/or the full professor in the scientific field. This aspect refers back to the localism previously mentioned, which is one of the aspects most affected and undermined by the new evaluation policies.

Respondents from this area show some level of difficulty in academic self-definition: identity appears to be tied to holding a formal position in the university, but this possibility appears to be a very difficult prospect for many respondents.

Not having strong social and professional recognition, respondents from the sociological area find themselves forced to anchor themselves to their 'role' in academic terms in order to define their professional identity. Therefore, a strong tension emerges between the scientific identity and the social identity that is recognised, and in this tension instability and precariousness play a strongly negative role with respect to public self-affirmation.

Finally, respondents from the sociological area show a very critical attitude towards evaluations (especially towards the 'ASN – National Scientific Abilitation'). At the same time, many state that habilitation is not useful for the purpose of entry and consolidation of an academic position.

6. Educational research field

The academic path of educational researchers interviewed was characterised by a pronounced – though not always welcome – mobility

experience: some interviewees spent a few months during their Phd in another country, others moved to another European country for their PhD or Post-doc programme, and in one case outside of Europe in pursuit of permanent lectureship. There were variable levels of choice/necessity with which mobility and the return to the country of origin was approached: for some, outward mobility was pursued out of transnational outlook, for others, it was seeking of opportunities non-existent in the national context, yet for others an explicit career progression requirement not happily entered into. Inward mobility – where it was a choice, and not a programme requirement – was caused either by change in personal circumstance, or the more attractive job opportunities. In large part owing to the transnational networking and collaboration experience and the various conditions of research funding attached to it, the scientific production was mostly international, and had a comparative, and not rarely, explicitly European approach. National production, where it appeared within the national context, was considered inferior to the former, however in one case, there was an explicit concern with the development of field and scholarship on a very local level.

Education being a field rather than a discipline, academic identity was not characterised by a strong attachment to it (our interviewees consisted of psychologists, sociologists, political scientists, anthropologists) but was rather thought of in terms of dominant activity and a professional project. In this way, academic profession was characterised either by the balance between the researching and teaching aspects vs the academic profession focused on the researching tasks of the academic career, pointing to a split between a more 'traditional', Humboldtian, model and an overtly entrepreneurial academic experience driven by international networking and project-building. In very rare cases, 'hybrid' experiences of academic and non-academic research work were shared, and a desire to pursue a non-academic path emerged, partly influenced by the publish or perish culture of academia (noted by almost all the interviewees), partly by a search for professional – and personal – stability.

In addition to the work culture of academia, other areas noted negatively or at least ambivalently by the interviewees included the academic and international networks which were found to be fundamental for the academic path to opportunity, and occasionally, stability; the tension between national and international recruitment criteria negatively impacting the individual paths; occasionally lack of proper supervision and guidance (particularly where the ECR was working on a large international – European – project); and the discrepancy between traditional, by-thesis doctoral training, and the realities of academic life.

7. From work life balance to academic identity: a difficult reconciliation

As Peacock (2016) states, in the last three decades precarity and its derivative expression as 'precarious' – as a way of perceiving oneself – and 'precariousness' – as a generalised state of being) have been advanced as categories to describe a new regime of labour. More recently, there has been a large discussion about the effects of this order on academic institutions (Giancola, 2021). These have been broadly conceived as attacks on disciplinary integrity (Kapferer, 2005); the dramatic expansion of audit and its attendant ranking and evaluative practices (Fontana, Valentini, 20202); and attempts to substitute academic for non-academic values, particularly of economic nature (Ball, 2015). From the relationship with the senior figures such as department directors or faculty deans (configuring relationships such as what Peacock calls hierarchical dependence), to the relationships with colleagues and the institution, up to the meaning to be attributed to one's own work, to the relationship with science and with the production of knowledge, the changes recorded seem to be of considerable entity.

The engagement required by the HE system to achieve a tenure track position produces a gap between professional and personal life, this gap increases if we consider the gender variable. The balance between family and career for women is until now more constrained than for men. For those already with a family, especially women, an international career is very difficult.

The intersection of gender, disciplinary field, and mobility would seem to make the path to parenthood more difficult for women in the fields of physics and biology (but with a decidedly strong relative weight also in the other fields analysed). The parenting project is often perceived as penalising women (as shown also by Ivancheva *et al.,* 2019), who then face the double hurdle of entry bottleneck and stabilisation in academic position.

The parenting desire is present in interviewees' narrative, for both men and women, but for women it is experienced a little bit more as a tension between 'career building process' and 'personal life adjustment'. From the interviews, however, diffuse and differentiated difficulties also emerge in other areas of extra-academic life that are influenced by it: affective stability, housing stability, a widespread feeling of stress (a finding strongly in line with international evidence, see Crew, 2020).

The researchers interviewed almost always spoke spontaneously and extensively about the mix between the difficulties of stabilisation, the pressure to publish or perish, the chasing of the parameters of evaluation in relation to their existential and life status, as well as their prospects (and desires) for the future. What is observed is a vicious circle that is self-reinforcing and that pushes subjects to adapt – even with high costs in terms of limitations in the sphere of private life – to try to assert themselves. All this then has a non-negligible impact on self-definition in both personal and academic terms.

According to above mentioned evidence, the academic identity is a result of: influence by the research field culture, HE policy, personal experience, gender, and the starting socio-economic condition. Academic identity is highly variable: 'fuzzy' in education and sociology; very discipline-bound in physics and biology; shifted to the professional dimension in the medical field.

Our data allowed us to describe three main categories of academic identity built during a linear or nonlinear professional path. Each individual biography can be represented just by one of these identity categories or the combination of its (Djerasimovic, Villani, 2019).

The first category is represented by the Individualist-Philomath identity: The narratives of these ECRs are characterised by their very broad, intrinsic, interest in theory and scholarship, and their love of learning, which whilst present in all narratives, certainly dominated the narrative of this type. More significantly, what characterised this type was the comparative absence of connections and networks outside those offered by their working conditions. The narration of their work described an ideal model of academic professionalism related with the 'homo academicus' model (Bourdieu, 1984).

The second category and the third categories are related directly with Gibbons (*et al.,* 1994) knowledge production theory. According to Gibbons (et al.) 'mode 1' academic work is usually conducted within the legitimation and valuation structures of epistemic communities – whether disciplines, specialised subfields (Becher, Trowler, 2001) or interdisciplinary domains (Henkel, 2009), and 'mode 2' work is problem-oriented and characterised by intersecting influences of 'external' structures of legitimation and valuation, coming from the public, private and civil society sectors.

The ECR represented by Mode 1 of academic identity share with the previous one a passion for knowledge, and enjoyment derived from the process of conducting research, the primary difference is that Mode 1 Academic frequently refers to the very specific activities aimed at the advancement of science, and – however, this is not the dominant motivation – their scientific careers. These activities may involve seeking individual funding and development opportunities, but they are always conducted within an academic community that one either joins or creates. Belonging to spaces of communal epistemic advancement is the chief distinguishing quality of this type. Unlike the Individualist, for the representatives of the Mode 1 Academic, the work environment is extremely important, as is the collegiality and support within it – support sought (mostly for the Aspiring subtype) but also provided to others (for the Established subtype). This type seeks academic tribes and alliances, whether these are discipline- (Becher, 1989) or 'domain-' (interdisciplinary and topic-based, as per Henkel (2009)) oriented. The ECRs represented by Mode1 have a great level of attachment to the Humboldtian (close relationship between research and teaching) ideal, strong commitment to building the research culture and programmes

within and outside of the institution, and supporting new generations of scholars (Djerasimovic, Villani, 2019).

The third identity is represented by the Mode 2 of academic identity. The ECR represented by the Mode2 of academic identity focuses on research activities, despite significant differences in age, nationalities and mobility patterns within this group, commonalities in how they orient themselves in the academic landscape are striking: they can be described as very entrepreneurial, proactive, strategic and pragmatic, including in the choice of topics of research, or a highly ranked institution within which to pursue their research (Djerasimovic, Villani 2019).

Conclusion

In relation to the new mechanisms of evaluation, entry and career consolidation, a change has taken place in a short time and of enormous intensity, involving everyone who lives and works, or wants to enter, the academic world. In response to these changes, adaptive strategies are varied and cannot be traced to a single model. Just as trajectories pluralise and fragment, the individual responses that emerge from academic biographies are also highly diverse.

As quantitative (Giancola, Toscano, 2017; Colarusso, Giancola, 2020b) and qualitative (Djerasimovic, Villani, 2019; Colarusso, Giancola, 2020a) studies have found, entry opportunities have narrowed dramatically. The academic biographies that we collected tell us that new researchers face old and new obstacles.

First of all the construction of academic identity takes on varying connotations based on positioning in the field (Bourdieu, 1984), based on relational capital, the individual professional project (Giddens, 1991) and the ability to put pressure on the professor of reference (Normand, 2016).

Secondly, academic acceleration dramatically impacts life paths and choices. Biographies thus tell of an ongoing tension of re-subjectification, in which researchers continually attempt to reconstruct an identity puzzle as the pieces continually change. However, it is evident that academic socialisation (in terms of a scholar's relationship with the sub-disciplines and positioning with respect to the hierarchical system of power) is configured as an increasingly open, competitive field in which sense-making (Martucelli, 2007; Moscati, 2020) is added to efforts to gain a non-precarious academic position.

Finally, we argue that the effects of this reconfiguration impact, therefore, not only on the modes of production of science but also on the profound sense of university work and, by extension, of the university itself.

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University Third Mission
and the Local Environment

Public Engagement and Gender Differences in Italy: Exploring the Gap by Activity and Discipline

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ABSTRACT: *The extent of some changes that have occurred over the last years, as well as the social and political consequences of these changes, has led to the emergence of new needs related to expert knowledge, scientific culture, and public trust, calling for new attention regarding the implications of the ties between science and society. Scientists are called upon in first person to engage with society, interact and facilitate the relationship between the scientific world and the world of non-experts. This study focuses on the public engagement activities of Italian academics, specifically on the participation of women scientists in these activities since the relationship between gender and public engagement in the literature is unclear. What is the involvement of women in these activities? Is it different in terms of quantity and quality from that of men? In which disciplines the gender gap, if any, is stronger? How do attitudes towards the university's role in society impact on public engagement of men and women? Using survey data from a national sample of Italian academics from all disciplines (N=5.123), we find that men and women are equally engaged in community-based activities, but women are less engaged in communication activities through mass media. Moreover, the gender gap in the last group of activities is stronger in those disciplines where academics are more frequently engaged, Health Sciences among STEM disciplines and Social Sciences among SSH. These results suggest a different analytical approach for investigating gender differences in public engagement and indicate which disciplinary fields need more incisive policies for promoting women as experts.*

KEYWORDS: *Public engagement, Gender differences, Science in society.*

Introduction

The extent and the complexity of some changes that have occurred over the last years – the scientific and technological developments, the disintermediation of communication and information, the new opportunities for individuals to find every kind of information –, as well as the social and political consequences of these changes, has led to the emergence of new needs related to expert knowledge, scientific culture and public trust, calling for new attention regarding the implications of the ties between science and society (Nichols, 2017). The concern of the diffusion of scientific culture within society calls into question the role of

university and, in particular, the commitment of academics in science communication activities towards different audiences. Scientists are called upon in first person to engage with society, interact and facilitate the relationship between the scientific world and the world of non-experts. In this context, the importance of the university's third mission has developed as a critical dimension in university activities, and particularly the relevance of public engagement of academics. Indeed, among the third mission's dimensions (Schoen, Theves, 2006), public engagement has perhaps been the one to produce the most reflection, evolving over time and varying its definitions and activities included (Burchell, 2015).

This study focuses on the public engagement activities of Italian academics, specifically on the participation of women scientists in these activities, since the relationship between gender and public engagement in the literature is unclear. What is the involvement of women in these activities? Is it different in terms of quantity and quality from that of men? In which disciplines the gender gap, if any, is stronger? How do attitudes towards the university's role in society impact on public engagement of men and women? These issues are relevant for at least two reasons. Given the importance of engagement with society, participation in these activities could be, in the near future, evaluated as one of the criteria for academic career prospects, thus representing an issue that may reduce or intensify existing inequalities for women, still relevant as substantiated by European Commission (2019). Furthermore, greater involvement of women in public engagement activities could contribute to feminize the image of science and to bring different role models for girls and increase over time the likelihood of choosing a scientific course of study, decreasing gender segregation in these fields.

2. Gender and public engagement

Unlike other individual factors for which studies have established coherent results although the same methodological differences – such as professional role, age and discipline – gender role is unclear. As we have recently stated and showed (Anzivino, 2021) the reason for this ambiguity is mainly methodological and it is related to how many activities through the mass media are considered in conceptualization of public engagement and how the public engagement variable is computed.

Looking at some international studies about public engagement, we can recognize a trend: studies that include a large number of mass media activities – proportionally – out of the total of public engagement activities considered, show that men are more engaged than women. Those that include more community-based activities and few or no mass media activities show that women are more engaged than men or do not find statistical gender differences.

Jensen (2011) in an extensive survey on all disciplines using multivariate analysis, finds that French women scientists are more active in public engagement. The indicators of public engagement in this study are participation in conferences for a general audience, in exhibitions, in open doors, actions taken to help associations in understanding scientific aspects of their activity, actions taking place in schools, publications of books/CD-ROM for the general public, activities in the press, participation in radio/television/movies and popularization sites on the Web. A single dichotomous variable synthesizes these indicators: the academic has participated in at least one activity or not. By this procedure, mass media activities account for just over a fifth (22%; two media activities – press and radio/TV/movies are susceptible to be affected by the gender gap on the total of nine activities). Johnson et al. (2014), in their qualitative study, find that women scientists are more involved in public engagement than men, but the activities which are more frequently performed are those with children and school and public lessons, whereas media activities are less. Moreover, female scientists are more interested and motivated by the goal of increasing the participation of women in science, then those activities directed at students. Thune et al. (2016) use a dichotomous variable of public engagement (at least one of the dissemination activities performed) including just one media activity – publication of contributions in the popular press – and three other activities – participation of academics in debates, the participation in meetings/conferences with users/practitioners, participation in lectures/talks to users/practitioners – and men and women result as being equally engaged. Also, the Dudo (2012) study on biomedical researchers shows no differences between males and females in public engagement. The author compute public engagement as a single variable, where the community-based activities (nine activities) are more than twice the activities through mass media (four activities).

On the contrary, studies that indicate a greater engagement of men consider more activities carried out through mass media. Kreimer et al. (2011) consider 17 activities and over half are media communication activities (i.e. TV or radio host or panelist; radio, newspaper, television, magazine, websites inter- views; magazine, newspaper and websites articles), and the dependent variable of public engagement is a synthesis of all activities: participation in at least one activity or not in the last year. When Besley et al. (2012) use, in their analysis, two separate indicators – one for media communication activities (how often researchers talk with journalists about research results) and one for other communication activities (how often researchers talk with the general public about science or research results) – gender differences (male are more engaged) are shown for the media activities and not for others; when they use only one index for public engagement, where three media activities are contemplated out of four, males are more engaged than females, even though women consider engagement to be more important than males. Also, Crettaz von Roten (2011) shows that men are more engaged

than women, even though the attitudes towards public outreach and engagement activities are the same. She considers 17 activities, of which four are media activities, computing a synthetical measure of public engagement, adding scores on the 17 items. This kind of computing allows to take into account the number of activities performed and their frequency. Therefore, if women are less involved than men in media communication activities, they will result as being less engaged.

In this contribution, we resume some of the previous results and expand the investigation to the gender differences in each disciplinary field.

3. Data and methods

Data used in this article have been collected through a national survey on academics' third mission activities, carried out between the end of 2015 and the beginning of 2016. It has been possible to collect information from 5.123 respondents working at 62 universities, with a response rate of 34.2%, on 27 different third mission activities. The sample was randomly selected from the Ministry of Education lists, according to two stratification criteria: the field of teaching and the university's geographical location within a macro-region. The field of teaching included seven categories: Humanities and arts, engineering and architecture, social and behavioural sciences, business, economics and law, mathematics, physical and life sciences, agriculture and veterinary, and health. The university's geographical location included five categories, corresponding to the traditional division of the country in macro-regions: North-West, North-East, Centre, South and the Islands. The sample is representative of the entire population of Italian academics who work in a public university. In addition to being a probabilistic sample, the distribution of the two stratification variables – field of teaching and geographical area – and the distribution of the other relevant variables – gender and academic position – are the same in the final sample and population.

3.1. Variables
Public engagement activities: Among the 27 third mission activities investigated by the questionnaire through a Likert-type scale, we have selected five activities that are characterized by being addressed to a general and non-expert public. Three of these activities were addressed to the territory in which the university is located: collaboration in the realization of cultural or recreational or sporting events (exhibitions, museums, concerts, scientific dissemination festivals, etc.); participation in projects addressed to primary and/or secondary schools; participation in conferences, meetings, training activities addressed to the general public. The other two activities were explicitly addressed as scientific dissemination in the mass media: scientific dissemination through mass

media interventions (press, radio, TV, Internet, digital publishing, social media and blog); contributions to the public debate through mass media interventions (press, radio, TV, Internet, digital publishing, social media and blog). Participation in each of these activities referred to the 5 years prior to the interview and the frequency was observed on a four-category scale: never, rarely, quite often and very often.

Independent and control variables: Gender is our independent variable, and it was collected at the start of the questionnaire, with 4.2% of missing data, which we have excluded from the analysis, leaving 56.4% of men and 39.4% of women. As control variables in the multivariate analysis we have included age in years; academic position (full professor, associate professor and assistant professor); the field of teaching and the geographical area where the university is located (as considered during the sampling); university size, classified on the basis of the number of students (small, up to 10,000 students; medium, from 10,001 to 20,000 students; large, from 20,001 to 40,000 students and mega, more than 40,000 students); academic productivity, measured by the number of articles or chapters published in academic journals or books, the number of scientific books authored and the number of scientific books edited. Attitudes towards engagement are indicated by the degree of agreement or disagreement with the item: Universities should increase their social relevance. This indicator has been inserted in the model as dichotomous, considering together 'totally disagree' (.5%), 'disagree' (4.6%) and 'agree' (38.3%) and separately the answers 'totally agree' (56.5%); this kind of recoding was necessary due to the low discriminatory power of this indicator.

3.2. Techniques

To answer our research questions, we used bivariate analysis to investigate the extent of public engagement activities for men and women, and factor analysis to test the existence of different latent dimensions in the concept of public engagement as it results from respondents' activities[1]. Finally, to test whether men and women differ in engagement with society in each dimension of public engagement, also considering the academic position, age, discipline and other factors indicated by literature as potentially relevant, we relied on regression techniques, namely linear regression. This technique allows us to use all the available information estimating the effect of gender, net of other variables. We also replicated the regression models within each disciplinary field, with the same control variables.

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[1] Factor analysis can be found in Anzivino (2021). We mention it only to substantiate the computation of the two separate indexes used in the analysis.

4. Results

Results from bivariate analysis (Table 1) show no gender differences for two of the three activities addressed to the territory where the university is located, a small difference for activities directed at schools and significant differences for the two activities of dissemination through the mass media. For both men and women, the most frequent activity is the participation in conferences, meetings and training courses for the general public. There are no relevant differences in the intensity of engagement, except for a slightly higher propensity for women to participate in projects with primary or secondary schools (statistically significant). Relating to public engagement activities in the mass media, the differences between men and women are more substantial: the frequency of engagement is higher for men for both activities (+9% for scientific dissemination activities, and +11% for contribution in public debate).

On the basis of a previous factor analysis (see results in Anzivino, 2021), we calculated two indexes, adding the scores for each item and dividing the total by the number of items composing the indexes: one for the index of local engagement, one for the index of media engagement (both varying from 1 – not engaged – to 10 – maximally engaged). These two dimensions of public engagement are different on several levels. Local engagement refers to the communication activities that imply a direct interaction with the public within the local community. Media engagement refers to communication activities directed at a potentially larger and general public that implies an indirect relationship with them. Moreover, these two dimensions differ depending on the origin of the initiative for public engagement activities. For media engagement, the initiative is external, it comes from editorial staff, whereas for local engagement it is more likely to come from the academics or the department.

Moreover, we calculated, by the same procedure, a third dependent variable that considers all activities of public engagement together in a single index and we used it in another linear regression model.

TAB. 1. *Public engagement activities by gender (% of men and women involved at least 'rarely' in the last five years*

	Men	*Women*
Carrying out of sport, leisure or cultural events	56.2	56.9
Projects with primary or secondary schools	56.7	60.7
Meetings, conferences or training activities	85.7	84.8
Scientific dissemination through the mass media	58.9	49.5
Contribution to public debates through the mass media	48.3	36.9

We used them as dependent variables in two linear regression models and we calculated, by the same procedure, a third dependent variable

that considers all activities of public engagement together in a single index and we used it in another linear regression model.

TAB. 2. *Linear regression model on local engagement (N = 4308); linear regression model on media engagement (N = 4303); linear regression model on public engagement (N = 4297).*

	Local engagement	Mass media engagement	Public engagement
	Coeff. B	Coeff. B	Coeff. B.
Intercept	3.829***	1.319***	2.825***
Gender			
Male	-.116	.301***	.053
Female (Ref.)	0	0	0
Age (years)	-.004	.014**	.003
Academic position			
Full professor	.476***	.680***	.557***
Associate professor	.276**	.243**	.264***
Assistant professor (Ref.)	0	0	0
Discipline			
Humanities and arts	.964***	.051	.598***
Social and behavioural sciences	1.174***	.797***	1.020***
Business, economics and law	.008	-160	-.056
Mathematics, physical and life sciences	.128	-.707***	-.206*
Architecture and engineering	-.039	-.412**	-.143
Agriculture and veterinary	.145	.030	.102
Health (Ref.)	0	0	0
Academic productivity			
N. Books published in 5 years	.094***	.124***	.106***
N. Edited/Co-edited books published in 5 years	.121***	.135***	.126***
N. Articles published in 5 years	.006***	.006***	.006***
University location			
Northwest	-.426**	.016	.-245*
Northeast	-.307*	.046	-.161
Centre	-.641***	-.058	-.403***
South	-.254*	.116	-.103
Islands (Ref.)	0		0
University size			
Small	.950***	.571***	.790***
Medium	.379***	.266**	.332***
Large	.073	.190*	.122
Mega (Ref.)	0	0	0
Attitudes			
Totally agree with the need for an increasing social relevance of university	.674***	.391***	.564***
Not totally agree with the need for an increasing social relevance of university (Ref.)	0	0	0
Adjusted R-squared	*0.116*	*0.157*	*0.153*

*p <.05; **p <.01; ***p <.001.

Results from the first model (local engagement as dependent variable) confirm the absence of substantial differences between men and women that we have observed in the bivariate analysis. Even considering the

control variables, individual and academic factors – such as age, position, the discipline of teaching and academic productivity – and the institutional variables – size and macro-region in which the university is located – women and men are equal for the intensity of public engagement within the territory. On the contrary, results from the second model (media engagement as dependent variable) show that the gender effect on public engagement through mass media is significant and relevant also controlling for the other variables: age, position, discipline, productivity, size and location of the university being equal, men have on average a higher score of 0.298 points of media engagement.

It must be highlighted that the differences between the two types of engagement involve other aspects. Those that are interesting for our aims are related to the mass media logic and the journalists' selection criteria of academics to involve in debates, speeches or interviews. Indeed, the factors relating to the Matthew effect and the scientist's visibility – age, position and scientific productivity – matter more (in terms of significance and coefficient magnitude) for media engagement than for local engagement, for which, on the contrary, contextual factors count more. Particularly interesting also seems to be the fact that the publishing products circulating almost entirely within the scientific community (such as scientific articles) count equally for both local and media engagement but publishing activity accessible also to the general public (books), matters more for the media engagement. Looking at the model with public engagement as the dependent variable, the absence of gender differences confirms that the conceptualization of public engagement as a whole, regardless of its different components, could mask the gender effect. We run the same model for local and media engagement within each of the seven disciplinary area (Table 3). Results show that the engagement on the territory is the same for men and women in all disciplines, but women are significantly less engaged in activities through mass media in four disciplinary fields, particularly in Social and Health sciences. Social and behavioural sciences is the most engaged field, and the Health sciences is the most engaged among STEM disciplines.

TAB. 3. *Linear regression coefficients of gender (Ref.=women), for Local engagement and Mass media engagement models in seven disciplinary fields[2].*

	Local engagement	Mass media engagement
Social sciences	-0,079	0,733**
Humanities and arts	-0,021	0,223
Economics and law	-0,183	0,364*
Health sciences	0,158	0,619***
Agriculture and Veterinary	-0,158	0,702*
Engineering and architecture	-0,254	0,169
Mathematics, physical and life sciences	-0,174	0,099

*$p < .05$; **$p < .01$; ***$p < .001$.

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[2] All models are controlled for academic position, age, academic productivity, university location, university size, attitudes towards the role of university in society.

Conclusions

This article aimed to show that the ambiguity in the literature concerning gender differences in public engagement could be ascribed to the one-dimensional conceptualization of public engagement that does not take into account the diverse character of activities. The analysis showed that synthesizing public engagement activities in a single variable, gender does not differentiate the engagement. Analysing the relationship with the two dimensions of public engagement separately, other factors being equal, women do the same local engagement activities but fewer media engagement activities than men, particularly in some disciplinary fields.

Considering that, other factors being equal, the inequalities of participation was solely on the mass media activities dimension of public engagement, also in the analysis within the disciplinary fields, we believe the explanation would be inherent in the specific logic of mass media, which can cross paths with some endogenous aspects related to the unequal distribution of resources in academia that could make an academic more visible.

From other surveys (Bucchi, Saracino, 2012; Peters *et al.,* 2008), we know that the frequency of contact with the media is associated with the scientist's position and with academic productivity – two factors on which women are strongly disadvantaged (Dubois-Shaik, Fusulier, 2015; Van Der Besselaar, Sandstrom, 2016) – and that contacts with media are more frequent for men, independently of position, age and faculty (Crettaz von Roten, 2011). Certainly, visibility is only one of the criteria for the selection of scientists by journalists, as is necessarily the topic of research and communication. The more the topic directly affects humans and their life and health, the more interesting is for the media (Summ, Volpers, 2016).

Gender seems to be an element crossing different dimensions of the media logic – that favours high visibility, scientific reputation, some disciplines, as the media engagement model seems to indicate. However, since our results show an autonomous impact of gender on media engagement, we can assume there is also an acceptance of a conventional idea of science in mass media logic that leads to the adoption of stereotyped communication models, whereby the image of a scientist is one of being older, with a high position, elevated scientific reputation and male. The literature on gender differences in mass media seems to support this hypothesis, showing how some journalistic routines favour the selection of men rather than women as experts and guests for reasons related to time and priority constraints, to communication style and personal characteristics (Howell, Singer, 2017; Niemi, Pitkcńen, 2017). Moreover, some media practices, such as the emphasis on private life (Mitchell, McKinnon, 2019), as well as the physical and aesthetical aspects (Kitzinger *et al.,* 2008) of women when they are involved as experts, could be at the basis of their reluctance to

appear in mass media due to the fear of being judged for work-unrelated reasons (Howell, Singer, 2017).

The exclusion of women from scientific media communication has several consequences. On one hand, on their academic career; and on the other hand, on the participation of young women in scientific educational courses and on their professional options. On the first point, having fewer opportunities in media engagement when public engagement is becoming strongly advocated at different levels (national and European) and, for this reason, having the potential in the near future to be among the evaluation criteria for the academic career, means for women to be disadvantaged in career paths where they have already been disadvantaged. On the second point, a larger presence of women who speak about scientific research in the mass media could contribute to making the image of science more feminine and to making it closer to young women, expanding their educational and professional perspectives towards scientific and technological fields, which at present are still affected by segregation and considered by many as male fields.

The role of university could be important in promoting public engagement of their academics. Each university has been compelled to reflect on the third mission (of which public engagement is a part) and to provide incentives to academics for participating in activities that are becoming part of the academic profession, in addition to the traditional academic activities, teaching and research. Considering this, universities should promote women's media engagement, in particular. Rather than general incentives, universities should focus on actions to encourage the participation of women in programmes or interviews in the press, television and radio, supporting them in specific training to build up their necessary skills to face the media logic and addressing their press officers to promote women as experts, particularly in those fields which are still perceived as male domains.

Indeed, the analysis by discipline shows that some fields need more incisive policies for promoting women as experts. Social sciences and health sciences, in particular, seem to be affected by a more relevant gender asymmetry in mass media engagement.

They are the two disciplinary fields more active on mass media engagement and where women are more represented (at least in the lowest level), so inequalities in these fields are more significant for women and serious in terms of the logic of representation of science.

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Territorial Development and 'Third Mission'

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ABSTRACT: *The subject of the 'third mission' has been on the minds of universities for some time, albeit with differences in orientation at the international level, concerning the interpretation of the mission and the calibration of the commitment devoted to it, compared with what is already required by research and teaching. In Italy, the initial focus was on university-enterprise links, then shifted to continuing education. Recently, there has been a further shift of focus towards the territorial dimension. The concept of 'territory' has been the subject of a strong theoretical resurgence of attention in recent years. Alberto Magnaghi launched an important international movement ('territorialism') that led UNESCO to review the concept of cultural heritage in 2012. Renzo Piano has intervened several times to support the centrality of the actions of 'mending' devastated and degraded urban territories, towards new forms of coexistence. Richard Sennett has dedicated his latest reflections to the relationship between the built territory and the 'dwelling' ('ville' and 'cité'), a fundamental relationship on a social but also ethical level. This turning point coincided with the full affirmation of the network society, which has significantly transformed territories over the last twenty years. The reasons for this transformation lie in the change in the mode of production, the virtualisation of culture, and the restructuring of identities: while physical places become 'translocations' and network nodes, in work and daily life the inhabitants are exposed to often violent glocal dynamics. On the other hand, the growing interest in the territorial dimension (development trends, transformation processes, decay) has been matched by a policy focus on the creation of territorial networks promoting the efficient use of development levers (public and private investment, citizen participation, improving skills, etc.). This applies to the most backward areas, to find ways of connecting them to the infrastructures and dynamics of the network society; but it also applies to more advanced urban areas subject to degradation, to ensure governability, care and involvement of stakeholders and citizens. Universities are potentially decisive players in the transfer of innovation, the training of skills, but also the definition of policies themselves. In this sense, the development of third mission initiatives can be better addressed. In particular, three sectors of activity should be considered, in which promising opportunities and experiences are visible: 1) the enhancement of territories as networks (tangible and intangible heritage); 2) the continuous training of human resources in stable and organised territorial networks involving educational institutions, enterprises and other stakeholders (from ITS to ContaminationLabs), with which to co-design the offer; 3) the development of the Third sector, as interlocutor, recipient and at the same time partner of the initiatives aimed at social welfare. But to what extent can these dynamics be favoured by the current ANVUR evaluation system?*

KEYWORDS: *Third mission, Third sector, Territory, Cultural Heritage, Education.*

1. The 'territorialist' turning point

In 2012, on the occasion of the fortieth anniversary of the 1972 UNESCO Convention for the Protection and of the World Cultural and Natural Heritage and the establishment of the UNESCO *World Heritage site list*, a new vision of cultural heritage was proposed, which placed the territory at the centre as a producer of culture, landscape and common goods. This position was inspired by the 'territorialist' movement and its leading exponent, Alberto Magnaghi. UNESCO had already broadened the definition of heritage: not only just individual assets to be protected (tangible heritage), but also millenary cultural processes such as languages, agricultural knowledge, craft techniques, festivals, rituals, dance and theatre performances. Since 2005, the notion of intangible heritage has been in fact introduced, as well as that of 'multiculturalism' as a guiding principle of protection. For Italian and French 'territorialists', the territory is also this: an asset to be protected: «a historical dynamic of long-term co-evolutionary processes between human settlement and the environment, nature and culture, and thus as the outcome of the transformation of the environment by successive and stratified cycles of civilization» (Magnaghi, 2010).

The territory should therefore not be considered as a simple concentration of resources to be exploited, a container of vestiges and monuments. Rather, it is the real forge of heritage, insofar as it is the relational heritage of environmental, anthropic, landscape, productive and artistic components that have sedimented and hybridised over the centuries. To survive over time, the territory needs communities that care for it and transform it in a far-sighted and sustainable way: Communities that can activate awareness and knowledge of the common territorial goods by forming them, which are essential for social and bio-topic coexistence. The ability to recognize the identity of places, their archives of knowledge, millenary experiences lost and to be recovered, memories and techniques for representing space is fundamental. The territory is continually restructured by human groups, projecting work and energy into space – and time – to adapt its conditions to economic and social needs (Raffestin, 1977; 2005). New forms of 'territoriality' are thus created, through which the space is culturally moulded, acquiring a particular morphology that is also recognisable thanks to scattered point-like signs: landmarks, often distinguishable only by the local population (paths, mines, meeting places, milestones, erratic boulders, such as that of the poet-shepherds in Camuti, Catania or Amatrice). The transformation of the territory passes through 'transfers of places' (for example, the re-functionalisation of buildings with a change of use such as the World War II bunkers studied by Virilio), or other traces, that are often minimal but which constitute a submerged memory rooted in the

landscape. Moreover, 'territorialisation' implies inclusive but also exclusive processes between communities of different cultures, which coexist, conflict and mix 'behind the landscape' (recalling a poetic collection by Andrea Zanzotto), giving shape to a 'landscape' in which nature is not the only feature. Processes that should also be interpreted as a 'deterritorialisation', in cases of land depletion, resource impoverishment (including cultural and human), unsustainable exploitation, or catastrophic events that have emptied and abandoned places. Or as a 'reterritorialisation', through space reconfigurations (e.g., the invention of 'paths', religious or otherwise, as St. Francis way or the Robbers' Road), environmental and urban 'repairs', technological innovations, infrastructural changes, multicultural settlements.

The turning point based on 'territorialist' awareness coincided with the full affirmation of the network society and the 'informational' mode of production (Castells, 1996), which has significantly affected the morphology of territories in the last historical phase, marked by several factors: globalisation, the network reorganisation of all processes, the accentuated culture virtualization and the perception of space and time, and an accelerated identities restructuring. As places become 'trans-places' and network nodes, in work and daily life both subjects and the territory are exposed to strong glocal dynamics, as crossroads of local and global imaginaries, created and remediated by technologies and media.

It is in this context that it is necessary to rethink territories preservation, not only by adopting conservation strategies, nor only 'green' strategies, but also by favouring the creation of 'landscape communities' as active subjects – acting in continuity – and endowed with adequate motivations and skills. Taking care of the territory, whether urban or rural, is a complex activity, requiring multiple skills. Experiences and models have multiplied over the last twenty years, starting with the strategies of slow food and slow travel. They require local care, but also the ability to deal with complex supply chains – productive, technological, communicative – in the field of food (agriculture, processing, distribution) and tourism. As far as urban planning is concerned, Renzo Piano has repeatedly proposed a strategy of 'mending', aimed at reconfiguring the suburbs by intervening on spaces, opening up passages between house blocks, in the 'built-up area', and creating infrastructures and meeting points for social and cultural activities. More generally, Richard Sennett (2018) theorises a 'dwelling' of the city as a re-appropriation, by those who live there, thanks to forms of living and 'construction' that respond to the needs of citizens from below, in contrast to the dominant concept of 'closure', of 'building' that compresses living spaces top down. Sennett identifies the 'reconfiguration' of the territory as a re-conquest of an artisanal way of operating, in a co-designing to which citizens and institutions contribute through the use of social platforms. In this sense, the role of associations and the 'third sector' becomes fundamental, also

in the economic sense, as a 'transfer' of needs, requests and bottom-up planning.

2. Territory, third mission, third sector

A movement of reconversion towards the territory can also be observed about the 'third mission' of the university (and, in perspective, of other institutions). The subject of the 'third mission' has been on the minds of universities for some time, albeit with differences in orientation at the international level, concerning the interpretation of the mission and the calibration of the commitment devoted to it, compared with what is already required by research and teaching. A fluctuation of the definition at the theoretical level is already evident from the outset. Gibbons and other researchers (1994) pointed out the shift from a linear 'Modus 1' view (the third mission as the transition from basic to applied research) to a 'Modus 2' view (the third mission as the interaction between researchers and producers). The idea has been reworked in the 'triple helix' theory (Etzkowitz, 2008), which enhances the role of universities in technology transfer and the knowledge economy in general. It prefigures a very first pattern of hybrid university that is: 1. entrepreneurial; 2. in connection with the outside world, society and institutions, in a co-productive relationship and industrial partnership; 3. with researchers and students acting in an entrepreneurial way. Mode 2 consequently implies that the products and indicators of university activity are patents, spin-offs, start-ups and patronage of industry. Other scholars, such as Carayannis and Campbell (2012), have gone further, emphasising a Mode 3: Openness to the territory and society and the involvement of civil actors together with universities in a co-design of common activities (fourth helix). And soon (2012) they added a fifth helix, based on the strategic role of universities in sustainability and preservation of the natural environment facing the climate challenge. The 'shift' – in different phases – of the third mission's declinations has stressed a more complex model of university hybridization and has also been accompanied by an enhancement of the university's offer of continuing education, another very relevant aspect, strategic in updating and enriching knowledge and skills.

The definition of 'third mission' has moved from the initial focus on the university-enterprise link to that on continuing education in Italy too. But recently a further shift towards the territorial dimension can be observed. Especially in some regions (first in the North for fifteen years, then in the Centre, more recently and only partially in the South, despite the greater availability of public investment), the growing interest in this dimension (development trends, transformation processes, decay) has been matched by a policy focus on the creation of territorial networks promoting the efficient use of development levers (public and private investment, citizen participation, improving skills, tangible and intangible heritage, etc.). This applies to the most backward areas, to find ways of

connecting them to the infrastructures and the dynamics of the network society; but it also applies to more advanced urban areas subject to degradation, to ensure governability, care and involvement of stakeholders and citizens. Universities are potentially decisive players in the transfer of innovation, the training of skills, but also the definition of policies themselves and in the co-participation in grassroots planning initiatives coming from territory. In this sense, the development of third mission initiatives can be better addressed. In particular, our experiences on the field concern three sectors of activity that should be considered, in which promising opportunities and experiences are visible:

1. the enhancement of territories as networks of tangible and intangible heritage, as territory heritage.
2. the continuous training of human resources in stable and organised territorial networks involving educational institutions, enterprises and other stakeholders (from ITS to experimental trials, as Contamination Labs), with which to co-design the offer.
3. the development of the Third sector, as interlocutor, recipient and at the same time partner of the initiatives aimed at social welfare.

The following considerations are based on these experiences.

3. Listening to territory actors and co-designing the project

To verify the 'territorialist' tendency in the context of third mission activities, it would be necessary to distinguish interventions based on a centralised project strategy from the mass of initiatives that universities carry out. In the cultural sphere, for example, the latter sees the territory as the place where the academic activities branch out (the management of cultural assets) and spread (the creation of events). The territorialist mission implies a grassroots listening system of territories, as a basis for valorisation (e.g., of cultural heritage or services for social welfare). Local stakeholders must be involved in various ways and for various objectives: for the formation of networks, enhancing the assets and taking care of the territories; for tourist and sustainable development; for the support of economic activities, craft and micro-business production, training initiatives; for active citizenship and its forms of association. Territorial networks, in short, and not just individual activities that can be carried out at the local level.

In particular, cultural heritage and the development of the third sector are the driving force behind the development of the territory, creating chains of activity. In the context of the continuous development of technologies and communication systems, the design and care of the territory must necessarily overcome the logic of sporadic initiatives, and constitute a process of transformation that the university can follow as a partner. In this sense, the relationship between the university and the territory is reversed with respect to the concept of the third mission based on the ideas and practices of the entrepreneurial university. The

university is not the subject that 'transfers' (knowledge transfer, intellectual capital enhancement). On the contrary, the territory is an organism in continuous mutation with which the university must tune in, interpreting its dynamics and transformations in their 'glocal' development, to become an actor in collaboration with other players. This entails actions that are planned in the medium and long term, not dependent on the immediate and contractual realisation of resources by the structures. As already noted, the immediate profitability of partnerships with industry risks overshadowing projects dedicated to service communities (Moscati, Boffo, 2015).

There are several possible and already practiced strategies for implementing programs of this kind. The first one concerns an aspect that has been little investigated, namely the contribution that students can make to identify needs and initiate a dialogue with the local area. The first step in making contact with local stakeholders, aimed at creating networks and co-design communities, can be achieved as a result of the most classic and widespread schemes of teaching based on 'social constructivism' (Watzlawick, 2008), even in curricular courses. Examples already described (Ilardi, Gola, 2019), and other ongoing experiences despite the limits to mobility imposed by the pandemic, the REWIND project of the Sapienza University of Rome (Capaldi, Ceccherelli, 2021), regard the application of technologies and methodologies suitable for supporting territorial cultural heritage. Project work by students' groups, especially if set up on an interdisciplinary basis, involves: The studies and analysis of territorial resources, the identification of stakeholders, the development and discussion of sustainable enhancement strategies, the creation of digital infrastructures and communication products (transmedia storytelling, gamification, events built on the most advanced technologies, etc.). Art and archaeology, history, entertainment, digital and audiovisual communication, applied IT, social media marketing and other specialist and transversal skills intersect in the field experience, creating a socially useful output. The relational approach with the territory is engaged in the interconnection of cultural heritage (tangible, intangible and hidden) from which to develop tourism marketing strategies and local productive activities. In general, schools and other local training agencies, citizens' associations, tourist, productive and craft actors, and often the institutions themselves (municipalities, museums, parks, etc.) are contacted to reconfigure the territorial area.

The second driving direction implies something more stable in the field of lifelong learning: a continuous training of human resources in stable and organized territorial networks involving educational institutions, enterprises, and further stakeholders co-designing the offer. The instruments can be various. There are two most interesting hypotheses for moving from the practice of spot interventions (such as training camps or summer schools or training events in excavation campaigns) to that of strategic and structured interventions: organic participation in super-professional ITSs rooted in specific territorial areas; and the

currently embryonic Contamination Labs. The latter formula – less executed – derives from a chain experimented in the last PNR of the Ministry of Education, Universities and Research (MIUR, 2016-20), involves the collaboration of business professionals, students, researchers and also stakeholders; it can easily be used to create stable and aggregated project communities dedicated to specific territorial areas. Project-based learning is thus directly linked to socially useful and shared planning, with good chances of project implementation. These projects must be well prepared and nourished by advanced scientific and technological skills, addressing the various social and economic players who can be direct protagonists in the construction of the offer.

The third line of action concerns a more systematic relationship with the varied world of the third sector. Voluntary associations, organisations and third sector bodies, in general, are the true mediators between the requests that arise from the local area and the possible implementation of concrete actions in agreement with the public administration. The ETS (Enti del Terzo settore, according to the 2016-17 reform) collect citizens' requests, can network and are often able to intervene and prevent needs The university can provide its expertise, not in a transmissive logic, but in a participatory one, contributing to co-planning paths and the training of key figures in the relationship with the territory. A concrete example is the Formazione Quadri Terzo Settore (FQTS) project, which has been financed by the Fondazione con il Sud for about 10 years. Its primary objective is to build an infrastructure of relations and skills for the third sector. Within it, in a non-formal, but highly organised learning context (Balzola, 2021), various training paths are making it possible to build skills in different areas: community development (Squillaci, Volterrani, 2021), social co-programming, social innovation (Fazzi, 2019), territorial animation, communication, sustainable development. Some professors from different universities have made their contribution, participating in a collaborative, experiential, and project-based training system, carrying out research-action experiences, and developing project ideas. FQTS has relations not only with individual teachers, but also with the universities involved (Roma La Sapienza, Rome Tor Vergata, Rome Tre, Naples Federico II), through agreements with some study courses and – in the case of Roma Tre – with a certification system provision for skills developed in some training courses. Of course, the relationship between universities and the third sector could become even more systematic and coherent, thanks to continuous moments of confrontation and work in which to involve – in addition to teachers – also students in their courses, in the logic of the first hypothesised strategy.

Conclusions

What has been said up to this point constitutes a reversal, or at least a major correction, of the entrepreneurial university paradigm. It is not an

autonomous driver of the human capital enhancement, but it shows how appropriate is to move towards an effective hybridisation, which tends to be driven by the current phase of cultural and economic evolution. But to what extent can these dynamics be favoured by the current ANVUR evaluation system? And how to reorient governance and possibly differentiation processes in the university fabric?

The movement we have started to describe probably implies a change in the logic of external evaluation, but also in the logic of internal organisation and quality assurance in universities. What is needed are structures or at least 'delegations', in each university or in networks of (regional) universities, which maintain a dialogue with specific urban and rural areas. ANVUR should move away from an evaluation pattern based on quantitative parameters to a system more akin to the one adopted for many years now for teaching (existence of dedicated structures, improvement actions, with verification of results, etc.). Aspects to be verified should be: dialogue with citizens, stakeholders, associations; synergies with the third sector (not only in the social-health field); contribute to active citizenship movements; dissemination of co-designing events and structures for the sustainable enhancement of territories and the mitigation of criticalities; creation and management of more or less complex networks; creation of territorial technological infrastructures; participation in the elaboration of business plans and territorial fundraising.

What should be assessed and rewarded is the action effectiveness as a whole. Not the atomization of individual initiatives, even generous ones, but scattered or unconnected.

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Rethinking Higher Education at the time of COVID-19: Challenges, new perspectives, critical issues

A Competency Model for Obesity Prevention and Healthy Lifestyles Education through the Interdisciplinary and Sustainable Paradigm of Telemedicine

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ABSTRACT: *Referring to health as 'complex problem' urging transdisciplinary research perspectives at present, hereby we present a research-based project addressing health literacy and obesity prevention through the interdisciplinary paradigm of telemedicine including medicine, education, biomedicine and computer science, with the aim to develop best practices and an educational competency model for obesity prevention and health promotion. Through an AI-based and patient-centered e-health framework, the project provides a holistic and sustainable approach to health literacy involving children and families in best practices on obesity and engaging in empowerment processes of psychosocial development, meant to support an independent and positive attitude through experiential learning within the salutogenic perspective. Objective is promotion of life-long capacities of informed decision and self-care in primary and secondary prevention settings, qualifying health education as active citizenship education meant to promote knowledge and participation of the person in the context according to a community-based approach with aim of well-being and quality of life. The present study constitutes a first working basis for experimenting telemedicine in healthcare and school settings. We present an exploratory research conducted with students of Educational Sciences and Psychology aimed at investigating preliminarily social impact of weight-bias and eating disorders and students' involvement in an educational competency models to promote healthy lifestyles and wellbeing. The first results highlighted strong connections between educational and clinical knowledge as urgent need to build more inclusive school and social systems and the emergence of new need of digital citizenship addressing the person's active participation in new digital health systems, made by health apps and medical devices, going from everyday wearables to telemedicine sensors.*

KEYWORDS: *Health education, Telemedicine, Digital health, Quality of Life*

Introduction

The theme of health education is updated in the post-COVID society which, recognizing the role given to social and environmental factors in the transmission and impact of COVID-19, draws attention to the need for educational interventions to prevent and promote resilience at local communities level as lesson learnt from the pandemic (Lauriola *et al.*, 2021). While evidence increasingly attests a positive correlation between

investment in education and healthcare, as well-designed and well-targeted 'non-economic benefit' investment in citizen's decision-making and information (EEE, 202l) at the forefront of the health policy agenda the search for community-based educational approaches to foster community-building emerges as a necessary element in the fight against global risks, resilience, participation and well-being in front of new health and environmental crises. Not only the citizen but also the patient, involved in secondary and tertiary prevention in a healthcare system characterized by a process of technological innovation aimed at achieving new ways of delivering services, treatments and solutions and to outline new partnerships to address health as a complex problem, is at the center of interventions that cannot overlook the principles of conscious and responsible participation, networking and long-term learning of lifestyles and improved behaviors of well-being and quality of life truly generative of health outcomes and a renewed citizenship. The new e-health system, focusing on the lower consumption of resources and the increase in efficiency (the so called value-based system) must be valuable for the patient and in this sense it generates resilience and involvement, consolidating patient-centered care (Tseng, Hicks, 2016).

In the post-COVID era therefore health, understood as defined in 1948 by the World Health Organization as a state of complete physical, mental and social well-being and conceived less and less in a dimension of individual responsibility, and more as a right-duty of the community, calls into question organic and coherent interventions aimed at promoting life and work situations and attention to contexts, starting from a paradigm shift achieved with the Ottawa Charter (WHO, 1986) where traditional approaches to health education focused on 'risks to personal health' were quickly overshadowed by focusing on more comprehensive environmental policies and interventions (Nutbeam, 2018). According to the Ottawa Charter, promoting health means:

- building a public health protection policy
- creating supportive environments
- strengthening community action
- developing personal skills.

Health and well-being, framed within the European Policy Framework and at the center of a global action with the First International Conference on Health Promotion (WHO, 2013) developer of a socioecological theory on health for a healthy development of the person in all conditions (work, leisure) and in the various stages of life, were then recognized as essential to achieving sustainable development with the Shanghai Declaration (WHO, 2017) that thirty years later repositioned them in the context of globalization and Agenda 2030. This declaration reaffirmed health as a universal right, an essential resource for daily life, a shared social objective and political priority for all countries, essential to meet today's interconnected challenges and to deliver on the promise of sustainable development (WHO, 2017), while the SDGS offer a unique opportunity to

address health and its many determinants in an integrated and transformative way.

Health today in the post-COVID era radicalizes strongly the openness to the pedagogical and educational gaze, so that it participates with its humanistic knowledge in policies that need to be increasingly integrated for an effective governance of the health system. Policies in which education is called to work on building integrated models to improve the well-being and quality of life of the citizen/patient, while the health professions gain from social sciences and pedagogical intervention perspectives of awareness and empowerment of the person at the heart of a systemic vision of health that recalls its active role in behaviours with repercussions on one's state of health.

In the context of primary, secondary and tertiary prevention, European educational research is called to promote the empowerment of the person through life-cycle approaches, as a capacity for participation and co-responsibility for the context, that is, processes of activation but also of knowledge and understanding aimed at building a personal knowledge, able to ensure healthier behavior, because it is based on scientific evidence. The reference is to the empowerment of the patient (Aujoulat *et al.,* 2007) in the wake of the model of Health Care Empowerment as substantial attention to the patient's ability to information, engagement, collaboration and resilience with educational objectives not specific to the disease, but which concern the strengthening or development of general psychosocial skills and the focus on experiential learning, a shift from historical modes of citizen participation (humanisation of care, perceived quality, service charter, informed consent) to wider and more complex control processes, critical awareness and participation, recognised as a useful tool for the provision of clinically and ethically effective and appropriate care while ensuring the highest possible level of equity in the use of resources. In the delineation of the new e-health system of digitization of health systems, with artificial intelligence tools increasingly able to operate precision and predictive medicine, the education of the patient is rooted in an idea of overcoming reductionism of the person identified in relation to the anatomo-functional dimensions only and disease as a process of pure diagnosis-cure-healing, for an understanding of the complexity of the disease that recognizes the right of the patient to be the protagonist of his health choices and takes into account the patient's experience.

1. From health literacy to digital health literacy through Telemedicine for obesity prevention

The dynamic relationships between education and health are expressed in the conceptual development and empirical evidence of health literacy, considered among the thematic 'pillars' of a holistic approach to health promotion including good governance, healthy cities and health literacy,

as interconnected challenges in a global approach to health (SHAFE, 2018). Within a triangulation citizens-environments-healthcare, citizens are at the center of processes of promoting health literacy, digital skills, commitment and democratic participation and equity of access. The World Health Organization refers to health literacy by talking about 'social and cognitive skills that determine the motivation and ability of individuals to gain access, understand and use information in order to promote and maintain a good state of health' and arguing that health literacy means improving people's access to health information and the ability to use it effectively, according to an extended definition that crosses the literacy boundary, to open up to the concept of empowerment (WHO, 1998).

Health literacy therefore becomes a tool for promoting health education which is not limited to the mere transmission of information but which aims at developing skills that allow or develop the ability to retrieve information, assess its reliability, to use them to exercise greater control over the determinants of one's health and to make informed, informed and optimal choices in this regard, starting from a traditional definition closely related to the basic concept of literacy, to extend the scope of empowerment and use it as a tool for the foundation of a modern citizenship (Kichbusch, Maag, 2007). The ability to understand health information is therefore closely linked to the ability to decide freely and consciously about it, in a connection of empowerment, health literacy and education towards the goal of overcoming psychological, cultural and social barriers that hinder access to health services and pathways.

As the core foundation of the school curriculum at the center of re-design processes to promote community and global well-being (OECD, 2019) health literacy promotes educational objectives in the classroom to enable children and adolescents to: accessing and navigating health information environments, understanding health messages, critical thinking and making informed health decisions, acquiring health knowledge and using it in new situations, communicate on health issues and concerns, use health information to promote one's own health, that of others and environmental health, develop healthy behaviour and attitudes, engage in healthy activities and avoid unnecessary health risks, become aware of one's own thinking and behaviour, identify and evaluate body signals, act ethically and socially responsible, develop a sense of citizenship and be able to pursue equity goals (Orkan *et al.,* 2020). The aim of this school is the recovering of its eminently educational vocation which should enable each student to develop responsibility and autonomy preparing to face the many uncertainties and difficulties of human destiny (Perla, 2020).

The new telemedicine applications in e-health aimed at promoting digitisation processes in healthcare, today supports digital health literacy as an extension of health literacy in the renewed digital context. New digital solutions, such as artificial intelligence and machine learning, virtual and augmented reality offer the opportunity for the person to

actively participate in their health promoting functional and critical skills in the post COVID digitalized context in which the model of citizen empowerment results in an investment in digital skills and data literacy, with a focus on promoting the ability to access and share data. The same Telemedicine Guidelines (Ministry of Health, 2014) indicate for patients the need for training, not limited to technological aspects, to intervene also on social and relationship aspects, on the change of medical relationship-patient, on the reassurance that, even at a distance, assistance and care is guaranteed to the patient and his pathology and education as well, especially in the management of chronic diseases. The overall strategy for the management of chronic diseases moves from a system that reacts to a sudden and unplanned event, towards a system that educates and empowers the patient to actively take care of his illness and treatment regime.

In this scenario within the Interdepartmental Research Center in Telemedicine CITEL at University of Bari we have hypothesized a multi/transdisciplinary study to understand the transition processes towards obesity and prevent obesity in primary, secondary and tertiary contexts. Obesity represents a disease in itself and a risk factor for major chronic diseases (heart disease, stroke, cancer, diabetes and chronic respiratory diseases). Excess weight is a highly significant predictor of the development of complications from COVID-19, including the need for hospitalization, intensive care and ventilation (WOF, 2021). Obesity represents an illness with psychological correlates (unsatisfactory body image, depressive and anxious symptoms, eating disorders, low self-esteem) and there also cases of prejudice and social and media stigmatization of people with obesity (bullying, weight bias, fat shaming)

Purpose of the study is:
- experimenting in a multi-specialist team with advanced AI-based applications of telemedicine clinical protocols for diagnosis, treatment and education of children with obesity or at risk of obesity
- identify an 'educational space' for the development of an empowerment-based educational model to empower people in managing health and achieve a quality of life balance

Objectives are:
- carry out a clinical trial of telemedicine for the diagnosis, treatment and educational therapy of children with overweight or obesity through a digital platform
- design gamified applications and educational tools within Learning Management Systems in the medical area for the treatment of children with obesity
- carry out data collection operations to define guidelines and best practices (e.g. diet, physical activity, etc.) to be integrated into a citizen's health education model and a therapeutic patient education model

- promote continuing education and training courses for patients and families in terms of assuming responsibility/autonomy in the context of treatment and healthy lifestyles.

Key challenges of the study is therefore promoting life-long learning for health and wellbeing. This means:

- working on the design of a new transdisciplinary paradigm, Virtual Patient Education, in the context of telemedicine applications to improve health outcomes and quality of life of the patients and families involved with outcomes as: clinical indicators, knowledge of the patient, quality of life, self-care and the ability to manage health care.
- developing a competency model for a healthy lifestyle through health literacy promotion in primary prevention contexts

2. An exploratory research: methodologies and results

In this context we conducted an exploratory research aimed to explore perceptions, experiences and beliefs of 357 students attending degree courses in Education and Training Sciences and Primary Education Sciences of the Italian University of Bari and of the Mediterranean University of Reggio Calabria on theme of obesity, eating disorders and educational strategies for related prevention and treatment (Massaro *et al.,* 2021)

The research questions were:

- What kind of representations do students have about obesity and eating disorders?
- On what dimensions is based their knowledge concerning nutrition and health?
- What are their perceptions regarding the design of an education for healthy lifestyles?
- What kind of involvement are they developing with the new digital health technologies? What knowledge derives it from? What is the impact of the new digital apps on their health practices?

The data were collected through the administration of a questionnaire consisting of 31 questions with both open and closed answers and the task of writing an episode evoked by the word 'obesity' experienced personally or indirectly.

The activities were preceded by viewing a short solicitation video and at the end a debriefing was started with questions having an explanatory, reflective and metacognitive function. 357 students (242 UNIBA; 115 from UNIRC) answered the questionnaire. The data were analyzed in aggregate form. The analysis was conducted by dividing the analysis of the 11 closed-ended items (using descriptive statistical techniques) and that of the 20 open-ended questions (by means of qualitative data analysis and content exploration criteria through computational analysis according to Queries functions).

There emerges almost total involvement of students in relation to the theme and the attribution of the phenomenon to causes of a psychological nature, indicating how the educational intervention opens in this direction to address the mental interiority of the person with obesity in a proactive and empowering direction of the personal identity, in connection with any clinical interventions.

99% of respondents state that they have heard of the problem of obesity or eating disorders and 98% consider obesity a relevant topic. With regard to the channels of access to information relating to the issue of obesity and eating disorders, the analysis shows the prevalence of informal channels compared to formal channels, as shown by the highest co-occurrences. Among the causes attributed to the condition of overweight or obesity in children, most (N = 203; 57%) consider psychological ones (insecurity, frailty) as priority, followed by sociocultural ones (family income, cultural background; N = 42; 12%).

It is interesting to note the representations on the impact of the variables 'age' and 'gender' on the problem of eating disorders: if there is agreement on considering the gender variable (male/female) to be of little relevance (78% replied negatively), as regards age, the population is divided, as 53% answered affirmatively and 47% negatively.

As results it emerged also:
- Accessibility to healthy food only for 42.6% of students
- Connection between intervention on obesity and environmental sustainability (84.4%)
- Important consequences of childhood obesity of discrimination and prejudice (weight bias at school and at work)
- Students' personal appropriation of nutritional education principles and healthy lifestyles, concerning which they propose immersive play and laboratory activities to be activated for children and families in school settings and on social networks
- Difficulties to activate training proposals for educators and teachers, for which courses, seminars, training, meetings with nutritionists, etc. are proposed by students

The last section of the questionnaire was built with questions aimed at grasping the involvement and impact of the new digital health applications on the lifestyles of the generation involved in the research, to detect their access and impact in terms of learning and practices about health:
- Do you use digital devices or apps to stimulate and/or monitor physical activity or food (e.g., wearable devices for controlling or stimulating physical activity or apps to guide food choices)? If so, which ones?
- Do you think that these digital technologies (e.g., smartwatches, pedometers, bracelets with sensors, etc.) can generate real forms of knowledge in those who use them about their physical condition?

- Do you think that obesity prevention interventions can be implemented through Telemedicine platforms?
- How do you think digital can currently contribute to supporting the issue of obesity prevention? (e.g., online counseling, devices such as pedometer or Applewatch, digital apps to guide food consumption, etc.

About half of the target of respondents (42%) uses digital devices or apps to stimulate and/or monitor physical or food activity, among which are mentioned in particular the Pedometer (N = 45), App to monitor physical activity (N = 17), the Smartwatch (N = 9) and a variety of applications to monitor calories, weight control, training.

As many as 71% believe that digital technologies can generate real forms of knowledge in those who use them about their physical condition: this data suggests the importance of digital technologies – also confirmed by the prevalence of media, social media and informal communication channels as ways of privileged access to information – in the prevention of eating disorders and in the promotion of healthy behaviors. In fact, students believe that digital can help support the issue of obesity prevention as digital devices and apps' can help regulate and monitor a certain lifestyle (only some fragments of the textual corpus are reported, postponing the detailed categorical analysis of the open answers in the extended descriptive contribution of the research).

Conclusion

The analysis of the data is currently under way. The goal is to obtain a database that can offer us useful interpretative support in the interdisciplinary work initiated within CITEL. The hope is also to demonstrate, in fields with strong bio- medical-informatics, connotation, the important role that knowledge and educational practices can play within a scenario that will revolutionize the approach of care and will increasingly promote the participation and self-regulation of patients

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Hybridity and Educational Virtuality. What Did 2020 Leave us?

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ABSTRACT: *This presentation relates the experience of a chair of the Argentine Cultural Institute of Higher Education (ICAES) in its surprising turn towards virtual teaching motivated by the appearance of the COVID-19 19 Pandemic and the Argentine quarantine, one of the most extensive in the world. The Argentine Higher Education System is called a binary system because it participates in Argentine universities and teacher training institutes. The ICAES is a non-governmental organization founded in the 40s in the city of Villa Mercedes, San Luis, without state subsidy, with educational levels from the initial cycle, secondary, night secondary, English academy and teachers with fees for students very Accessible. Every year, the ICAES takes the corresponding steps to obtain the state subsidy, which facilitates teaching work and institutional activities, without obtaining satisfactory responses from the educational authorities of the province of San Luis in Argentina. In the Argentine context, on March 20, the government issued a decree that ordered 'Preventive and compulsory social isolation' suspending all non-essential activities, and the closure of schools and educational organizations. Violently and without preparation, a virtual emergency education began to function progressively in educational establishments, where teachers with their own resources, possibilities and limitations had to organize in a short time and adapt their classes to virtual mode. The digital gaps, educational gaps, technology gaps, and social and educational inequality that already existed, emerged and expanded with more force and speed in this time of uncertainty. The problems faced by the Argentine face-to-face educational system are not new. Low salaries for teachers, schools with limited buildings and no technology, and student overcrowding in school and university organizations already existed. Before the pandemic, there were traditional schools and hybrid schools. Hybridity combined traditional teaching with little virtual condiments. In this context, with growing difficulties characterized fundamentally by the lack of obsolete devices, limited or no connectivity, little teacher and student preparation in teaching in digital platform, the teacher emerged as a prominent figure in the educational conversation. With historically meager salaries, they had to learn and re-learn the new teaching and learning rhythms, the new rituals, the looks, the silences and the absences caused by the pandemic and quarantine situation in all the subjects. On the other hand, the virtual teaching of classes imposed a greater teaching work in the planning of the classes, the delivery of them and the recognition of new ways of evaluating. In this context, with doubts and uncertainty, a teacher tried to emerge who tried to dominate some areas of the unprecedented, what was probably little unattainable until then: virtuality. Education will never be the same again. Analysis of the immediate future is in the making. Analysis that should be dealt with in education about the role and training of teachers, the use of ICT, the probability of different future scenarios and the specific weight they have in them, the*

different and no fewer complex relationships that can be established between educational organizations, society and the state.

KEYWORDS: *Education, Presence, Virtuality, Educational emergency, Pedagogical continuity*

Introduction

Stenhouse said that teachers were going to save the school by understanding it. Where was the school in the long Argentine quarantine of 2020 with the educational organizations closed? The school was desperately on digital platforms. Could we understand it?

This presentation relates the experience of a chair of the Argentine Cultural Institute of Higher Education (ICAES) in its surprising turn towards virtual teaching motivated by the appearance of the COVID-19 19 Pandemic and the Argentine quarantine, one of the most extensive in the world. The Argentine Higher Education System is called a binary system because it participates in National universities and teacher training institutes.

The ICAES is a non-governmental organization founded in the 40s in the city of Villa Mercedes, San Luis, without state subsidy, with educational levels from the initial cycle, secondary, night secondary, English academy and teachers with fees for students very accessible. Every year, the ICAES takes the corresponding steps to obtain the state subsidy, which facilitates teaching work and institutional activities, without obtaining satisfactory responses from the educational authorities of the province of San Luis in Argentina.

1.1. Argentine Context

In the Argentine context, on March 20, the government issued a decree that ordered 'Preventive and compulsory social isolation' suspending all non-essential activities, and the closure of schools and educational organizations. Violently and without preparation, a virtual emergency education began to function progressively in educational organizations, where teachers with their own resources, possibilities and limitations had to organize in a short time and adapt their classes to virtual mode. The digital gaps, educational gaps, technology gaps, and social and educational inequality that already existed, emerged and expanded with more force and speed in this time of uncertainty.

The problems facing by the Argentine face-to-face educational system are not new. Low salaries for teachers, schools with limited buildings without technology, and student overcrowding in school and university organizations already existed. Before the pandemic, there were traditional schools and hybrid schools. Hybridity combined traditional teaching with little virtual condiments (give using some google apps).

In this context, with growing difficulties characterized fundamentally by the lack of obsolete devices, limited or no connectivity, little teacher and student preparation in teaching in digital settings, the teacher emerged as a prominent figure in the educational conversation

With historically meager wages, they had to learn the new teaching and learning rhythms, the new rituals, the looks, the silences and the absences caused by the pandemic and quarantine situation in all the subjects. On the other hand, the virtual teaching imposed a greater teaching work in the planning of the classes, the delivery of them and the recognition of new ways of evaluating. In this context, with doubts and uncertainty, a teacher tried to emerge who tried to dominate some areas of the unprecedented, what was probably little unattainable until then: virtuality.

1.2. The Platform. The Campus

Classes began to be taught through the campus of the Argentine Cultural Institute of Higher Education (ICAES) and its Physical Education and English Language teachers (http://www.ica.edu.ar/campus/). From the Chair of Teaching Practice II, it was sought beyond transforming the classes into virtuality and adapting the curriculum, the construction and maintenance of the teacher-student pedagogical link according to their interests, experiences, feelings, fears and desires.

FIG. 1. *The Virtual Campus 2020*
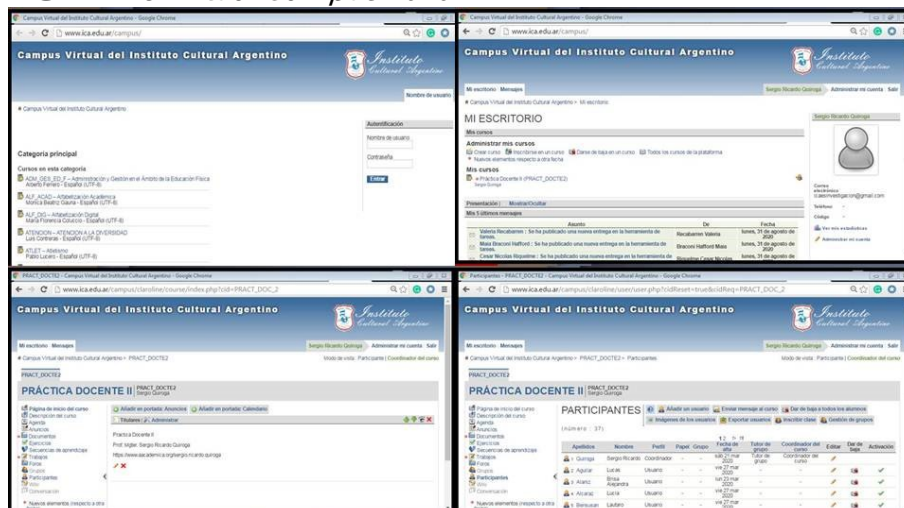
Along this path, the dynamics, strategies and educational proposals to convene the meeting were characterized by the affective-emotional and communicative. The campus turned out to be an interface made up of teachers, students and resources that educators and students had to learn to use quickly and one of the institutional faces in virtual mode. In 2021, Google tools were added.

FIG 2. *The students of Teaching Practice II*
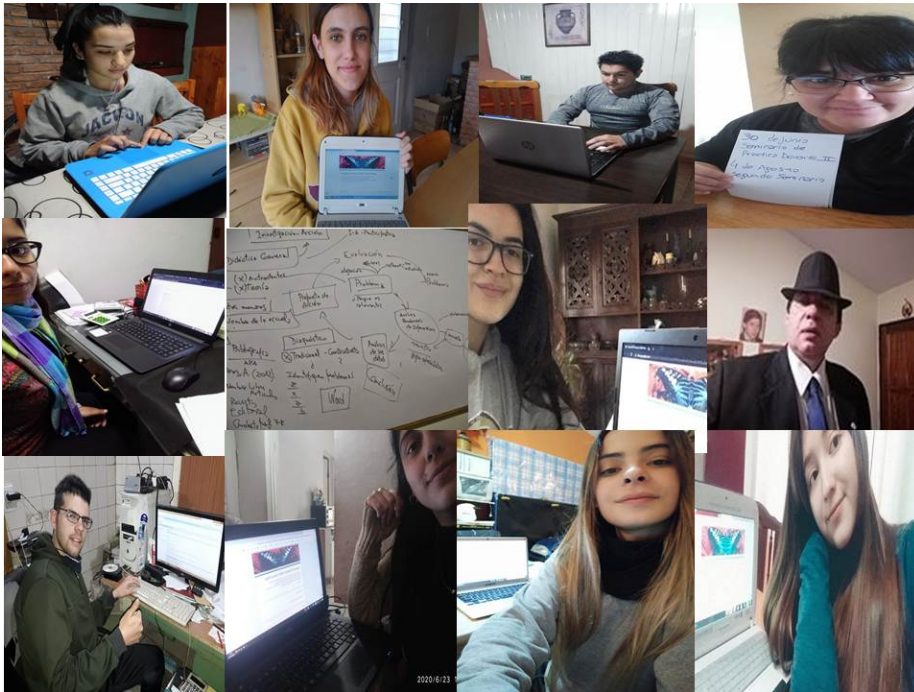
2. New Educational Environments

We understand that new educational environments provide new possibilities in teaching and learning processes, making teaching more creative and attractive for students. Teachers from the understanding of the contributions of technology with a critical sense must build new scenarios of interaction and teaching in educational processes focused on students. It is necessary to consider a change in the roles of teachers and students in working with ICT and to recognize the learning strategies of students.

On the other hand, meaningful learning environments involve a set of elements that favor the conditions for students to achieve comprehension activities. The understanding of knowledge can be understood as that «ability to think and perform flexibly with the knowledge that each one has» (Stone Wiske *et al.,* 2005, 125). In these environments, one type of activity should predominate: the so-called comprehension performances, that is, actions where students «think for themselves and become capable of applying what they know appropriately and creatively» (ibidem). Once the teacher has formulated a version of the understanding goal, he uses it as a 'common thread' to design learning activities planning effective uses of technology. The goal setting process is not a rigid process, as it continues to evolve as the teacher discovers the potential of new technologies and observes what students achieve. Goals continue to be reviewed, clarified, and refined throughout the project.

3. Construction of knowledge

Dussel (2016) advocates that the school curriculum today more than ever is subject to various criticisms and challenges. Today the centrality of the curricular text of those who propose other criteria of organization and hierarchy of knowledge is being questioned. The need for more extensive programming is present, as well as pedagogical approaches and flexible times, alternatives for offline work. It is also about making flexible and adapting the programs and forms of teaching-learning (Chehaibar, 2020).

FIG. 3. *The Board*
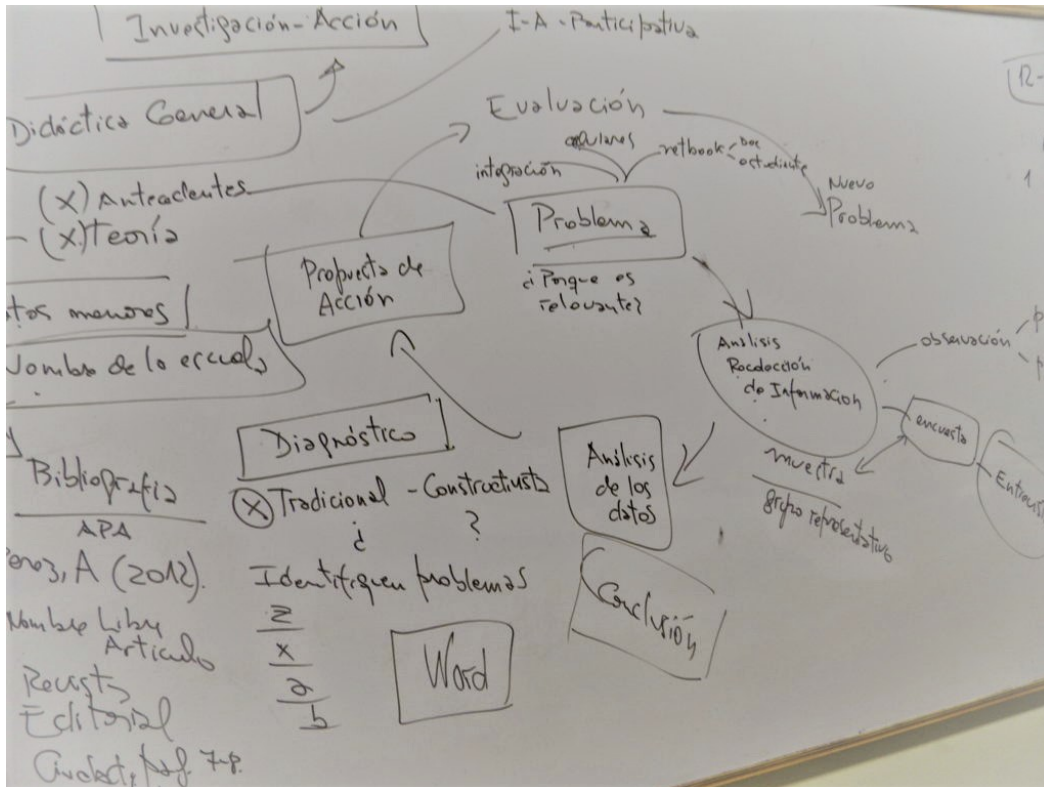
Maggio (2012) called effective inclusions to those situations in which the incorporation of new technologies occurred for reasons other than those of the teachers themselves concerned with improving their teaching practices. The closure of educational establishments for face-to-face classes led to this unexpected inclusion of ICT in classes.

Teachers sought to change the traditional teaching and learning model focused on the development of a curriculum and content, for one that crosses the learning needs of students. A model that arouses the interest of students and shows innovative aspects. In this way, we proposed the Inverted Learning methodology, a student-centered model that consists of transferring part or most of the direct instruction outside the classroom, to take advantage of the time in class by maximizing one-to-one interactions between teachers. and student (Martínez Olivera *et al.,* 2014).

Different gaps reported by Spiegel and Rodríguez (2016) separated students from teachers: firstly, the expectations, capacities and social

practices developed with mobile technologies, secondly, the formats and languages chosen and lastly, the various social practices related to audiovisual materials.

From the teaching role, it was also tried to motivate the students in the classes and stimulate the students throughout the educational process and the use of audiovisual and transmedia narratives. Emotion is relevant in learning and teachers had to understand and encourage students, many of them who felt the close impact of the virus.

4. Place of technologies

Today technologies have a preponderant place in different aspects of social life. Its use in educational organizations can no longer be ignored. Litwin (2016) recognizes that practices with technologies are involved in the didactic proposals and, therefore, in the ways in which reflection is promoted in the classroom, opening a communicational space that allows the construction of knowledge and generates an area of respect and help in the difficult and complex problems of teaching and learning.

According to the perspective of Litwin (2016), there are three dimensions that intersect and integrate when thinking about the field of didactics: reflection in the class, communication, didactics in the reflective process and the moral perspective in the communication. Litwin (2016) acknowledges that every didactic proposal generates ethical considerations and deconstructs, and does so from the practical knowledge of teachers and the old technocratic ideas of teaching. From his contributions, it is possible to think that teachers must rebuild and reconfigure ourselves in the light of new possibilities, while still looking at all these alternatives and media with a critical and overcoming tone. The use of technologies in the classroom should promote a new conversation between teachers and students in the search for transformative learning.

Information and Communication Technologies (ICT) go through our lives, changing our visions and perception of the world, the ways of learning, teaching and working and the patterns of access to knowledge and interpersonal interaction. At the same time, ICT occupies a central and privileged place in the current debate on which broad expectations of transformation are placed.

In the educational context, the use of ICT in educational processes is dissimilar in each country. Teaching with technology supposes the idea of rethinking the place of educational institutions, teachers and students (Badía, García 2006; Cabero, 2006). Addressing the use and adoption of technologies is promising, especially when you are aware of the political, social and economic processes that go through them. In the current context of unplanned virtuality and in the face of the emergency of transferring classes and content and providing educational continuity through digital media, teachers and students are beginning to know an

almost new world. Training spaces have been crossed by dilemmas that arise from thinking about technologies as an object of knowledge and as didactic tools in use. The contributions of technology, changes and their significant meanings have made valuable contributions of technology to education in teaching-learning processes (Barbera, 2006), precisely mobilizing theories towards digital status. This has been a time to refocus and rethink educational processes and focus them on students, in addition to the fact that such processes must (or should be comprehensively open and flexible), while recognizing the difficulties and gaps that are present in education mediated by TIC. It is about having knowledge applied to the production of new teaching scenes that are adapted and include the new practices of the students (Spiegel, Rodríguez, 2016).

The Teaching Practice Space II of the Physical Education Teachers of the Argentine Cultural Institute of Higher Education (ICAES) adopted a virtual modality in the 2020 cycle due to the pandemic. For this, the design and adaptation of an educational learning environment of the curricular space was imposed within the framework of the institution's nascent Virtual Campus in 2020, and the Google tools available in 2021.

5. Strategies

We proposed the application of the inverted and collaborative learning model through group and ubiquitous activities outside of class time. The inverted classroom or inverted learning model, formulates the inversion of the moments and roles of traditional teaching, where the chair, usually taught by the teacher, can be attended and expanded in extra-class hours by the student through multimedia tools (Martinez Olivera *et al.,* 2014).

We understand that each student learns better through different modes of communication, therefore, the process is more effective when it is transmitted through more than one channel of expression (Scolari, 2019). According to the perspective of Litwin (2016), there are three dimensions that intersect and integrate when thinking about the field of didactics: reflection in the class, communication, didactics in the reflective process and the moral perspective in the communication.

6. Criteria for Selection of E-resources

6.1. Criteria
The E-resources were updated and digitized documents of each of the modules, the audiovisual materials (YouTube), the collaborative audiovisual constructions and transmedia narratives of the students and the teacher. This made possible the teaching and student work with the provision of interactive classes, reports, multimedia, and collaborative groups. The presentation of different forums allowed to exchange

opinions and discuss aspects of the educational space and share texts and documents on the development of the Teaching Practice II space that served as materials and resources for the classes and on which the students had to deliver periodic reports, document constructions presentation and transmedia narratives

6.2. E-Evaluation

The evaluation was understood as a set of permanent actions that the teacher carries out continuously to inquire about the level of student learning, their interests, their developments, evolution and their contributions. In this sense, we sought the articulation of different forms of evaluation that allowed us to adopt new perspectives of analysis on these aspects.

The evaluation strategies to be used were procedural. In accordance with what Lai and Viering (2012) propose, we seek to experiment with evaluation through hybrid methodologies integrated by personal reports (blog), rating scales, standardized evaluations and observational measures (ivi, 159). For this, the reinforcement of the teacher-student interaction and the realization of personal and collaborative reports, standardized evaluations and observation of individual and collective productions were proposed.

7. Four central questions

7.1. What could be done (and how did we do it), pedagogically, during the pandemic?

The context of isolation in the midst of a scenario of uncertainty altered the dynamics of the learning processes of all students in the country. The pandemic threw schools, children, adolescents and families into an unprecedented situation. In a short time, the educational institutions had to prepare to guarantee the pedagogical continuity of the students. From one day to the next, the students had to adapt to virtual mode. To the challenge of organizing routines to comply with deliveries and virtual classes, was added the need to find new ways to connect with their teachers and their peers.

7.2. What learnings did this experience enable?

Not all schools had the technological and pedagogical resources necessary to face this crisis. Neither teacher and students. Similarly, all of them had to adapt and use the tools that were within their reach, such as Google Classroom, which functions as a repository of information, WhatsApp groups, videoconferences, such as the Zoom App, government content platforms and virtual classrooms.

The experience made possible a different connection and interaction with the students. In a time of crisis and with emergency classes, together with the 'technical' knowledge that we were acquiring, we learned to

recognize ourselves among students and teachers, to live with difficult situations that touched us closely, and to understand students and teachers.

7.3. What did we learn in 2020?

Teachers learned to use existing technology tools, WhatApp groups, and video conferencing. Students used the mobile phone, forgotten in face-to-face classes in many schools, to connect with teachers and perform their homework. They learned to understand students, to overcome difficulties and to be patient in some cases. The support of families in this long period of closed schools (Argentine quarantine 2020) was uneven, but when it existed it was significant.

7.4. How do we reconfigure our teaching practices in 2021?

The year 2021 began with renewed hopes due to the long-awaited promises of vaccines, the progressive opening of activities and the return to face-to-face classes with small group modalities (bubbles) and a battery of care in educational organizations of initial and primary level and a half. In the province of San Luis, non-university higher education continued in virtual mode. Secondary education returned to a careful presence in March 2021, with great absenteeism in schools. The teachers had to work in person on the bubbles and maintain the virtual format, which created a double teaching load, with the same salary. The optimism would last a few weeks since in mid-May the increase in cases, the appearance of other strains and the heavy occupation of intensive care beds, turned to education in virtual contexts.

The experience accumulated in just fifteen months enables and triggers a set of reflections. The classes have been enriched from the learning of students and teachers, the understanding of the difficulties of the context in which virtual education is provided, the recognition of emotion and the patience to have in this teaching modality.

We understand that school hybridity existed in different educational organizations and in groups of students and teachers where face-to-face education was complemented with some virtual dyes (Quiroga, 2014). Undoubtedly less than what was expected, or what is proposed for the future as an educational paradigm based on virtuality.

The pandemic has expanded virtual (emergency) education with its possibilities and limitations. The evaluation and salary recognition of the virtual work of the teacher still does not appear with force in the press, the teachers' unions, or in the educational authorities.

Education will never be the same again. Analysis of the immediate future is in the making. Analysis that should be dealt with in education about the role and training of teachers, the use of ICT, the probability of different future scenarios and the specific weight they have in them, the different and no fewer complex relationships that can be established between educational organizations, teachers and society.

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The Transition to Online Teaching in Times of Pandemic: An Experience of Teachers' Training in European Higher Education

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ABSTRACT: *Considering that the global pandemic involved an intense integration of Digital Technologies in all of the spheres of human life, education needed to adapt to an urgent remote context. That fact made teachers around the world consider online training as a response to adapt to students' needs Most teachers adapted remote teaching solutions that cannot be considered as online teaching: they literally replicated face-to-face activities and strategies in online settings. Given that situation, this paper explores the necessary transitions that must be developed to provide a quality online teaching: from traditional teaching methods to active and collaborative methodologies; from a content-centered learning to an activity-centered approach; and a change of students and teachers' role. This shift of roles implies the consideration of students as an active part of their own learning and of the teacher as a guide of this process. The new role of the online teacher is related to the design of students' learning activities, the promotion of interaction and collaboration among them and the monitoring and assessment of their learning. Considering all the concepts mentioned, this work explores the key elements for a quality online teaching and presents the design of a training proposal oriented to Higher Education teachers developed in the framework of an european Erasmus+ project that is based on the mentioned key elements.*

KEYWORDS: *HE, Online teaching, Online learning, Training design*

Introduction

Considering that the actual context of global pandemic involved an intense integration of Digital Technologies in all of the spheres of human life, education needed to adapt to an urgent remote context. Given that situation, online training became a response for educational institutions from all levels because they had to apply hybrid solutions in order to develop their training activities. In addition, the need to quickly adapt to these changes made teachers aware of a lack in their own Digital

Competence, not from a technical point of view but from a methodological perspective. This fact has been identified in the application of models of online teaching based on the strategies they apply in face-to-face settings, without taking in consideration some elements that highly differ in online settings such as the process of interaction, the possibilities of asynchronous communication, the redefinition of the concept of time and the changes in its management or the need of more continuous, formative and diversified assessment processes.

In order to develop online training processes that take profit of the potential of digital technologies and promote students' learning, there's a need to develop several transitions: from traditional teaching methods to active and collaborative methodologies; from a content-centered learning to an activity-centered approach; and a change of students and teachers' role. This shift of roles implies the consideration of students as an active part of their own learning and of the teacher as a guide of this process. The new role of the online teacher is related to the design of students' learning activities, the promotion of interaction and collaboration among them and the monitoring and assessment of their learning.

In the case of Higher Education, where students present a higher level of maturity, the mentioned changes become more relevant. For this reason, during the presented work a training proposal oriented to University teachers will be presented. This proposal consists of an online seminar in which participants integrate and apply the methodological teachers' digital competence while they make explicit several teaching strategies in all of the phases of online teaching: design, implementation and closing. The mentioned training proposal is based on a Challenge Based Learning (CBL) methodology. The CBL is understood as a methodology that involves the participants in the definition of a solution to a real and very relevant situation linked to their environment, in this case involves the collaborative design of a learning situation applicable to participants' teaching practice. Thus, during the seminar a future professional scenario is simulated. This training seminar is created in the context of the European project *Empower Competences for Onlife Learning in HE* (ECOLHE) thought a consortium of institution from Italy, Greece, Ireland, Cyprus and Catalonia, and can be a training model scalable to other contexts. In order to give a context to the training proposal, the background in the transition from emergency remote teaching to online teaching, the key elements of online teaching and the training proposal itself analysing the application of the key elements mentioned will be discussed.

1. Background: from remote to online teaching

During the last year, teachers and educators around the world had to adapt to the pandemic situation that COVID-19 provoked. With the

impossibility to perform their teaching practices in face to face settings, they adopted remote solutions based on replicating face-to-face dynamics and activities in online settings (such as video conferencing tools, for example). But this remote teaching cannot be considered online teaching, because any online education activity needs a proper design to be properly developed and to assure students' meaningful learning (Hodges *et al.,* 2020). As a consequence of this situation and the solutions adapted, the results of remote teaching were not coherent with online teaching principles, causing a negative vision on online teaching and learning. This fact can find an explanation on the need of new and different insights to transform face-to-face teaching in online teaching. To properly transit to online teaching, is necessary to consider the subsequent elements:

- Interaction is an essential aspect of online learning and teaching. Many authors (Lapadat, 2002; Wanstreet, 2006) consider the interaction among students, teacher-students, students with resources and students with the learning environment as a way to promote a quality online teaching and learning. Most of them highlight human interaction in online learning settings as the most complex and important to promote students learning, because it establishes a social and psychological connexion that creates the proper environment to activate students' learning process. Considering the features of online settings, interaction must promote students' active role during the development of learning activities and it has to be considered since the design of any online training initiative. In consequence, the level of interaction promoted, can become a good model of online education.

- The potential of asynchronism for learning can be an important asset to transform face-to-face teaching into online teaching: being connected in online environments in front of a screen for several hours can be a dropout factor for students. Considering that students attention doing the same task is limited in time (Montagni *et al.,* 2015), the development of asynchronous activities can prevent fatigue of students and be a strategy to promote their active role in their own learning process and gives them more time to reflect and go in depth with concepts, activities and contents and to acquire meta-learning competences.

- The differences in time management in online environments: given the potential of connectivity that online settings provide, time factor becomes an essential aspect of online learning (Barberà, 2010): teachers and students can be connected at any time and it requires a different time management: the development of all activities, different interactions and all the processes that configure the training actions must be exhaustively planned. In addition, it's important that online teachers help students to plan their own learning processes, because online settings require an autonomous time management by them.

- Online assessment: In order to promote students' continuous learning, assessment has to gather the subsequent characteristics: to be continuous, The assessment that has to be: continuous, formative and diversified.

Definitely, there is a clear need of teaching training in order to make them capable of providing quality teaching in online and blended settings.

2. Key components of online teaching and learning

Online learning has adopted more relevance during the last years and there are several Higher Education institutions that provide online learning activities, but, are they really offering quality online training proposals that take advantage of the potentialities of online settings?

Several authors (Murphy *et al.,* 2001; Bach *et al.,* 2006; Sangrà *et al.,* 2013; Doo *et al.,* 2020) reflect on the concept of online learning and analyse experiences in Higher Education and all of them agree on differentiate it from traditional approaches of distance education that were more oriented to memoristic activities based on content and to highlight its potentialities to promote students' learning and the benefits that if offers such as the access to education or the collaboration among people from different cultures and contexts. Taking into account all of the aspects mentioned, and based on more of 20 years of experience of the Open University of Catalonia (UOC) in online education, ten key elements for online teaching are defined and described in the subsequent sections of this work.

2.1. Student's active role

Online learning offers a wide range of possibilities for students' development. It allows them to be aware and responsible of their own learning and to become cognitively mature because they need to know how their learning is developed, to identify and express their learning needs and to satisfy them with, by one hand, the orientation of teachers and, by the other, their own resources. This fact helps them to develop several cognitive processes that allow them to become more autonomous learners. This active role is essential to promote effective online learning. Nowadays, students become the center of the educational process in all settings (from face-to-face to fully online ones), but it has more relevance in an environment where the interaction between students and teachers is not systematically synchronous. Online students must actively participate in his/her own learning process, to be involved, to be able to self-manage his/her learning process (autonomy), to plan he development of the assignments or activities, to be mature, responsible, motivated, critical with the use of ICT tools and to promote social interaction through collaborative learning.

FIG. 1. *Online student's active role*
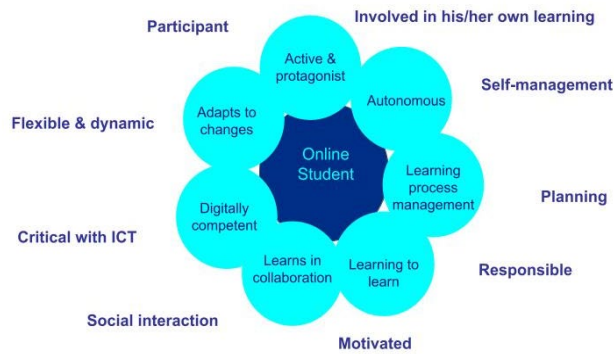
2.2. Competences

A competence combines knowledge (to know), abilities (know how) and attitudes (to be), that an actor needs to develop a function, duty or role and to achieve an aim, within a specific context and according to the conditions established and established standards (adapted from Paquette, 2002). In order to promote the acquisition of the competences by the students, the online training assessment process must be competence-centered. During the process of design, teachers must define several assessment criteria based on the analysis of the evidence of students' acquisition of knowledge, abilities and attitudes during the development of the online activities.

2.3. Active and collaborative methodologies

In order to preserve coherence in the design of online learning activities and to promote the first key component of online teaching and learning, active and collaborative methodologies should be taken into consideration. Among the possible methodologies, the subsequent ones can be highlighted according to Maina et al. (2019):

- Problem solving: problem-based learning presents a situation or problem that requires a solution that must be found by the students. It is based on the need of discovering, experimentation and reflection on the basis of resources and contents provided by the teacher.
- Gamification: that applies game dynamics in the learning process. It includes features to promote students' attention, motivation and satisfaction through challenges, level achievement and rewards. It puts the emphasis into competition and collaboration
- Project-based learning is based on the use of authentic projects, based on a task or motivating problem that is related directly to the students' social or professional context. Applying this method students develop competences in a collaborative focus on the basis of several phases that drive them to a final solution.
- Simulation-based learning is a technique used to stimulate students' participation through hypothetical situations that seek to foster life-based knowledge and apply them to daily situations. It allows students to experiment and take risks without any negative consequence.

- e-Portfolios-based learning is used as a strategy to show a selection of evidence of the competences developed during a period of time. It consists of a powerful tool to promote students' self-reflection.
- Flipped-Classroom consists on the fact that students have the first autonomous contact with the contents through video-recorded sessions or didactic resources and, subsequently, they carry on the practical part or the resolution of complex questions asynchronously
- Collaborative learning is based on the social organization of a group, where students collaborate in teams to achieve a common objective. It promotes the development of individual and social abilities such as autonomy and personal and group responsibility.
- Design-thinking is centered on the recipient of the solution. Is a design process initiated by the definition of a problem and ended with the solution as a final product.
- Challenge-based learning is a practical approach, where students work in teams on the basis of a challenge. During the process a series of conflictive situations familiar to the students are presented to motivate them and promote ideas generation and the use of new tools to solve them.

2.4. Wide typology of e-activities

In the framework of online learning, e-activities can be defined as the activities that are developed online and require the active participation of the students and the guidance and orientation of the teacher. Compared to conventional content-centered activities i present the subsequent characteristics:

TAB. 1. *Differences between content and activity-centered learning*

CONTENT-centered learning	*ACTIVITY-centered learning*
The student is passive and reactive, he/she waits for teacher's instructions	Students' active implication in their own learning, without waiting for teacher's instructions.
Student has a low level of decision-making during his/her learning process.	Students have a high level of liberty in decision-making about their own learning process.
Individual learning is promoted	Collaborative learning is promoted
Lack of opportunities for autonomous learning.	Students have opportunities for autonomous learning.
Memory-oriented competences and content replication.	Process-related competences, results oriented, and to search, selection and management of information.
Personal and professional training is restricted to concrete periods of a student's life.	Personal and professional lifelong learning.

Source: Gros (2011, 25)

Considering the aspects mentioned in this table, activities such as inquiry process of a concrete content, problem solving tasks, virtual debates or design-based activities with a collaborative basis should be good examples of e-activities in an online training.

2.5. Asynchronous and synchronous communication

Nowadays different tools promote communication in online settings that can be very useful for the development of online learning activities. But beyond the tools, communication processes must be planned during the design of the online teaching activities. In order to promote communication among students and with teachers, it is necessary to have in consideration that, as previously mentioned, synchronous communication cannot be the only type of communication in a fully online setting.

Asynchronous communication offers very useful advantages for online learning such as:

- Information is stored and available at any time and place, and the participants can consult and use it whenever they need.
- Participation is strengthened because there is more time and more space to do it. In fact this is quite relevant for those students who don't usually participate because they are introverted or because of a lack of motivation.
- It allows students to develop more reflective and deeper interventions, because they have the time to look for resources to increase the quality of their discussions and arguments and to analyse what peers are discussing to provide answers that increase the virtual debates.
- It helps students to process information because they are able to analyse information in different formats and to seek for the better way to interpret statements, data, facts, etc.
- Flexibility is promoted because the asynchronous base lets students to adapt interaction to their learning rhythms and their availability.

It doesn't mean that synchronous communication has no place in quality online teaching and learning, because it presents very powerful advantages:

- It promotes real-time collaboration, allowing students to quickly produce content to solve problems.
- Immediate response and feedback can be provided by the teacher, helping him/her to orient students in the development of learning activities.
- Incorporation of body language and voice tones helps to provide proximity and to break with the sense of loneliness of some students during a lack of human interaction.

Both types of communication can be used for different types of activities in the same online training: asynchronous communication is recommended to develop reflective and knowledge creation tasks and

synchronous communication can be very useful for decision making and consensus during the development of online collaborative activities.

2.6. Resources for teaching and learning

One of the most important key elements that must be considered during the design of online learning activities is the selection of the resources. Teachers must prioritize resources that are available online and seek for Open Educational resources (OER) because it guarantees that all students will be able to access and or download them without problems or restrictions.

In order to search for resources, online teachers have different engines and sites that can provide quality academic resources such as institutional repositories, virtual libraries and even the web 2.0, because there are several professionals of the educational sector that share their own and other's resources via social networks.

Although, the wide number of resources available online, make it necessary for online teachers to have several criteria selection in order to assure its quality in academic terms. Most important criteria to consider can be, according to Kurilovas et al. (2014) and Senter for IKT utdanningen (2018):
- Reliability and authors identification
- Quality of language, grammar and writing style.
- Content validity beyond commercial or partial opinionated content.
- Adaptation to the learning and teaching purpose.
- Interaction possibilities
- Grade of reusability
- Availability of teaching guidelines
- Promotion and respect of students' individual differences (inclusivity)
- Technical aspects.

2.7. Continuous assessment

Continuous assessment can facilitate the acquisition of competences and support students' learning, because receiving continuous feedback, students can orientate their activity to achieve the maximum level of their learning. Having the intentionality of giving support to the students during all the learning process, it shows the subsequent features:
- It increases student's participation: bearing in mind that they can receive constant feedback that gives them opportunities for improvement, a fact that promotes students' motivation for the development of learning tasks.
- It enables the control of the process: continuous assessment can be a powerful tool to help students to overcome several difficulties during the development of learning activities because it allows them to be aware of any deviation. In fact it also helps the teachers to prevent students' drop out.

- And, finally, it facilitates the rhythm of learning: online teachers continuously monitor and assess students' activity, so it promotes adapting teaching to students' learning and gives them orientations to plan the process.

2.8. Teachers' role as a guide

The changes in educational models that are situated far from traditional settings have not only allowed a significant change in students' role, these changes reconfigured the role of teachers as well. Nowadays, the teacher as a provider of knowledge and contents is totally obsolete and he/she is more considered as a guide for students' learning process. This new role becomes more explicit in online training activities where students are more autonomous.

The subsequent figure summarises the most relevant characteristics of online teachers:

FIG. 2. *Online teacher's active role*

- Designer: Online teacher becomes a designer of learning activities, so he/she adopts a role that requires abilities beyond content providing. He/she needs to know different active methodologies and how to design and implement them.
- Manager: linked to the previous characteristic, the online teacher, as a training manager, needs to be able to exhaustively plan all the interactions, activities, tasks, assessment process and so on to provide a quality learning process to the students.
- Guide: Considering that students are more autonomous in their learning process, the online teacher must facilitate the learning process providing them resources, orientations and guidelines to ensure success in all the process and ensuring that they learn how to learn. This role gets more importance in an online setting, where teachers cannot continuously and synchronously interact with their students.
- Dynamizing actor: an online teacher must provide to the students not only resources and tools for their own learning but also has to

motivate students and give emotional support during their learning process. In order to do so, he can dynamize communication and interaction among the students and provide spaces to promote collaboration and support.
- Adviser: The continuous assessment and monitoring previously mentioned, gives online teachers the opportunity to provide feedback to the students and give them advice adapted to their real needs in order to foster students' learning.
- Collaborator: online teaching must be linked to online collaboration, in online settings the concept of co-teaching gets more relevance because it exponentially increases the quality of teaching and learning.

2.9. Planning

As early stated, the planning of online teaching and learning activities is essential to assure the success of the development of all the processes. Is very important that each activity and task is exhaustively planned so the online teacher must be able to synchronize not only students' performance but also all the processes behind that make online learning possible.

2.10. Stable learning environment, and well bounded tools

In any online learning and teaching activity the environment and tools must be carefully selected in order to assure that they facilitate the development of the different tasks. Online teachers need to have several selection criteria that allow them to select the most suitable tools to develop the activities they design, in consequence, it is necessary that they have a minimum technical knowledge that help them to select the environment and tools that are easy to use, that provide interoperability between different devices and are properly updated.

In addition, teachers must also have several pedagogical selection criteria such as the type of activities that students are going to perform, students digital competence, the possibilities of the tools to adapt to students' learning rhythms and its level of flexibility.

Considering the ideal environment to perform any online teaching and learning that considers the previous key elements should provide the subsequent features:
- Communication tools, both synchronous and asynchronous to make possible discussion and collaboration.
- Information management system in order to share files and information among the participants
- Collaborative tools to develop knowledge generation in collaboration.
- And assessment and feedback tools to develop students' assessment.

3. Integration of the Key components of online teaching and learning to an HE teachers training proposal.

The ten key components of online teaching and learning have been used in an integrated way to design a training for European HE teachers.

The proposed training, designed by teachers from the Open University of Catalonia will be implemented in 6 countries around Europe (Italy, Spain, Ireland, Greece, Cyprus and Finland), and is developed in the framework of the European project Empower Competences for Onlife Learning in HE (ECOLHE).

The training will be developed through Challenge Based Learning (CBL). The conception of the overall training methodology and the different activities proposed allow participants to activate each of the 10 key elements in a situated and practical way, linked to participants' environment. Based on the learning by doing perspective, the training involves the collaborative design, implementation and evaluation of a learning situation directly applicable to participants' teaching practice.

It is organized in two synchronous sessions (initial and ending session) and four asynchronous sessions. Table 2 shows the overall training design that are described below:

TAB. 2. *Overall training design for European HE teachers*

Description	Workload (25 hours)	Modality
Introduction session	2	Synchronous
A2 – Analysis of a learning activity	3	Asynchronous
A3 – Activity design	8	Asynchronous
A4 – Activity implementation	4 + 4	Asynchronous
A5 – Activity evaluation	2	Asynchronous
Conclusion and training evaluation	2	Synchronous

3.1. Introduction session

Developed during two hours in a webinar format, this first synchronous session will consist in sharing the Training with the involved participants, including an introduction, training development, methodology, materials, etc.

The differences between asynchronous and synchronous communication are highlighted in this session where participants will have the opportunity to take an active role making questions and suggestions. The training planning is described not only as general information to organize the training, but also as a first example of its importance to develop online teaching. Some tools to generate webinar

sessions (including video and active communication) will be also explained during the introduction.

3.2. Activity 1 – Analysis of a learning activity
In this first asynchronous activity, participants will analyze an online training proposal developed by the UOC for students. Participants will work 3 hours in collaborative groups, guided by a template and share their analysis with the rest of participants. This activity is focused on knowledge of a set of digital resources (OER) organized by competences.

3.3. Activity 2 – Activity design
Participants will collaboratively design a blended learning activity addressed to their students. Guided by a template and trainers' support, each group will design their own teaching-learning blended proposal, based on their discipline or subject, addressed to their own teaching context. During eight asynchronous hours working collaboratively, participants will follow all the steps to transform face-to-face teaching in online teaching, taking into account the ten key components.

3.4. Activity 3 – Activity implementation
Each university will manage asynchronously two of the designed learning activities playing two roles. Each group will implement during four hours their own created activity playing the teacher's role, guiding a set of other participants groups, who will perform the activity playing the students' role. Once the activity is done, they will exchange roles and activities for four hours more. The continuous assessment and feedback between both 'sides' of the teaching-learning process will give participants the opportunity to change the point of view, evaluate out of the box an online proposal, and improve their own design methodology and activity.

3.5. Activity 4 – Activity evaluation
Each group will evaluate the implemented activities following an evaluation guide provided by UOC. They evaluate their own proposed activity (self evaluation) and their role as teachers, and also they evaluate the activity followed by playing the students role (peer evaluation). Quantitative and qualitative evaluation in this double look will increase the participants' assessment experience.

3.5. Conclusion and training evaluation
Involving all the participants, a final synchronous activity to evaluate the training pilot will be conducted. The evaluation will be composed by an online questionnaire and an open feedback participation.

Table 3 shows where each key component is principally involved in the training proposal:

TAB. 3. *Consideration of the key components of online teaching in the design of the training*

	Intro	Act 1	Act 2	Act 3	Act 4	Conc/Ev
1 Students	✳	✳		✳		✳
2 Competence		✳	✳	✳		
3 Method		✳	✳	✳		
4 e-activities		✳	✳	✳	✳	✳
5 Sync/Async	✳	✳	✳	✳	✳	✳
6 Resources		✳	✳			
7 Assessment		✳		✳	✳	✳
8 Teachers			✳	✳		✳
9 Planning	✳		✳	✳		
10 LE Tools	✳	✳	✳	✳	✳	✳

Conclusion

The development of the work presented implies the definition of a series of key elements that can become quality criteria for the analysis of any online teaching practice in a Higher Education setting. As previously stated, these key elements have enriched the design of the training proposal presented.

The presented training design will offer several European Higher Education teachers the possibility to design quality online or blended training solutions adapted to their knowledge disciplines and their students' needs In addition the design presented constitutes a European proposal in which teachers from several countries will be able to share experiences, collaboratively design activities and to contribute to the creation of an international online teaching community.

Future lines of research will be oriented to develop, implement and analyse the results of the training in order to promote the definition of a training model that can be applied to other contexts.

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Addressing Complex Real-World Challenges in Software Engineering Education through the Integration of Gamification and Crowdsourcing

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ABSTRACT: *Software engineering education aims to train graduates for a thorough under-standing of the principles, methods and tools needed to produce high-quality software as well as to promote the development of their competences and skills required to develop software in a global world. In addition to rich technical skills, software engineers need to develop particular soft skills such as the ability to clearly communicate within international projects characterised by cross-cultural communication and collaboration. Moreover, software engineering education needs to face critical challenges coming from its theoretical nature and the difficulty to integrate authentic practice in the classroom. Frequently, these challenges lead to student's disengagement. In this work, we describe the experience we conducted during the two COVID-19 pandemic years in a Software Project Management course, in which the risk of student's disengagement was accentuated by the fact that the course is taught entirely online. We adopted a student-as-a-producer learning approach together with the CLIL methodology for content and language integrated learning. To address the challenge of student's engagement in the two entirely online editions of the course, motivational technologies such as gamification, serious games and crowdsourcing were used.*

KEYWORDS: *Gamification, Crowdsourcing, Problem-solving skills, Software engineering.*

Introduction

Software plays a central and key role in practically all aspects of our daily life. Software products help us to be more productive and efficient at work, more informed, more entertained, and to be permanently connected to others, among other functions. To produce high-quality software, it is necessary to apply rigorous methods and reliable techniques in a systematic, controlled, and efficient manner.

In 2017, the term 'software engineering' was defined as «the application of a systematic, disciplined, quantifiable approach to the development, operation and maintenance of software; that is, the application of engineering to software» (ISO/IEE/IEEE, 2017). As a discipline, software engineering is a relatively recent one, which celebrated its 50th anniversary in 2018.

Software engineering education aims to train graduates for a thorough understanding of the principles, methods and tools needed to produce software as well as to promote the development of their competences and skills required to develop high-quality software in a global world.

In this work, we address some of the challenges that software engineering education faces currently, which have been intensified by the current pandemic situation worldwide. To do so, we have made use of motivational technologies such as serious games, gamification and crowdsourcing.

This work is structured as follows: first, we summarize the main challenges identified in software engineering education; second, we discuss the role of technologies in the motivation and engagement of students; third, we describe the experience carried out in the pandemic years 2020 and 2021; finally, we summarize our contribution and discuss the lessons learned.

1. Challenges in Software Engineering Education

Educating the future software engineers requires to integrate theory and practice to develop a thorough understanding of the principles, techniques and tools for software development as well as to improve their competences and skills, as suggested in reputed curricula guidelines such as (CC2020 Task Force, 2020; SE2014 Task Force, 2015). The students need to develop both their hard or technical skills, related to the technical activities involved in all the phases of software development, testing and maintenance, and their soft skills, needed to communicate efficiently and effectively with different types of audiences, team leading and management, critical thinking, problem-solving and decision-making orientation.

To help students acquire the real-world competences of a software engineer, it is important to pay attention to the expectations of their future employers. Among them, having good communication skills are vitally important for effective professionals as stated in (Ruff, Carter, 2009). According to this study, software engineers need to communicate effectively for different purposes and contents to a variety of audiences. Their communication needs to be clear and convincing even under stress, and balanced between conciseness and explanation. Additionally, as software engineers are team leaders, they need to be proficient in leading group discussions, managing conflict and be constructive and respectful when providing and receiving criticism. Lastly, they also need to manage

non-verbal communication so that they communicate not only with their words, but with their posture, tone and gestures that reinforce their charisma and passion.

Traditionally, software engineering courses are considered to be highly theoretical and frequently disconnected of the real-world practice, as it is not easy to bring quality professional-like tasks into the class activities. Among the different challenges that software engineering education needs to address, as identified in (Ouhbi, Pombo, 2020), there is one critical and recurrent one: the student's disengagement, due to the theoretical contents of the subject and the lack of real-world practical activities.

Frequently, the previous problem has been tackled by changing the teaching approach. As stated in (Ouhbi, Pombo, 2020), the most adopted ones have been the problem-based and the flipped-classroom approaches, with the aim of facilitating the understanding of the practical aspects of the discipline. Techniques such as role playing, and gamification have also been tested to promote student's engagement (Alhammad, Moreno, 2018).

2. The Role of Technology in Student's Motivation and Engagement

Technology-Enhanced Learning (TEL) consists on the use of technology in educational settings with the aim of maximizing the student's learning experience (Dunn, Kennedy, 2019). Among the different pedagogical effects of TEL, in this work, we are particularly interested in its contributions towards increasing student's engagement. Research has found that students that use technology tend to have higher motivation levels and therefore, remain more engaged in their learning process (Trimmel, Bachmann, 2004).

In this section, we provide basic knowledge about the two technologies that have proved to have positive effects on student's engagement: gamification and serious games, and crowdsourcing.

2.1. Gamification and Serious Games

Gamification, defined as the use of game design elements in non-game contexts (Deterding *et al.,* 2011), promises to increase user participation and engagement, as well as promote behavioural change (Kapp, 2012). Through the introduction of game mechanics and game elements, many companies and research groups have tried to increase student's motivation (Seixas *et al.,* 2016) and performance (Yildirim, 2017), energy savings (Morganti *et al.,* 2017), employee engagement (Robson *et al.,* 2016), production and logistics operations (Warmelink *et al.,* 2020), promote healthy lifestyle habits (Hamari, Koivisto, 2013) and influence on consumer's habits (Hsu, Chen, 2018).

Education has typically been the most popular area of application of gamification (Trinidad *et al.,* 2021). In this context, gamification had been

found to be an effective agent of engagement (Seixas *et al.,* 2016), mainly because of its ability to provide instant feedback about the student's progress (Kapp, 2012).

Although closely related, serious games are not exactly the same as gamification. They are games which have as a primary purpose educate and not only pure entertainment (Dörner *et al.,* 2016). Serious games have been proved engaging as they provoke in the player a highly energized state of concentration and focus for an extended period of time (Annetta *et al.,* 2011; Paine, 2007).

2.2. Crowdsourcing

Crowdsourcing is the practice of engaging a 'crowd' or group of people for a common goal—often for innovation, problem solving, or efficiency. It is based on the idea that 'the Many are Smarter than the Few', and helps boost collaboration (Surowiecki, 2005). There are many forms of implementing crowdsourcing (Lebraty, Lobre-Lebraty, 2013). Among the most popular ones, we can find 'crowdwisdom', which aims at constructing knowledge based on the collective opinion of a community rather than on a small group of experts. Typically, this approach of crowdsourcing has been used in education, using groups of students as the community that collaborates to create new materials and other types of contributions, such as questions for quizzes to test their and other's knowledge. Frequently, the crowdsourced activities are also gamified, with the aim of adding extra engagement (Murillo-Zamorano *et al.,* 2020).

3. Description of the experience

When designing an educational process, it is paramount to start knowing our target group. In our case, we are addressing the Y and Z generations, also known as social media and millennial generations. They are characterized by a native or close to native use of digital and mobile technologies. This aspect is even more reinforced by the fact that our students are technology students. Back in 2013, the TIME magazine dedicated a special issue to the Millenial generation (Time, 2013). In that publication millenials were described as a highly self-centered generation, often lazy and narcissists, highly influenced by the selfie culture and their technology addiction. As for their learning method preferences, they show interest in following research based methods such as group works instead of lectures. They prefer application and connection with reality, rather than receiving information alone, and to have informal interaction with their professors, rather than a rigid or formal style of communication, prefering to a have a connection with their professors on a personal level (Margaryan *et al.,* 2011; Nicholas, 2008).

Having into consideration that our target population belongs to this millenial generation, the following sections describe the type of learning methods, tasks and tools selected to conduct our experience.

3.1. Context

The experience was carried out in the course *Software Project Management* of the degree on *Software Engineering*, which is a 6 ECTS course, during the pandemic years 2020 and 2021. The students who enrol in this course are in their fourth year of their undergraduate studies. Due to the COVID-19 restrictions, both editions of the course were taught completely online. Face-to-face classes were substituted by synchronous online classes via Google Meet. The course materials and the asynchronous communication with the students were managed via a Moodle virtual campus.

Typically, the classes of this course are divided into three different types of sessions:
- Lectures, in which the trainer presents the main theoretical contents. There were 15 sessions of two-hour length each that were conducted using a dialogued style.
- Seminars, which are oriented to facilitate the improvement of soft skills such as communication and leadership in an international context. Seminars were conducted in 10 synchronous online sessions of one-hour length each.
- Labs, in which students perform practical activities. There were three labs dealing with the role of the software project manager, initiating software projects and planning agile software projects. During the labs, the students perform a series of group activities that are monitored and supervised by the trainer and finally submit a report and conduct an oral presentation of their results. Labs were held in 15 synchronous online sessions of 2.5 hour-length each.

To face the main challenges discussed above, we use teaching and learning methods that promote active learning. In particular, for this course we always:
- Adopt a teaching method that promotes active, interaction and highly participative learning.
- Include as much real-life tasks and materials as possible, to bridge the gap between theory and practice.
- Adopt a learning method to facilitate the integrated learning of contents and a foreign language, English in our case, and to contribute to the improvement of their communication skills.

However, if there is always a risk of student's disengagement, in this occasion, this risk was higher due to the effects of the online teaching mode. Therefore, we decided to apply motivational technologies such as gamification and crowdsourcing to aid in keeping our students motivated and engaged. The decisions made were:

- To apply the gamification approach to gamify the activities performed in the subject.
- To use the crowdsourcing approach to enable students conduct activities to build their knowledge supported by their own and software professionals' contributions.

3.1. Educational approach and methods

The general approach followed in the course was the 'student-as-producer' approach. Under this open and student-centered approach, the students work in teams to perform research-like activities so that their learning is built on their own discoveries in a collaborative and research-based way (Hynes, 2017). For the research of new knowledge, we promoted the use of real-life resources in English such as professional videos and podcasts. Once the knowledge has been searched for, the next step consisted in producing their own knowledge

To address the complexities of teaching effective communication in English integrated with the learning of the technical skills needed, the CLIL approach was adopted. This approach, which aims at teaching content and language in an integrated way, is characterized by five main C's: Content, Communication, Competence, Cognition and Community (Coyle *et al.,* 2010).

3.2. Planning the lessons

This step is focused on deciding the general aim, teaching objectives, cognitive, communication and culture objectives of the lessons. To plan our lessons, we started by defining their general aims and then, disaggregated them by setting the specific objectives that will guarantee the achievement of the general aims. Secondly, we defined the cognition or the learning outcomes and the thinking skills needed to achieve the aims. Third, we added the communication step, which helps to integrate the content and cognitive demands with the language learning following Coyle's language triptych (Coyle *et al.,* 2010). Finally, the last step integrates the three previous steps and selects the elements that make the lesson a multi-lingual and multicultural experience.

3.3. Activities and tool ecosystem

Once the content, cognitive and language aims had been planned, it is the moment to decide the types of activities the students will perform under the educational approach previously described, as well as the tools that will create the tool ecocystem that supports the activities.

Table 1 lists the different types of activities and tools used regarding the types of learning goals, and the types of activities and tools used to include the motivational technology layers of gamification, serious games, and crowdsourcing.

TAB. 1. *Types of activities and tool ecosystem used*

Type of learning goals	Types of Activities	Tool ecosystem
Content goals	Project planning and management	Trello[1] Jira[2]
	Project documentation	Confluence[3]
	Project estimation	PlanningPokerOnline[4]
Language and communication goals	Learning vocabulary and expressions	Quizlet[5]
	Presentations	Google Slides[6] / Microsoft PowerPoint[7]
	Online communication and collaborative work	Google Workspace[8]
Motivational technologies	Types of Activities	Tool ecosystem
Gamification and Serious Games	Most of the activities of the course included	GoRace[9] ProDec (Calderón, Ruiz, 2013)
Crowdsourcing	Mixed content and communication activities	Tricider[10]

Source: Elaboration of the authors

To support the different activities related to the content learning goals, several software tools were selected on the basis of their frequent use in the software development and project management industry. Therefore, by using software tools that are used in real-life professional settings, not only do the students learn up-to-date tools but also keep motivated as they know they are learning the tools they are going to use in their proffesional life. For this experience, it was very important that all the tools allowed collaborative work online, given the courses were taught fully online.

Regarding the language and communication goals, the different activities could be classified into activities aimed at learning new vocabulary and/or expressions, and communication ones. To promote the construction of new knnowledge related to vocabulary, we did not ask the students to produce lists of vocabulary, neither play vocabulary games. As we wanted them to create the knowledge, we asked them to work in teams to create vocabulary games and challenge other teams to prove their vocabulary knowledge. In our experience, this strategy was highly positive and resulted as a very important motivator, especially when the challenged one were the trainers. Additionally, another way of learning vocabulary is not only to learn separate words, but useful expressions. In this case, the students collaborately created a wiki

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[1] https://trello.com

[2] https://www.atlassian.com/software/jira

[3] https://www.atlassian.com/software/confluence

[4] https://planningpokeronline.com/

[5] https://quizlet.com/

[6] https://www.google.com/slides/

[7] https://www.microsoft.com/en-us/microsoft-365/powerpoint

[8] https://workspace.google.com/

[9] https://gorace.uca.es/en

[10] https://www.tricider.com/

included in the virtual campus of the course with useful expressions for the tasks they needed to solve. Practicing communication is essential to develop that skill. In this case, we designed numeruous activities for them to practice their speaking skills in the online sessions conducting professional like activities such as job-interviews, making presentations to different types of audiences, conducting meetings, and leading brainstorming sessions and conflict resolution ones.

3.4. Adding the layer of motivational technologies

Gamification and serious games were the elements selected to add an extra boost of motivation and engagement to the students along the course. In order to put into practice the technical knowledge developed in the course, the serious game ProDec was selected. ProDec is a serious game created by the authors of this work to teach software project management. It places the students in a virtual organization where they can manage software projects and solve real-life problems in a risk-free environment. The game accepts the information describing a software project plan and generates automatically a source code file with the equations of a simulation model to simulate the planned project. By running the simulation model, the game provides the players with the experience of seeing the effect of their planning and the decisions they are taking during the project execution. When the simulation of the project ends, the game performs an assessment of the students according with the assessment criteria that the trainers have previously set (Calderón, Ruiz, 2013). In the experience, the tool was running in several virtual machines that the students accessed from their houses through the virtual private network of the university.

FIG. 1. *Screenshots of online synchronous sessions playing the serious game ProDec.*
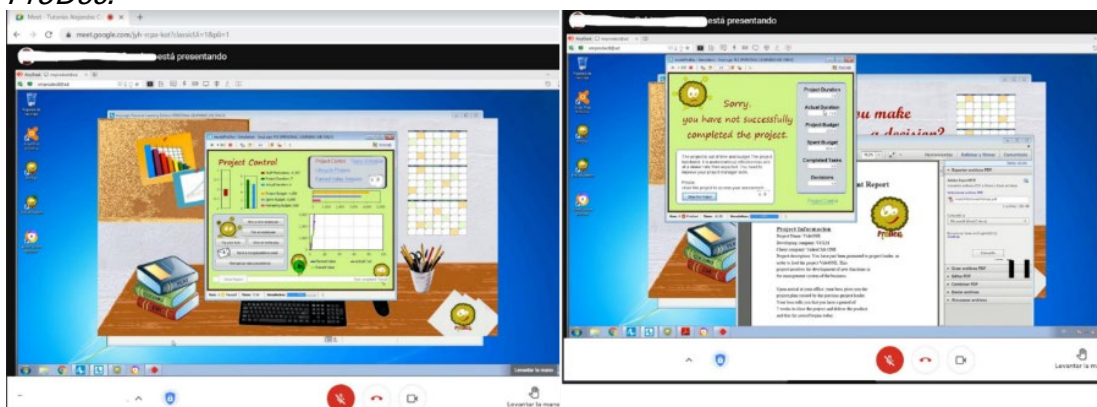
Source: Elaboration of the authors

During the synchronous online sessions, the trainers introduced the tool to the students, who played different gameplays and provided their answers to both the exercises set by the trainers and a questionnaire to assess their satisfaction with using the game, as seen in Figure 1.

The introduction of gamification in the course was done with the help of GoRace. GoRace is a suite of web applications to gamify the activities performed in different contexts, such as the educational one that has been created by the authors of this work (Trinidad *et al.,* 2021). It easily integrates with the tools used in the classroom and offers the students an engaging experience that increases their motivation. GoRace helps place the student in a virtual world in which they participate in a legendary Olympic race to achieve immortality. The student's progress in the race is determined by their accomplishments in their real-life academic activities.

In this course, the activities performed by the students in the virtual campus were monitored and transparently sent to GoRace so that they could receive their rewards in this virtual environment. Those rewards consists on distance points that help them advance in the race and divine points, a type of virtual coins, that enables the purchasing of different relics in a virtual shop, each one having different powers such as allowing them to advance farther, attacking other players or defending themselves against attacks by others.

FIG. 2. *Screenshots of the gamification suite GoRace*
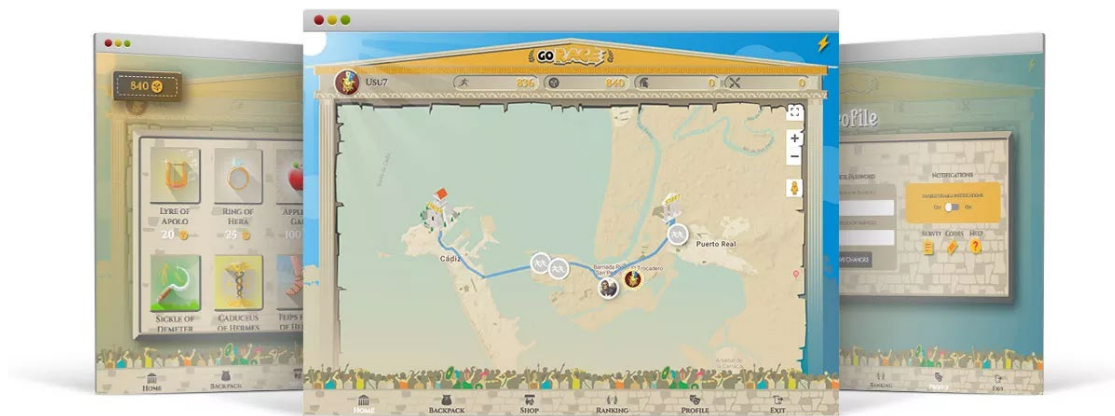
Source: Elaboration of the authors

Figure 2 collects different screenshots of this tool, showing the map of the race that allows the student to check their position on the race and other valuable information such as the time left to finish it (center of the figure), the virtual shop where they can buy relics to get special powers (left), and the account setting screen, to configure their profile and cancel the codes given by the trainer with particular awards (right).

Finally, we also made use of open forums and social media to help our students engage in rich discussions with software engineer professionals in order to find answers to particular course aims related to ethics and social responsibility in the professional career of a software engineer. To achieve this aim, we made use of the tool Tricider. Tricider is a free brainstorming tool to make easy decisions collaboratively. In our course, Tricider worked as a suitable tool to implement the strategy of Crowdwisdom supporting the activities of generating new ideas and

voting. To do this, we invited our students to work together as a group and lead an international debate in Tricider about the importance of social responsibility for software engineers. Very frequently, developing tasks that are perceived as non-technical ones does not seem to be very interesting for our students. This is why we decided to use the strategy of crowdsourcing with this topic. The students created the debate in Tricider as an open one and they starting providing their own ideas and voting them. Soon after that, people, who were not related to the course, not even to the academic environment, started participating also in the debate, enriching it with the points of view of software users and practitioners. Figure 3 shows a screenshot corresponding to this debate.

FIG. **3**. *Screenshots of the crowdsource activity with Tricider*

Source: Elaboration of the authors

3.4. Results

At the end of the course, we asked our students to answer a short questionnaire to collect their feedback about the experience. The questionnaire has close and open questions. Figures 4 and 5 show the evolution of two indicators, which are closely related to measuring the level of motivation and engagement of the students, to collect how interesting and how difficult they perceive the course. The evolution is measured in the period 2018-2021. Within this range, the period 2018-2019 corresponds to course editions delivered before the COVID-19 pandemic, in which the course was delivered face-to-face. The remaining years, 2020-2021, during the pandemic, the course was delivered completely online.

In Figure 4, we can see that the percentage of students that perceived the course as interesting is around 51%. This average grows considerably to reach 71.5% during the first year of the pandemic and grows a little more after the second one, in which 73% of the students describe the course as a very interesting one. The percentage of improvement in this indicator increases in almost 35% after introducing the layers of motivational technology to improve the engagement of the students (year 2020). In the second year of the experience (year 2021), this indicator keeps on growing, but in a smaller proportion, reaching an improvement of 2.10% over the value of the previous year.

FIG. 4. *Student's perception of the interest of the course*
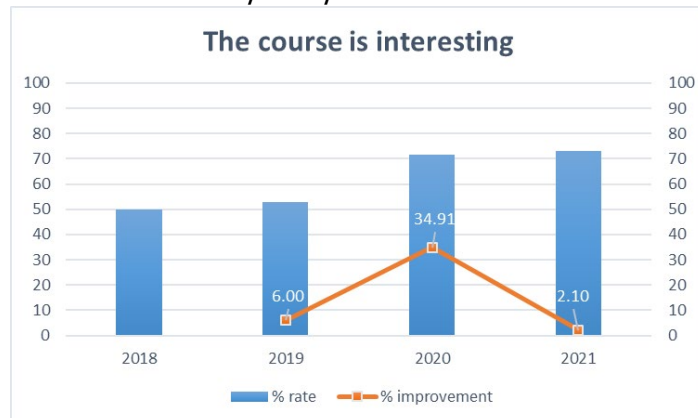
Source: Elaboration of the authors

In Figure 5, we can see the student's perception of the difficulty of the course. Before the pandemic, close to 56% of the students perceived the course as 'difficult' or 'very difficult'. However, in the two years of pandemic, the perception of difficulty has dropped significantly, since no student rated the course as 'difficult' or 'very difficult'.

FIG. 5. *Student's perception of the difficulty of the course*

Source: Elaboration of the authors

In terms of student's performance, we can say that even though the pass rate and the average marks of the subject were high before the pandemic,

in the two pandemic years all the students passed the course and their average marks increased.

In the open questions, the students valued very positively the realization of real-life activities as well as the use of professional software tools, which they are sure they will use in their future careers. The inclusion of motivational technologies was also very positively assessed. The fact that this was the first time they were using them helped attract their interest. The negative comments were mostly concentrated on the perception of feeling a little lost at the beginning of the course. As they were not used to the methodology, the students demanded a more traditional and rigid teaching style, in which they do not have to research for their knowledge. At the beginning, they demanded clear models and examples/templates of what they had to produce. After discussing with them that attending their demands would limit their possibilities of learning as they would simply imitate the models of answer we could provide, and being consistent with the method on our side, the students started to recognize the advantages of the learning method we had proposed.

Conclusions

This work described the experience conducted to teach a course on Software Project Management that aimed at addressing two different types of challenges that both conduct to student's disengagement:
- Challenges coming from the theoretical nature of the software engineering discipline, and the difficulty of including authentic practice activities in the courses.
- Challenges coming from moving from a face-to-face mode to a fully online one motivated by the COVID-19 pandemic in 2020 and 2021.

By changing the teaching method towards an open and student-as-a-producer one, making an intensive use of real-life software tools ecosystem, using the CLIL methodoly to favour an integrated learning of contents and language and adding a layer of motivational technologies such as serious games, gamification and crowdsourcing, it was possible to improve the student's motivation and performance.

The first lesson we learned is that you need to avoid pitfalls such as dealing with the immense amount of work running this experience from scratch. Some students felt the pressure of having to do many tasks in English and they were stressed and tempted to quit, especially at the beginning. Gamification, seriuous games and crowdsourcing helped to keep the students focused and motivates. As professors, we needed to invest a lot of time on this, but we were very motivated and confident on the benefits.

From our point of view, we feel like that even though the contents or aims of the course did not change in this 4-year period analyzed, the

changes included enabled the students to learn and develop their capabilites further.

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University and Active Citizenship. Didactic Practices and Methodological Trajectories for the Development of Creative and Critical Thinking

Bring It On! Debate into University. A Methodological Proposal to Foster Creative and Critical Thinking

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ABSTRACT: *This work takes up the big challenge to innovate University education, providing a solution as old as it is still valid: using debate, conceived as a linguistic regulated relation among opposite parties, even at universities. Debating is like playing chess: every match is a contest played within a strict set of rules and specific boundaries. The checkboard is the place where black and white pieces meet and interact. In the same way, during the debate, opposite theses clash while every party tries to come up as the winner. The project to improve higher educational processes via debating contests can draw inspiration from actual formative experiences, already tested in Italian high schools with positive results. Even during this pandemic period debates didn't stop and were held online, showing how flexible and adaptable to the new digital world they are. Moving from these experiences, new educational pathways can be developed at the University, seeing as debate is one of the 'best practices' that should be spread to encourage the creation of stimulating learning environments. This paper shows the necessity to practice Socratic debate as a methodological model to reach a dimension of truth and thus making rational decisions (choice-based learning). The dynamic of dialectics allows a comparison among different and heterogeneous linguistic elements to evaluate which option is the more resistant and therefore preferable in a given context, even much complex as the current social reality. This way, Socratic debate at universities is the ideal instrument to make students more conscious of their belonging to a community, through reflection and dialogue on various topics so they can take an active role to address citizenship issues, with fairness and wisdom. Moreover, listening to others, contesting their thesis, defending one's point of view – with all due respect – a common ground and mediation spaces can be found, even among seemingly irreconcilable positions. Hence, debate contributes to develop a more inclusive society in which different points of view can live together. Those who experiment debate will develop soft skills and competences of active citizenship that are increasingly crucial in public life, such as critical thinking, public speaking, teamwork, ability to argue, creativity, fair play, logic, respect for the rules, cultural awareness. Methodology: the dialectical clash through a metaphor: the chess game. The Socratic method and the fundamental skills achievable with it. Maieutic strength and Parrhesia: a personal dimension of truth. The Socratic debate as a key tool to forge an active, honest, and responsible citizenship. A proposal to disseminate Socratic debate in universities.*

KEYWORDS: *University debate, Socratic method, Choice based learning, Inclusive society, Active citizenship.*

Introduction

This work tries to suggest a methodological proposal to innovate University education, providing a solution 'old but (still) gold': using debate, conceived as a linguistic and regulated relation among opposite parties, even at universities.

This article is focused explicitly on the Socratic method, grounded on counter-argumentation and maieutic strength, as a desirable tool to experiment with a personal dimension of truth and, this way, to undertake a rich educational journey. Thus, this paper holds that those students who will practice Socratic debate will contribute to build honest, active, and responsible citizenship. In this regard, the Socratic debate is an excellent means to foster and improve core skills and values more and more fundamental for today's life. It is a way to find common grounds and middle solutions for a more pluralistic and inclusive society, even among opposite theses and views. Also, it is the ideal instrument to nurture students' communitarian sense of belonging and active role (through reflection and dialogue on city themes). Eventually, it is the formative path to forge individuals able to be accountable for themselves and their own decisions. Undoubtedly, improving higher educational processes through debate contests can draw inspiration from concrete formative experiences that positively involve Italian secondary schools. Indeed, this contribution specifically considers, as an empirical reference, a high school debate tournament that has been taking place in Trentino since 2010, underlying how relevant it has been for the young students who joined it.

Likewise, this work sustains new educational pathways through debate that can be envisaged and developed at the University because debating is one of the 'best practices' that should be spread to encourage stimulating learning environments and, thus, improving fundamental skills like creative and critical thinking. Accordingly, this paper offers a theoretical explanation of what debate ought to be to maximize its potential. Furthermore, it shows the main characteristics, functions, and achievements of the Socratic method and the necessity to strictly connect the latter with the former practice of debating. This way, as mentioned before, through Socratic debate, it is possible to reach a personal dimension of truth and learn to make rational decisions (choice-based learning). Basically, debating is a lot like playing chess.

1. Black and white pieces on a chessboard: debate through a metaphor

At least a few of the well-known legal philosophers refer to chess to explain their ideas[1]. Here a specific and different perspective is given to

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[1] For instance, dealing with «hard cases» and «institutional rights», Dworkin (1975) states that «Chess is [...] an autonomous institution». Ross (2019) envisions a chess game to represent when a (chess) rule is scientifically valid for the members of that

draw a parallel between the game and debate, conceived as a peculiar dialogical and regulated relation among opposite parties.

Every chess game is a competition in light of a certain set of rules and within a predetermined space, where every party tries to come up as the winner. The chessboard – a precise normative framework – is where black and white pieces meet and interact. Their relation is possible only because of their coexistence. They live together on the chessboard, where both are the condition of existence for the other. As one could not know the day without the night, so in chess, there is no black without white and vice versa. Hence, what brings them together is the 'dialectic', intended in its original meaning[2].

Likewise, during a debate, there is a dialectical clash among opposite elements (typically theses or statements), and the linguistic relation takes place in a specific and regulated figurative 'space', that is, the adversarial dimension. In this peculiar environment, it is possible to compare a claim with its negation (its opposite) in order to test its strength and to clarify the reasons for which that claim may be preferable[3].

Connections with some classical rhetorical activities can be highlighted. Indeed, while playing chess, each player tries:

- to find the best moves (the most effective, the most compelling for the opponent, the one that will lead a player to checkmate) and thus to elaborate a winning-effective game strategy (*inventio*)
- to develop their strategy and moves with a particular rational and functional order to win the game, which means to produce a logical and effective tactical progression (*dispositio*)
- to carry out their game plan according to a certain 'style' (e.g., 'Russian', tactical or positional, etc.) (*elocutio*)
- to use their memory of the game, remembering a chosen strategy, tactical schemes (chess theory), the opponent's moves in the current game, and any games previously played to predict their choices and thus taking advantage in the preparation of countermeasures (*memoria*)
- to provide their ludic performance according to a specific personal modality. Although the voice is not particularly used, every player marks their own game with peculiar movements (by pressing the timer button, capturing an opponent's piece, fiddling with the captured pieces, interacting with the referee, etc.) and with their

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specific *community* (the players) and thus provide «a simple model» to identify «scientifically valid (Danish) law».

[2] On the concept of *dialegein* see Montanari (2003) and Sommaggio (2012). In other words, see Berti (1987). The reader may notice curious assonance between the original meaning of dialectic and what Ross states (2019) about the *necessary concomitance* of both players in a chess game: «A single person cannot pursue the goal 'to win at chess'. The actions which are included in 'playing chess' can only be performed in interaction with another person. Each player has his part to play, but this part has meaning only on the condition that the second player also plays his part».

[3] See Sommaggio, 2012.

body language (eye contact or not, confident or insecure attitude, gestures, etc.) (*actio*).

Last but not least, it is worth emphasising how exciting a chess game (and thus the game plot of each player) can be and thus involves the audience and the players themselves also on an emotional level (*movere*). This aspect is particularly true, especially in the final stages of a hard-fought match in which the outcome hangs by a thread, because the forces in play are almost equal and even a single move, brilliantly played, can determine victory or defeat.

Similarly, connecting the aforementioned features of a chess game with the debate practice, participants in a debate should:

- find the best arguments and counter-arguments, namely, those most suitable to support their thesis and conclusions, and rhetorically demolish and invalidate their opponents' discourse in the light of the context and the audience of reference. Moreover, they should also elaborate a strategically winning discursive plan (*inventio*)
- concretise their debate strategy, and the envisioned 'moves' through rational discourse and, possibly, an argumentative progression (that is, an ordered and concatenated series of arguments) leading to a persuasive conclusion that is cogent both for the audience, for a possible third party (e.g., a judge), and even for the opponents (thus giving them a linguistic 'checkmate') (*dispositio*)
- choose and use a certain linguistic style: emphatic, friendly, confident, ironic, calm, reasonable, and so on, also depending on the discursive result that every speaker wishes to achieve in a debate (such as highlighting the argumentative-logical weaknesses of others' speech, looking for points of mediation between the opposing theses, better substantiating the statements at stake and clarifying which reasons support them, etc.) (*elocutio*)
- remember their argumentative path, possible discursive schemes or patterns (quotations, rhetorical questions, expedients, particular syllogisms, etc.), and what their opponents argue (*memoria*) in order to be able to carry out an adequate and effective counter-argumentative activity, in the attempt to undermine and overcome the opponents' speech.
- declaim their discourse effectively and persuasively (almost like they were actors in a theatre), modulating the tone of voice, managing silences, creating suspense, using certain gestures and body language (postures, eye contact) (*actio*).

Finally, any orator who aims to get recognition for their thesis – as the most resistant, convincing, and then shareable in the context of reference – seeks the persuasion of the audience, of possible judges, referees, and mediators, and then has the burden of emotionally involving these subjects (*movere*) so that they endorse the orator's thesis and conclusions and therefore support their *logos*.

As an example of what has been depicted through the chess metaphor, this paper brings a concrete formative experience to show how concretely relevant debate practice can be for those who experiment with it.

2. The particular formative experience of the project *A suon di parole – Il gioco del contraddittorio*

Within the Italian educational scenario, this paper refers to a specific learning experience taking place since 2009/10 in the Autonomous Province of Trento, involving students and teachers of several high school institutes. It is called *A suon di parole – Il gioco del contraddittorio*[4] and is a debate tournament that consists in a rhetorical-dialectical and argumentative competition among students and classes from different schools, fostering critical listening and thinking, fair play, analytical comprehension of the opponents' views and arguments, autonomous reasoning, among the others. This peculiar debate format offers a formative path to get students closer to democratic practices (for instance, by dealing with city themes), to develop their social and civil competences, to enhance their initiative, and to improve a set of fundamental 'soft skills' (such as the ability to argue, public speaking, teamwork, an attitude of respect, decision making, etc.). The promoters of this project are several local Institutions, educational and political, which have grown in number over the years[5]. Especially in the experimental phase, they received valuable input from the few schools initially involved in the project and their referent teachers. Since its beginning, *A suon di parole* provides participants specific education on debate and argumentation employing qualified debate trainers, thus offering theoretical tools and hours of good practice.

The enthusiastic support and the growing participation in the first decade of this debate-focused initiative are shown by the increasing numbers of students, teachers, and schools involved, the project's increasing territorial scope, and the positive synergy with other local and national initiatives[6].

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[4] For extensive content on this project see Sommaggio and Tamanini (2019; 2020a).

[5] On the project history and the coordination board see Sommaggio and Tamanini (2020a).

[6] Considering the data collected and published by IPRASE for the 2018/19 tournament – see the corresponding report (2019) –, 24 educational institutions participated in the initiative, thus experimenting with debate contests in Italian or even in a foreign language. Overall, 60 classes debated that year, and the total number of students involved reached 1.300. School teachers concerned as tutors were 63, and almost 30 topics were addressed. Since the project start and up to 2018/19, approximately 6300 students have taken part in it, mainly from Trentino, but also from the Autonomous Province of Bolzano and the neighboring Veneto region. This tournament has achieved synergies with relevant cultural events, both local and national. For a broader look at it, https://www.iprase.tn.it/.

Furthermore, the positive impact of this project, conceived as an enriching formative experience and a way to acquire fundamental skills, is directly witnessed by the students involved in it. According to a survey[7], indeed, most participants consider the debate tournament an interesting and engaging experience and a stimulating way to learn new things, even though pretty challenging. Their commitment was significant or fairly good. Moreover, they largely notice the initiative's usefulness for learning or improving the ability to reason and provide arguments, present opinions with rational discourse, speak in public and deal with current and city subject matters. Indeed, they see this experience as an *innovative way* of learning.

Other relevant feedback was collected in a series of interviews with a high school class that attended the 2012/13 tournament edition (Simeon, 2020). Overcoming an initial skepticism, most students consider their debate experience as an awesome opportunity. The debate topics usually resulted in interesting, a premise deemed ideal to elaborate personal opinions and develop critical listening and thinking to experiment with a real growth path. Students hold that dealing with current issues improved their ability to reflect on things and their rhetorical skills to publicly express relevant contents, whether providing arguments to support a thesis or counter-arguing the opponent's claim. Furthermore, the students interviewed give a proper account of how this debate contest fostered and improved their teamwork – even when teammates had different ideas or opinions (cooperative learning) – and stimulated their competitive mindset and full participation. Depicting this formative experience as a good practice to be valorised, Simeon (2020) stresses that nowadays, the development of a critical sense and attention to current topics are shared cornerstones of learning methodology. Moreover, she detects that the students' statements confirm that this is what they need and that the *A suon di parole* tournament is an excellent tool for meeting this need.

The last part of this paragraph brings its author's direct experience precisely within the *A suon di parole* project.

As a debate trainer and one of the judges of the past edition (2020/21), the author can testify the drive and desire of the whole community of students, teachers, members of the coordination board, and institutions involved to continue this formative journey even during (and despite) the Pandemic, precisely because, it has proved to be an engaging and fulfilling social and educational experience for all those involved. For this, the tournament coordinators decided to adopt experimental methodologies, completely digital and innovative, to offer specific education on debate and for the running of the competition. The former was made available entirely in asynchronous form through the creation of a formative podcast, divided into thematic episodes, mainly dedicated

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[7] For the whole data, see Tamanini (2020).

to debate, argumentation, and dialectical confrontation[8]. The latter, starting with inter-school competitions, took place online via the 'Zoom' platform. Participants drew heavily on the available formative materials (as shown by the high rate of podcast streaming during the preliminary stages of the tournament), and participation in the tournament was great and enthusiastic, despite the logistical, technical, management, and human difficulties inevitably associated with digital experimentation in a time of Pandemic. This way, the online tournament showed how fertile and adaptable to the new digital world debate is.

Also, in light of this empirical framework, this paper sustains that similar debate-focused initiatives, *mutatis mutandis*, should be embedded and developed into universities, thus bringing positive outcomes (in terms of skills gained, experiences made, stimulating learning environments, etc.) for those who will experiment with this peculiar dialogical relation.

A deepened look at what debate is (or what it ought to be to express all its potential) is now appropriate.

3. Debate and Socratic method. Parrhesia for citizenship

This article embraces a conception of debate which distinguishes it from a mere exhibition of 'monologues' or a confusing discussion with disorderly overlapping discourses, without rules and boundaries. Instead, as highlighted earlier in this paper, debating is much more like playing chess.

Indeed, the debate is (or should be) a regulated linguistic relationship among opposite parties and their theses which takes the form of a 'dialogue', possibly informed by the dialectical method (see *infra*). Typically, the debate is a formal and regulated practice on a specific topic that consists in a linguistic clash at least between two different and alternative positions, where it is crucial to find and provide arguments and counter-arguments ('rebuttal') to support one's thesis and to face the opponent's claim adequately[9]. This way, debate allows to identify which is the resistant and therefore preferable thesis in the given context. Like players in chess, participants in a debate accept its rules and organized setting, where their speeches are usually made to convince a third party (e.g. a judge, a referee, etc.) that their arguments and thesis are preferable in that context. Moreover, they show the 'right' approach in a debate, not simply rejecting the opponent's arguments but learning to argue and counter-argue against them. Debate is a dynamic, concrete, and open practice that has not pre-determined results, because its outcome

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[8] The whole digital podcast *DibattiCast* was available via Spreaker.
[9] Indeed, argumentation and counter-argumentation are the two different souls integrating the debate, then every participant should argue and counter-argue to succeed.

depends on the argumentative 'moves' of each 'player', then its conclusion cannot be predicted. Moreover, the debate is a formative practice of peaceful confrontation: it drives participants to explore issues of common relevance and adopt an attitude of respect for other people's opinions and a rational detachment from their ones.

Therefore, stressing the dialogical nature of the debate, this paper agrees with the consideration that «debate can be both a method for building civil society and an educational approach to develop a range of skills and knowledge», a formative paradigm «that is student-centred, focused on critical thinking and based on the exchange of ideas» (Sommaggio, Tamanini, 2019). As also underlined earlier, indeed, debating activates and nurtures a set of transversal skills that today are more and more fundamental for students, individuals, and societies as a whole (such as public speaking, teamwork, creative thinking, critical listening and thinking, etc.).

Although briefly, time is come to explicit which further results and personal achievements the Socratic method grounded on dialectics allow to reach, thus proposing a typically Socratic debate.

The Socratic method, more than a theoretical discussion, is a philosophical practice: it must be practised, one has to make the experience of it, any written description can only be less than a pale substitute (see Dordoni, 2009). Indeed, it is a concrete way of experiencing a dialogical relationship that takes place on a linguistic and conceptual level and has Platonic Socrates as its model (see Sommaggio, 2020b). This peculiar approach is usually pointed out as dialectical opposition in rebuttal (*elenchos*).

This method empowers individuals who practice it to dialectically consider the linguistic options in a given context, pushing for their comparison, to find out which one is the most resistant in that specific environment and then preferable (for it has the best arguments, logical cogency, no contradictions, etc.). By doing this, it allows a better definition of the opposite theses[10] and a comprehension of what kind of opposition exists between them. It also makes possible to detect any contradiction in the opponent's reasoning or even to provoke it[11]. Furthermore, it highlights possible 'common grounds' between the alternative theses so that a mediation space for 'intermediate solutions' can be found and valorised[12]. Eventually, the Socratic method holds individuals accountable for their choices (they have to take rational

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[10] As two opposite river sides shaped by the same incessantly flowing river (*dialegein*; Sommaggio, 2012).

[11] Indeed, the Socratic method does not conceive 'contradiction' as an unsolvable problem or obstacle because the oppositional dialectical clash is the appropriate tool to notice and hence expel any contradiction from the parties' discourses, thus helping to determine precise and not illogical statements. In this sense and concerning the principle of non-contradiction see Cavalla (1983), Sommaggio (2019).

[12] About the mediating space representable as a 'bridge' (over the river of *dialegein*), see Sommaggio (2012; 2019).

decisions and support them with sufficient and efficient arguments), and even for themselves (*Parrhesia*), where the latter means that everyone who experiments with this method is driven to create an inner relationship of accordance between what they say and what they do (*infra*).

These two last aspects are strongly connected to a core element of the Socratic method, to the extent that this method especially acts through counter-argumentation and a particular force that operates by rebuttal: the maieutic force[13]. Actually, is this force that in a dialectical clash holds the opponent accountable for their decisions and themselves by driving them to a particular state of being, which is a personal condition of truth: *Parrhesia*[14]. Thus, who behaves as Socrates (an orator, a debate participant, a teacher, etc.) will push their opponent to 'tell the truth about themselves', that is, to generate a rationally founded discourse in which the opponent connects their own experience (*bios*) with what they think of it in terms of values and rationality (*logos*). Then, it is precisely the maieutic force that enables the linguistic relation between opposite parties to produce a 'truth effect': thus, the person who experiments Parrhesia, due to their opponent's rebuttal activity, strongly connects their world vision (logos) with their own concrete life experience (bios).

Therefore, in the personal dimension of who lives this condition of truth, the harmonic interaction between reality and language can be found. Consequently, this paper maintains that who reaches *Parrhesia* can be depicted as the door that opens *bios* to *logos* and *logos* to *bios*. Hence, the connection between language and reality is possible through a personal achievement, a desirable target that should be pursued.

Accordingly, the importance of practising Socratic debate – based on argumentation, dialectics, rebuttal, maieutic – can be grasped for every participant (whether a student, a teacher, a citizen, a politician, etc.) to reach this personal dimension of truth. Consequently, this article reckons crucial the introduction and diffusion of Socratic debate into universities (by means, for instance, of debate courses and training activities to effectively practice it), but even into public spaces, city contexts, political scenarios, formative initiatives, and society as a whole: the aim is to nurture a productive cultural collaboration among students, educators, and citizens and thus foster the creation of honest, active, and responsible citizenship.

Citizenship can be honest if citizens live a dimension of truth, and this happens to the extent that as many citizens as possible reach the

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[13] As well known, Socrates compares himself to a 'midwife' as far as he takes out from his opponents, using counter-argumentation and maieutic force, their ideas, values, theses, and arguments, and asks them to provide rational justifications for their actions and choices (see Plato, *Teeteto*, 150 B-151 C). Indeed, maieutics is exactly the Socratic method, eliciting knowledge through a series of questions and answers.
[14] Foucault (1985; 2019) valorises the classical Greek tradition and considers the oppositional dialogue between different parties to reach *Parrhesia*, that is, man's relationship with the truth. In this sense, Sommaggio (2012; 2016).

aforementioned personal achievement of the Parrhesia (so that there will be the greatest number of people who say what they do and do what they say). Citizenship can be active if individuals are trained in the use of all the fundamental skills achievable through Socratic debate, previously highlighted, and if they deal with city issues and problems[15]. Eventually, citizenship can be responsible if everyone becomes capable of rationally choosing and motivating their own decisions, in light of the personal alethic connection between *logos* and *bios*.

Hence, the Socratic debate results in the ideal tool to innovate higher educational processes and, through this path, enhance whole society.

Conclusion

This contribution outlines the pivotal points of a methodological proposal to innovate and improve University education through the practice of Socratic debate by showing its potential, characteristics, and significant outcomes through a metaphor, a concrete formative experience, and a theoretical framework.

Indeed, this work introduces the theme of the oppositional dialectical clash by comparing the debate practice to chess. A constant parallel between the game features and structure and the classical rhetorical activities is highlighted.

Then, this paper gives a proper account of a concrete educational initiative, a high school debate tournament, to show to what extent this kind of learning method can be effective and fruitful for students and to suggest, *mutatis mutandis*, similar debate-focused practices, and competitions into universities. In this context, the author's personal and direct experience in the project is reported.

Afterward, the article deepens what debate is (or ought to be), taking the distance from other phenomena and highlighting its relevant features, as its peculiar nature of dialogical-linguistic and regulated relationship between opposite theses which meet and clash with each other.

Hence, an illustration of the Socratic method, its functions, and the set of fundamental skills that it allows developing in who makes the experience of it follows, with a specific focus on maieutic strength and the goal of Parrhesia, which means access to a personal dimension of truth.

In the end, debating in a Socratic sense turns out to be a pivotal tool to forge honest, active, and then responsible citizenship, a worth pursuing desirable goal. Consequently, the proposal to introduce and practice the

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[15] See Dossi (2020), referring to citizenship as active participation in the political dimension of civil coexistence, states that formative experiences as the one presented here can be considered interesting premises of active citizenship.

Socratic debate into universities has been formulated, supported, and grounded.

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Can Community Mapping Strengthen the Relationship Between University and Civil Society? A Case Study In Bari

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ABSTRACT: *The paper analyzes the case of a web Geographic Information System, created to facilitate the participation of civil society and third sector organizations at the revitalization plan of the Libertà neighborhood of Bari. The City has set an integrated strategy of renovating its suburbs. The main target area is the Libertà district, close to the city center, a former working-class neighborhood with the characteristics of many European suburbs: unemployment, low schooling, high crime rate, increasing immigrant population. The Municipality is investing in the area European and national resources to establish new services, new squares and parks, and to sustain the creation of new businesses. Civil society is at the center of this intervention, called upon to co-produce and co-manage interventions and spaces, to create the common and relational goods that the neighborhood needs. The project questions the role of community mapping in shortening the distance between the local University and civil society. To do so, the author created a web GIS, Rigenerazione Libertà, in order to encourage participation and to strengthen trust between citizens and institutions. The research used a mixed method approach. The web GIS reprocesses an extensive qualitative analysis, administrative documents, open data, articles from the press and a questionnaire administered to a sample of businesses in the neighborhood. The theory-driven evaluation and the realistic evaluation were used to reconstruct program theories, in order to show users the logic of public policy design. The web GIS intended to support civic participation: the evaluation questionnaire instead shows a high self-selection bias. The quali-quantitative GIS suffers from the same limitations as public assemblies and arenas. According to respondents, the tool is not easily understandable by people with low schooling and it is only partially able to close the distance between public institutions, universities and people.*

KEYWORDS: *community mapping, urban regeneration, Third Mission, civil society, mixed method.*

Introduction

According to Jin-Kyu Jung (2017), participatory mapping is a fundamental tool to create partnership between university and community and to fulfill one of the mandates of the academic institutions, i.e. the Third Mission: «we need to diminish the distinctive line between academic and professional knowledge and community-based experiential knowledge. These perspectives all epitomize the need to work with rather than on community» (2). Community mapping usually involves associations, businesses, public decision makers, managing entities of services in a process that investigates the needs of neighborhoods and cities.

Urban plans and programs are one of the classical «wicked problems» (Rittel, Webber, 1973), hard to understand and to manage by both professionals and citizens. In this respect, Geographic Information Systems can be an instrument for reconsidering urban areas, to «understand a community's needs, to connect to local communities, and to reflect and assess with communities» (Jung, 2017, 6). Universities can provide communities with technology and informations in order to empower people and democratize civic life (Al-Kodmany, 2000).

This paper investigates ways of learning through community mapping. In particular, it analyzes the case of a web GIS (Geographic Information System), Rigenerazione Libertà, created to facilitate the participation of civil society and third sector organizations at the revitalization plan of the Libertà neighborhood of Bari.

FIG. 1. *Screenshot of the portal Rigenerazione Libertà. Social deprivation index of the city of Bari.*
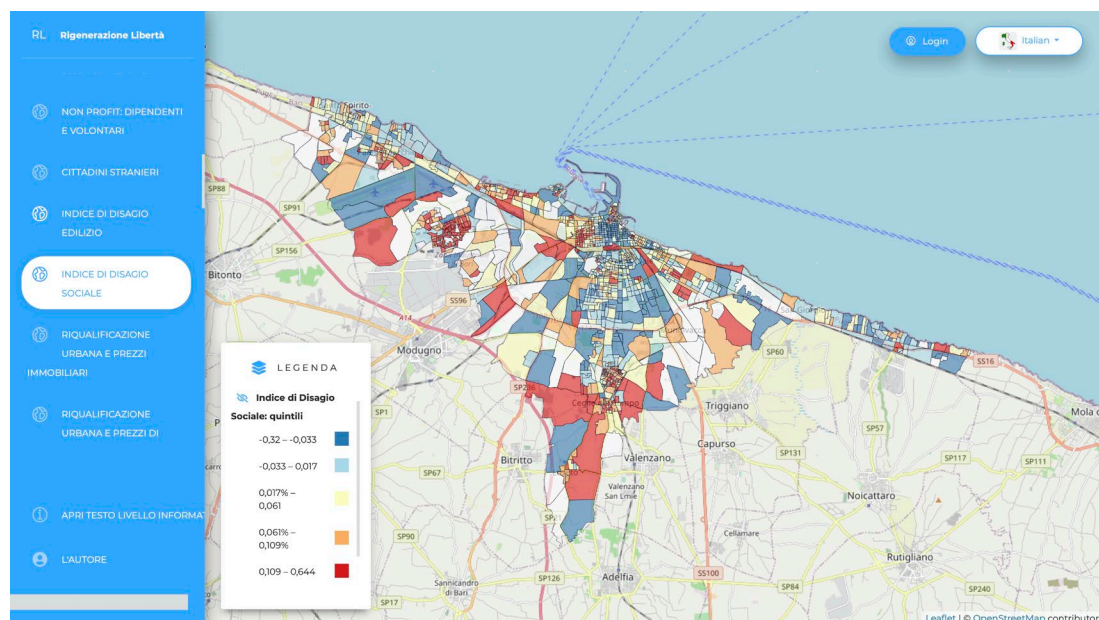
Source: Elaboration on ISTAT census data, 2011.

Libertà district is just a few hundred meters from the Faculty of Education of the University of Bari. It used to be the industrial and workers district of the city and now is the main target area of the urban regeneration programs implemented by the City Council. National and European cohesion funds (over 15 years, the planned expenditure is about 70 million euros) are financing an integrated program of interventions to reverse the decline of a difficult neighborhood, with problems stratified over time and unequal living conditions.

The proximity to the city centre and the rental affordability, together with the availability of a large amount of a degraded housing stock, has made of Libertà the main place of residence for foreign citizens. The area is at the centre of political debate. In July 2018, a political movement based in Libertà sent a petition signed by 3,000 people to former Interior Ministry Matteo Salvini, highlighting the issue of the immigrant population, the harsh living conditions of the inhabitants and the decrease of the real estate values, which the petitioners linked to the presence of migrants. It seems to be listening to the big issues that animate the political confrontation at a global level: the impoverishment of the middle class, the contrasts between the people and the elite, immigration and the identity of communities affected by crises (Mounk, 2018). The neighborhood, where organized crime is strong, represents one of the many «places that don't matter» (Rodríguez-Pose, 2017, 189).

The former Deputy Prime Minister visited the area in September, 2018. The clash became physical at the protest demonstration organized on the 21st of September, 2018, by left wing protesters. A group of demonstrators were violently attacked by members of CasaPound as they passed near the headquarters of the far-right movement, located in Libertà right next to the local mosque. Twenty-eight members of CasaPound are still on trial.

The first intervention in the area dates back to 2006, when the administration decided to transform a parking garage into a cultural centre. Since 2017, Spazio 13 has also been active in the neighborhood, run by 14 associations with activities aimed mainly at the youth population. ExpostModerno, an old open-air cinema now revitalized by a local association, is not far away. Moreover, at the Salesian Institute the Municipality is in the process of completing work of the community library.

The old Salesian structure also houses a day centre for minors, an educational community and a vocational training centre. The Municipality, since 2014, has strengthened the welfare services of the area, especially the ones addressed to children and families.

FIGURE 2. *Screenshot of the portal Rigenerazione Libertà showing the welfare interventions in the area and a pop-up with part of the qualitative analysis carried out.*

Source: Own elaboration.

National and European cohesion funds have been used to support the creation of new businesses. The economic and social regeneration is also pursued through the transformation of the former Tobacco Factory, where a job center and a business incubator already exist, in the new offices of the National Research Council.

Thanks to the Periphery Plan, launched by the Government in 2016, the City is establishing a new park and three new squares, and intends to renovate one of the district's main avenues. In order to strengthen social capital, the administration has launched two social innovation initiatives: Urbis, which finances community social enterprises, and Urban Civic Networks, which has led to the creation of groupings of third sector bodies for the social and cultural animation of the city's neighborhoods.

The Municipality is involving civil society to reach three different goals:

1. shorten the distance with people living in the vast suburban areas;
2. use the knowledge dispersed among those who live and work in the area (Hayek, 1945);
3. multiply the initiatives of social assistance and urban innovation.

In this context, the author created a web GIS[1], published in 2020, July, to offer stakeholders a tool to deepen and sustain their involvement in the plan. The tool, following the «collaborative planning» of Patsy Healey (1997), intends to be a virtual space where to bring together the different points of views of the actors involved in the regeneration plan. The

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[1] Rigenerazione Libertà, available at: http://www.rigenerazioneliberta.com.

approach is concerned with ensuring dialogue and a fruitful exchange of points of view between people with opposing values and visions.

Methods and tools

The Web GIS has been constructed upon concepts and methods of the evaluation analysis. In fact, according to the theory-driven and the realist evaluation, projects postulate that activities will be followed by certain effects according to a logical sequence of expected events. If programs are «theories incarnate», as Pawson (2006, 26) writes, then it is important to analyze and reconstruct their logic, the expected results and the ways in which they should bring about the desired social change. Pawson and Tilley (1997) construct their realist evaluation method by emphasizing an explanatory model of social change for which mechanisms, in certain contexts, give rise to specific outcomes. In the triad «mechanism-context-outcome» (Pawson, Tilley, 1997), mechanisms are propositions that show «*how* specific program activities lead to specific changes in behavior, wherein individual behavior constitutes the relevant outcomes of policy programs» (Shaw et al., 2018). Outcomes derive from the choices of people and organizations and the resources they have at their disposal (Moro, 2015, 8).

Theory-based evaluation can favor the dialogue between professionals and the civil society. As Weiss (1995, 72) states, «[e]valuations that address the theoretical assumptions embedded in programs may have more influence on opinions, both elite opinion and popular opinion. Theories represent the stories that people tell about how problems arise and how they can be solved».

The study of the mechanisms of change hypothesized by the decision-maker can therefore be the point of conjunction between the technical knowledge of practitioners and academia with stakeholders and the more general public (Chen, 2012).

The web GIS was created using a «triangulation strategy» (Creswell, 2009) between the knowledge dispersed among decision-makers and civil society, together with an elaboration of open data and an extensive documentary analysis. The overlapping of thematic maps, the visual comparison of qualitative and quantitative characteristics, made it possible to reinforce hypotheses on the relationships between data of a different nature.

The combination of the mixed method and GIS offers the opportunity to elaborate the complexity of processes and the multiplicity of viewpoints at play in urban transformations (Pavlovskaya, 2009; Picone, 2017). The main sources of the analysis were interviews, in order to

understand how in fact the public interventions are structured, their logic and the risks policies face. As Donolo (2017, 207) states in regard with cities and urban needs, people hold more informations than many data sets. Data collection drew on different sources through what Glaser and Strauss (1967) called the «constant comparative method»: interviews; administrative documents; questionnaires, used both in the data collection phase and in the evaluation of the GIS; open data regarding the context, the real estate market and the quantity and prices of houses rented on a short-term basis through the Airbnb.com platform; participant observation of the neighborhood and the places; press reviews, which made it possible to make up for the lack of geo-referenced databases on phenomena relevant to the context analysis.

The integration of quali-quantitative analysis and GIS was mainly done by inserting, in the fields of the attribute table (the database of the elements shown on the map), extracts of the interviews carried out with privileged witnesses of the neighborhood and information and quotations from the documentary analysis. «Integrating interview data into a GIS […] also served to include the respondents as co-creators of representations based on their experiences» (Pavlovskaya, 2009, 28).

The shapefiles were then uploaded to the web, with the possibility of querying points, lines and polygons and showing the constituent elements of places, services and public works.

The fields of the attribute table were thus transformed into a reconstruction of the main elements of the interventions. As the regeneration program is mainly implemented using national and European cohesion funds, the Web GIS was also conceived as a method to monitor planned and ongoing interventions, similar to what was done by Monithon, a civic monitoring system that allows for geolocalized comments on projects, organizations and enterprises that have received public funding. The Web GIS in fact provides administrative-accounting data on contracts for works and services.

Corbett and Rambaldi (2009, 84) write, «[a]lthough community maps have proven to be useful tools for communicating local knowledge, they are limited in describing the complexity and extent of what is known about the land. For this reason maps are frequently supplemented with the written word». For the same reason, a text window has been inserted to the right of the maps, explaining the characteristics of the layer and hints at the methodology and literature on the subject.

Rigenerazione Libertà possesses some of the characteristics of Public Participatory GIS, which emerged in the mid-1990s in the strand of critical geography, emphasizing co-creation and the collective purpose of mapping (Sieber, 2006). They are public and participatory both in their purpose – to foster community awareness – and in the involvement of

citizens in the creation of data-supported maps. Co-construction of maps does not necessarily mean that participants create Geographical Information Systems themselves. «This is typical of many community mapping projects in which community members do not engage directly with the GIS but provide input and evaluate output» (Sieber, 2006, 497). Rigenerazione Libertà lies at the bottom of Arnstein's ladder of civic participation (1969), since it informs people but it doesn't give them the possibility to add informations, comments, ranks or propose alternative plans (Steiniger et al., 2016).

Rigenerazione Libertà contains to a lesser extent what Lynch (1960) called «the image of the city». The use of mind maps together with GIS is a widespread practice (Jung, 2017; Picone, 2017): in the first part of the qualitative analysis carried out through semi-structured interviews, the privileged witnesses were asked to indicate two places that had a strong positive or negative valence. In the personal and collective vision of the city there are in fact streets, buildings and squares that take on importance because they are obligatory passages or collective memory, they are collectors of emotions for a group and sometimes for the whole city. The mentioned places gained opacity or prominence depending on the number of times they were mentioned by the respondents.

FIGURE 3. *Mind map of the area with a pop-up showing extracts of the interviews and the number of times the place was mentioned by the respondents as a symbol of the area.*
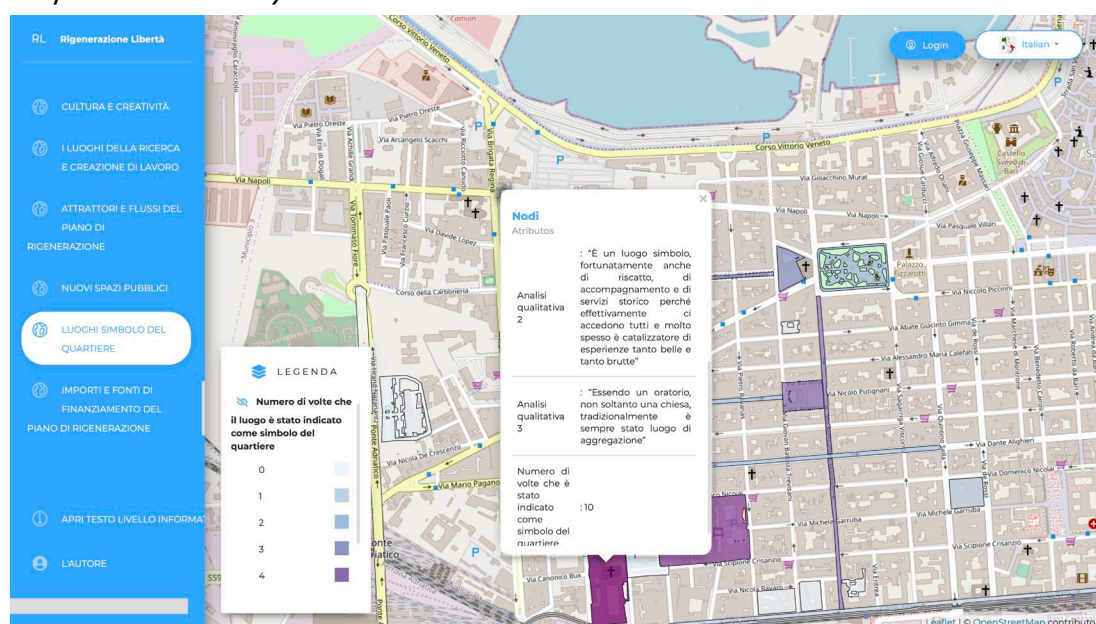
Source: Own elaboration. Screenshot of the portal Regenerazione Libertà.

In order to acquire relevant information on the businesses of the area and on the opinion of entrepreneurs on the regeneration program, a questionnaire was administered to a sample of businesses that was

representative of the population, as shown by the 2011 Census. The questionnaires – concerning the health status of responding businesses, reconstructed by examining turnover, recruitment, investments made in the last 3 years and short-term expectations (1 year) – were analyzed in a predominantly qualitative manner, given the small size of the sample (n=25), and displayed in two separate information layers after being geolocated.

The Web GIS contains 41 layers, the first part of which with socio-demographic data on the city and the neighborhood, and the second with the analysis of the regeneration program. They represent two of the three elements of the realist evaluation (Pawson, Tilley, 1997): the context and the mechanisms (outcomes are not comprised since the regeneration program is still partly unimplemented). Simple diagrams of a few elements, containing the reconstruction of the program theory (objectives, expected results, risks), were integrated as diagrams in the text boxes to the right of every layer of the web GIS. Since the program is complex, with a diversity of actors involved and a number of concurrent actions with different objectives, the author chose to construct program theories both simple and detailed (Davies, 2018). In order to make the information comprehensible and accessible, the author chose to show the causal links according to a linear model (Chen, 2012), while trying not to sacrifice details that may prove necessary in a future phase of evaluation of the program.

FIGURE 4. *Program logic of the renovation works implemented in the area.*
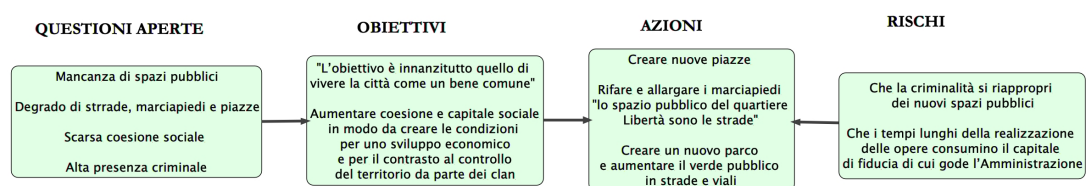
Source: Own elaboration.

Results and discussion

The Web GIS was constructed as a place of mediation between the positions of citizens and the vision of the Administration, trying to convey information in two directions (Bugs et al., 2010): outlining the changes envisaged by the regeneration plan (top-down), a feature that the users of an experiment by Wilson, Tewdwr-Jones and Comber (2017) considered of great importance; collecting, through interviews and questionnaires, the opinions, the demands and the requests of civil society (bottom-up). The intention of the IT tool was to accompany

individuals and civil society organizations to a critical involvement in the program.

The web GIS was completed in the first half of July 2020. Through Google Analytics, a tool for the user flow analysis, it is possible to have an overview of who used the portal. There were 313 unique visitors in the period 11 July, 2020-28 March, 2021: about 23% of the total were returning visitors, i.e. users who returned to the site more than once with the same device. The total number of sessions was 812, with 1,325 page views and visits lasting an average of 3 minutes and 13 seconds.

Rigenerazione Libertà, as stated in a work of Carver et al. (2001) on the characteristics that a web PPGIS should possess, sought to be a virtual space that would enable:

- to explore the information embedded in the shapefiles;
- to be simple and understandable;
- to be impartial in its analysis and to offer multiple viewpoints;
- to ensure the transparency necessary to create a climate of trust with the users, for example through the sharing of the shapefiles, that were distributed with a Creative Commons licence.

In order to test the interest and usefulness with the direct users of the platform, which Chen calls «[v]iable validity» (2012, 29), an evaluation questionnaire was published at the website. The questionnaire has been constructed with 5-point Likert-type scale. The information collected consisted primarily of the respondents' socio-demographic data, computer skills and GIS knowledge. 19 out of the 22 respondents live in Bari and 11 in the district. Their age ranges from 25 to 72 years, with an average of almost 49 years. The sample consists of 12 women and 10 men. Education is very high: all but two of the respondents are university graduates. The question of self-selection, which was evident in the participatory processes of the plan, recurs here. The distortion is also clear in terms of occupational status, since 6 are freelancers, 2 are self-employed, 2 are civil servants, 5 are clerks/teachers, while only one person works as a laborer/salesman/farmer, 2 are housewives and 4 are pensioners.

Computer knowledge, as expected, is good; knowledge of GIS is rather low. It is important noting that 13 out of 22 people declared to be members of associations/committees/parties. The majority of the sample (almost 80%) was already informed about the regeneration program. Due to the incompleteness of the answers of one user, it was decided to remove the corresponding records from the subsequent analysis.

Most of the sample (16) are not direct beneficiaries of the program, even if 14 people have used services and places lately established. The following question investigates the clarity of the information displayed, which is a defining quality of users' experience with PPGIS (Bugs et al., 2010). The perceived level of clarity is high, with an average of just over

4.1. Ease of use of the tool is rated slightly lower than clarity (average of 3.9): there are some people who rated it as not good. The hypothesis is that users have encountered problems in navigating the site. For example, one person wrote: «I did not find the opinions of the interviewees», contained in the fields of the attribute table, popping up when clicking on the geometries of the map.

The next block of questions investigates constructs that are among the declared objectives of the Web GIS (in the brackets the average score of the item): the capacity to support public debate (3.8), to favor civic participation (3.3), to clarify the objectives, expected results and risks of the program (3.5) and to make transparent the action of the Municipality (3.9). The second and third questions in the set, concerning some really important objectives of the portal, receive the worst rating. The hypothesis, with regard to fostering participation, is that the link between the information shown on the platform and the ability to become actively involved in the regeneration program was not clear to respondents. In the other case (the ability to clarify program theory), one reason might be that the small diagrams explaining it are located at the bottom of the text boxes containing informations on the topic covered in the layer, which perhaps made them difficult to access.

A question was reserved to the capacity of the web GIS to mix theoretical and practical knowledge. The average value is 3.6: as in previous cases, doubts remain as to whether, through the exploration of points and polygons, the users actually grasped the novelty.

All but two respondents answered in the affirmative to the question of whether it was possible to export the same urban regeneration policy analysis tool to other contexts. Finally, the last question was designed, based on Sidlar and Rinner (2007), as a summary measure of the experience with the platform. The overall evaluation of the experience is quite high (with an average of 3.9).

The questionnaire, built on similar experiences of evaluating the interaction between users and web-based participatory planning systems (Bugs et al., 2010; Carver et al., 2001; Sidlar, Rinner, 2007; Wilson et al., 2019), has a high internal consistency (Cronbach's Alpha of .83). Given the small sample available, the non-parametric Spearman test was performed to check the degree of correlation between some of the variables. The two conditions allowing the calculation of Spearman's correlation coefficient by ranks – ordinal variables with a monotonic relationship – were respected by just the level of education and two variables of the questionnaire: one related to the question on how clear the information contained in the platform was; the other on how effective the site is in combining qualitative and quantitative research. The Spearman coefficients are respectively .66 and .57, both values

significant for n=21 and p<0.01. There is a positive and fairly high correlation between the perceived clarity of the information shown on the platform and the level of education; and the evaluation of the effectiveness of the quali-quantitative methodology correlates with the level of education. Even if the sample is very small, the results of the test go in the direction to state that the platform is not easily understandable by those with a low level of schooling.

The pandemic made it impossible to attempt an evaluation of the portal in presence, in order to compare the two samples. In any case, the first indications provided by the answers to the questionnaire lead once again to one of the central themes of the reflection on civic participation, namely that it is the prerogative of «professional citizens» (Van Reybrouck, 2016): certain categories of people (educated, relatively well-off, socially engaged, older) are more likely to devote time and energy. This is true in the real world as well as in the virtual one. On the web, the situation is more complicated due to the unfamiliarity of part of the population with IT tools (Sidlar, Rinner, 2007; Sieber, 2006). A respondent with a middle school diploma, who works as a housewife, wrote under «suggestions and comments»: whoever is not practical does not understand anything and cannot make suggestions».

Conclusions

According to Mounk (2018), the social contract needs to be renegotiated. There is a need to rebuild institutional trust by investing in rights, reconciling representation and participation in a mutually reinforcing way. This is what the Municipality of Bari is trying to do by carrying out an integrated program that has at its core the enhancement of social capital to avoid the degradation and tragedy of the urban commons (Donolo, 2017).

Qualitative GIS succeeds in processing and restoring the complexity of reality (Jung, 2017; Pavlovskaya, 2004) and can be a tool to reconsider cities. Rigenerazione Libertà tries to restore a unified image of a fragmented place and the actions undertaken to reverse its fate. It is a quali-quantitative Web GIS to support civic participation, but it suffers from the same limitations as public assemblies and arenas. In other words, it is a platform built for university graduates, with a good job position and an interest in urban issues. It is only partly able to close the distance between public institutions, universities and people, a need that characterizes Libertà as many other contexts. For this reason it should further implemented, giving users the possibility to comment and rate projects, and propose alternative plans.

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Design Professional Prefigurations in School and University Through Creativity

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ABSTRACT: *In this paper we describe the design and the practice of the workshops conducted in the project Super Orientation and tutoring to promote university and professional succes. The aim of the project is to support the construction of professional prefigurations in school and university students. The project, coordinated by the University of Siena, leader of a network of 14 state universities, involves 116 schools, 55 companies and 46 organizations operating in the national territory. It is addressed to high schools (4th and 5th year) and university students and engages school and university teachers with a tutoring function. One of the actions of the project was to realize workshops that increase the level of mutual knowledge and integration among educational systems and the labour market. In these workshops, students/teachers of high schools and universities and the representatives of the labour market are considered as a community where practical knowledge is connected with the theoretical and the understanding of professional practices may deconstruct some stereotypes related to the professions.*

Introduction

In this paper we describe the design and the practice of the workshops conducted in the project *Super - Orientation and tutoring to promote university and professional success*. The aim of the project is to support the construction of professional prefigurations in school and university students. The project, coordinated by the University of Siena, leader of a network of 14 state universities, involves 116 schools, 55 companies and 46 organizations operating in the national territory. It is addressed to high schools (4th and 5th year) and university students and engages school and university teachers with a tutoring function. One of the actions of the project was to realize workshops that increase the level of mutual knowledge and integration among educational systems and the labour market. In these workshops, students/teachers of high schools and universities and the representatives of the labour market are considered as a community where practical knowledge is connected with the

theoretical and the understanding of professional practices may deconstruct some stereotypes related to the professions.

Principles and concepts for the design of workshops
Talking about how learning processes can be fostered, Saymour Papert (1980, 1993) points out that novices in a certain area should be immediately enabled to experience and understand things without any problems (low floors). Similarly, over time, becoming experts, they should have access to increasingly sophisticated knowledge and projects (high ceilings). Mitchell Resnick (2018) integrates these two design principles with a third, starting from the realization that a learning path cannot be the same for everyone. This is why it is important to provide a multiplicity of different paths. He defines this principle as wide walls.

In designing and conducting workshops in the project Super we worked, as much as possible, on these principles. Moreover, we integrated these with other theoretical and practical concepts that Resnick states during his research and that lead him to the definition of two models for facilitating learning. These models are the 4P model and the spiral of creative learning (Resnick, 2018). In the following of the paragraph, we describe the main concepts of these models.

Students learn best when we actively work on projects, generating new ideas, designing prototypes, making improvements and creating products. Working on projects, students learn to improvise, to adapt, to repeat their actions. By reflecting on the design and iteration process, they learn not only to solve specific problems but also to hone their skills in understanding and designing solutions to any problem.

Students learn with people who share ideas and collaborate. The most difficult problems cannot be solved by one person and we rarely work alone in our professional life. This is why the ability to involve others in our work and to collaborate with them in a constructive way is so important. Sharing ideas with others is a great way to deepen our understanding, because it requires us to explain what we know.

Students are likely to work longer and harder, persist in the face of challenges, and learn more if they have interest in what they do. They make their most creative contribution when they pursue their passions, not when they are motivated by external rewards. The educational challenge is to identify passions and provide the support learners need to turn these passions into reality.

Learning involves experimentation; try new things, use materials, test boundaries, take risks, repeat. Experience teaches students how to fail and how to learn from our failures. These skills are essential for entrepreneurs or anyone looking to innovate. Different people learn in different ways, you need to give them the space and time they need to explore their own paths.

To foster imagination, it is important to think about the materials we use to learn. Materials need to be designed to encourage different types of activities. Students with different interests and different learning styles

can use the same materials in a personal way. The goal is to have materials that can be used in multiple ways, leaving space to imagination. To support and encourage this diversity materials must allow for the exploration of alternative uses.

Play and learning can and should be intimately linked. Both involve processes of experimentation, exploration and verification. Attempts to create links between play and learning must not conflict. Play must not be the sweetener used as a reward for having suffered a period of learning nor should learning be seen as entertainment because this has an intrinsic value of passivity that can confuse the learner to traditional instructional logic.

Sharing is an important part of learning, but this ability has received less emphasis than competition. This has changed recently as several converging trends push for more attention to collaboration. Business leaders and politicians note that teamwork is more important than ever in work and in life in general. Researchers in the field of education and learning have focused attention on the social nature of learning and on strategies to support communities. Finally, we are witnessing the proliferation of interactive technologies and broad access to the network that has spread the culture of participation. In this case, the goal is to create a collaborative community in which one's own work could constantly expand the work of others. In fact, there is a greater involvement in the learning process when users are able to use the work of others if deemed particularly useful and important.

Reflection is a fundamental part of the learning process, but too often overlooked. In recent years, schools and universities have adopted more participatory activities, but the focus is often shifted to creating a learning artifact rather than critical reflection on the ideas that drove the design, on possible strategies to refine and improve the design, or on links to scientific concepts related to real-world phenomena.

In the next two paragraphs we describe examples of how we designed and conducted workshops. Important in these are creative processes that foster learning but that could become complicated to adopt during lessons in high grades of school and at university. The necessity to teach complex and abstract concepts could inhibit the possibility to support students in looking forward and thinking creatively to one's own future professionality. For this reason, workshops in the project Super foster not only the acquisition of knowledge and practical skills but the development of an environment where to create new ideas of work.

1. Women's entrepreneurship and leadership workshops

In this paragraph, we focus on the laboratory paths to support the development of the professional prefiguration and identity of students within the degree courses of the 14 Italian universities, which are partners of the SUPER – POT Project. The L-19 degree courses, in fact, have to deal

with the changes taking place in the professions of the education and training sector. What learning should an educator achieve at the end of his/her academic career? A student who enrolls in the L-19 degree courses does not necessarily have clear ideas about the future: often he/she has a series of precritical representations, which are the result of distorted beliefs and popular mythologies on the professionalism of the educational world (Taylor, 2002; Romano *et al.,* 2018).

In this sense, the SUPER Project has pursued the broader aim of prefiguring the new professional epistemologies that should characterize L-19 graduates and future education and training professionals. What am I going to do by enrolling in this degree program? What significant experiences of internship, foreign mobility, encounters with the labor market will be offered? Will this university make me acquire useful knowledge for my future professional practice? These are questions that families and students ask themselves when looking for information at the time of enrollment and concern the ability of the university to support the construction of employability prefigurations. The Degree Course in Education and Training Sciences of the University of Siena has developed a pattern of systematic actions as part of the Super Project, including workshops aimed at supporting students in the acquisition of a validated and free from stereotypes work culture. The formal curriculum has been enriched with workshop experiences that elicit methodological and transversal skills functional to cross a working world made up of uncertain and ambiguous situations (Watkins, Marsick, 2020).

Accompanying students has meant to facilitate meetings with local stakeholders and educational organizations in order to:
- create crossbreeds with the practical knowledge of professionals;
- access to practical knowledge through experiences mediated by privileged witnesses;
- support the critical reflection on professional representations allowing female students to find spaces where they can reflect on their learning processes (Fabbri, Romeno, 2019).

The choice to deal with professional prefigurations could not be an option that could be postponed to the post-graduate nor could it be delegated only to the Placement, but it actually translated into planning collective, critical reflection experiences in small and large groups (Fabbri, 2018; Fabbri, Melacarne, 2012).

The intersectional settings allow students to go through different scenarios – university, work – anticipating problems, solutions, acquiring practical skills to support employability through a multidimensional approach.

Examples of these paths are the workshops experiences in support of entrepreneurship and self-employment, hybrid and intersectional proposals with stakeholders from the labor market: they included the path of *Calls for ideas for entrepreneurial start-up*, meetings with privileged witnesses, and *Hackaton* as the *Innovation Lab.*

Specifically, the laboratory called *Entrepreneurship, gender and female leadership* developed in collaboration with the Chamber of Commerce, was configured as a learning space addressed to meeting witnesses from the national productive fabrics. The conceptual model is centered on research-based learning (Fabbri, Romeno, 2019).

The organization of the Laboratory has provided 8 meetings of 3 hours with the presence of 125 participants divided into 5 groups of 25 people. The planning of the meetings was shared and negotiated with the Chamber of Commerce, with the Local Women's Entrepreneurship Committees.

The laboratory's path included a set of methodologies aimed at supporting professional knowledge and learning from professional experience processes:
- introduction of 'critical incidents' professional stories and confusing dilemmas;
- analysis of the distorted representations of female students regarding the world of work and their future professional role;
- arrangement of meetings with privileged witnesses, such as entrepreneurs in multi-stakeholder co-facilitation structures with university teachers, institutional and organizational actors;
- adoption of reflective and critical-transformative methodologies, such as analysis of critical incidents, case histories, and narrative case studies;
- anchoring of open and inclusive perspectives to problems and challenges of future professional practices;
- acquisition of schemes of action and intervention through project-work, e-portfolio, and validation practices (Fabbri, Romeno, 2017; Fabbri, Romeno, 2019).

During the workshops, a first object of work was the internalized images and representations 'about the educator and his/her role'. International literature agrees in highlighting that educators start their studies with consolidated images and often stereotyped representations about this professional role (Taylor, 2002; Bracci, Romeno, 2017). They already have a well-developed sense of their responsibilities and the roles they will play. Only few of them consider themselves entrepreneurs, free consultants, and service coordinators. The most common representation is that of the fixed-term employment contract. Hardly anyone imagines herself/himself in another city. Nicolaides and Scully-Ross (2018), at this regard, identified five promising practices for cultivating curiosity, endless flexibility and self-awareness: disruptive design methods, polarity mapping, collaborative developmental action inquiry, visual design, collaborative design thinking.

The adoption of reflective methodologies based on experience and learning from experience (Poell *et al.,* 2009; Hoggan *et al.,* 2018), on the other hand, has facilitated the construction of discursive arenas where it has been possible to validate preconceptions and distortions and to co-construct schemes closer to professional practice.

2. What does it mean to be an educator? The workshops on the educational professions

This paragraph is aimed at describing the workshop paths on the professional prefigurations of the SUPER – POT project carried out by the University of Siena.

The workshops described herein involved 23 fourth and fifth grades of 5 high schools and allowed the participation of 297 students (65 male and 232 female) from schools in the Arezzo area.

The SUPER Project laboratory courses were defined from the beginning of the Project with the scientific and educational intent of activating a questioning process that would allow students to explore and analyze what they know (or think they know) about a profession, in particular that of the educator, in order to deconstruct common stereotypes and build, on the contrary, aware future professional paths. The collaborative and participatory dimension characterized its entire duration: the teachers of the schools were involved in all phases, from design to implementation, and worked together with the Project tutors in order to identify laboratory paths that would meet students' needs and professional desires.

The three meetings, each lasting two hours, held in the classroom (at school or university) with groups of about 25 students, represent the result of an experience that can be considered challenging both as regards the definition of objectives and methodological choices, both as regards the structure and organization of the laboratories themselves, focused on professional prefigurations.

The reflective dimension on the professional future characterized the formal and informal learning settings of the workshops, centered on the investigation of an imagined future (Rieckmann, 2011) from which it was possible to experiment and acquire specific knowledge on a professional category (Inayatullah, 2005, 2006; Burke, 2009; Da Re, Riva, 2018).

The future as a problem to be faced that is intertwined with the personal interests and professional choices of students has been presented as a disorienting dilemma (Mezirow, 2003; Fabbri, Romeno, 2017). And it is precisely on the disorienting dimension of the future that each meeting was structured, with the aim of making it less frightening and more consciously reasoned.

The objectives of the meetings allowed to trigger a process of reflection that accompanied the students of the schools 1) in the definition of the problem linked to the choice of their own path, 2) in the need to know creative and alternative perspectives compared to one's own, 3) in the analysis and evaluative comparison between the perspectives of meaning up to 4) planning of one or more operational strategies to solve one's own dilemma (Fabbri, Romeno, 2017).

During the meetings, the students of the schools talked and compared with the peers on preconceptions, values and professional interests that can guide their choices, thus exploring their own prefigurations (first

meeting); they then deepened the professional figures leaving the L-19 class by negotiating the meanings that emerged (second meeting) and tried to develop their own training and professional path that would serve as a guide to understand how to plan their professional future in an operational way.

In this scenario, the presentation of the Department, the resources, and the university services made possible to acquire some elements of the context and to recognize some guiding figures, such as tutor students or tutor teachers.

Active learning methodologies were chosen to enhance active participation and support learning processes using a transformative perspective (Mezirow, 2003; Fabbri, Romeno, 2017).

These intervention methodologies served as a theoretical and operational framework in the work with students, who were encouraged to reflect on professional prefigurations through game-based learning, lego serious play (Beltrami, 2017), and jigsaw (Aronson *et al.,* 1978). Some stimulus materials, such as Lego® for example, supported the expression of students' ideas, called to imagine creatively their future, and to give their own definition of the figure of the socio-pedagogical educator.

The explicit request was immediately accepted with enthusiasm: the students gave shape to the representation of their idea, thus defining the most appropriate strategy to respond to the task. This triggered an inquiry process in the classroom that made it possible to explore the main meanings attributed to the work of the educator, mainly gendered as 'female' work and as work carried out especially in the educational contexts of the 0-6 age group.

The deconstruction of stereotypes – also of gender – with respect to the figure of the educator was followed by the meeting with professionals working in the educational area who were thus able to describe school students about their educational experiences, their career path and contexts. It is precisely the deepening of work settings that have allowed students to acquire new knowledge about 'what an educator does and the places in which he/she works', creating new and shared perspectives of meaning.

Starting from the tacit and confused knowledge of students about the labour market and the more or less conscious desires, the research intervention learning process facilitated understanding of their own professional prefigurations. The analysis of one's professional desires was carried out through the Professional Development Plan, which made it possible to decline these desires into general objectives. These were combined with specific learning objectives, resources, and strategies with the aim to be able to achieve them consciously.

3. Final reflections

The implementation of the workshops carried out with the students suggests the presence of a transition path between school and university through which the subjects are supported in defining the trajectories of personal and professional growth.

In fact, from a methodological point of view, supporting the construction of students' professional prefigurations has resulted in the search for facilitation practices that allow for gains from the point of view of reflective learning. For example, the shared and collective analysis of 'border' and 'trench' professional stories offered the possibility of re-reading the hetero-professional experience of privileged witnesses through the categories of changing stories (Lanzara, 1999; Fabbri, Romeno, 2019). The adoption of reflective methodologies has allowed us to relate to a multiplicity of organizational actors to intercept new schemes of intervention and action, taking care to develop practical proposals useful for building students' professional scenarios.

The laboratory methodology did not impose predefined paths but supported the learners for what could emerge from them, facilitating comparison and opening reflections not only on themselves but also on significant issues such as time, remuneration, gender, culture, inequality. A student in the fourth grade of high school, for example, represented work as a door to go through and a staircase to take: «At first, work is chaos and you feel confused, then there is a staircase because in the over time it is a progressive work, the staircase also represents a tower because it can be more difficult for women to climb».

So how to build a career guidance path for students entering the workplaces able to develop empowerment, accompanying them in defining goals and searching for resources to achieve them? The challenge to which schools, universities, and institutions are called to respond is more current than ever and requires a focus not only on the orienting actions to be designed, to support students in the construction of life projects but on how to design them, which tools, approaches and methodologies to adopt working for – and with – students in the difficult task of co-constructing professional prefigurations. To do this, it is necessary to involve all the figures that revolve around the student and to build a network that aligns the school and the university to create an orientation action that is meaningful and effective for all the players involved.

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Active Citizenship in a Transformative Perspective

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ABSTRACT: *We know that the European Union (EU) is a quite complex and dynamical legal and political system. An important point, however, is that people have the right to know exactly what is going on, ad described in Charter of Fundamental Rights of the European Union (Article 42) and the Treaty on the Functioning of the European Union (Article 15). The EU space allow people to ask for receiving information about basically everything happening within the Union. People also have the legal right of 'access to documents' of all EU institutions. These possibilities that allow people to take part actively in public debate and institution is formally a right, but it has to be educated for becoming a real process. The Higher Education is not always involved in the debate on active citizenships, directly. How to introduce this task into curricula, as a specific content or an implicit learning outcome of discipline? The idea is to use the category described by Brookfiled, Mezirow and other scholars for underlining the different area of interest that could be used at university. The proposal will show how the emancipatory theory could explore different ways to work in Higher Education with a particular attention to Active Citizenship goals.*

KEYWORDS: *Transformative education, Citizenship, Higher education, Emancipation, Democracy.*

Introduction

We know that the European Union (EU) is a quite complex and dynamical legal and political system. An important point, however, is that people have the right to know exactly what is going on, ad described in Charter of Fundamental Rights of the European Union (Article 42) and the Treaty on the Functioning of the European Union (Article 15). The EU space allow people to ask for receiving information about basically everything happening within the Union. People also have the legal right of 'access to documents' of all EU institutions. These possibilities that allow people to take part actively in public debate and institution is formally a right, but it has to be educated for becoming a real process and from EU Commission is clear that we have to choose in which of the five levels we want to promote active citizenship skills: local place, region, country and Europe.

Into this scenario, the proposal will use the Brookfiled's classification of 'assumptions' to describe three methodological ways for developing active citizenship in Higher Education (Giampaolo, Melacarne, 2017). The Higher Education is not always involved in the debate on active citizenships, directly. How to introduce this task into curricula, as a specific content or an implicit learning outcome of discipline? The idea is to use the category described by Brookfield for underlining the different area of interest that could be used at University. Brookfield describes assumptions (Brookfield, 1995) and divides them into three categories: paradigmatic assumptions, 'structural axioms we use to give order to the world' (2); prescriptive assumptions, 'assumptions through which we expect that a certain thing must happen in a particular circumstance' (p. 3); causal assumptions, 'assumptions that help us to understand how the different parts of a system work together and the conditions within which to imagine how to change this process' (4).

1. A theoretical perspective to understand citizenship

Biesta and Lawy (2006) argue that in recent decades there has been a worldwide resurgence of interest in education and democratic citizenship issues, both from educators and educators and from policy and policy makers (for an overview see, for example, Osler, Starkey, 2006). In democracies new and emerging attention is focused on how education can contribute to the formation of democratic citizens and the promotion of a democratic culture, while in established democracies the focus was on how to cultivate and maintain the interest and the commitment to democratic processes and practices. At stake in these discussions are not only technical questions about the correct form and form of education for democratic citizenship but also more philosophical questions about the nature of democracy and the possible configurations of citizenship within democratic societies.

Two tendencies can be distinguished in discussions of the state of democracy (McLaughlin, 2000). On the one hand there are concerns about the level of political participation and understanding, while on the other there are wider concerns about social cohesion and integration. Within these discussions there are particular anxieties about the role and position of young people. The idea that young people have lower levels of political interest, knowledge and behavior than adults has been well documented. While some argue that this is a normal life cycle phenomenon and that political interest increases with age, there is evidence that suggests a decline in political interest and engagement among young people compared to previous generations – at least, this is, with regards to official politics. In response, some have argued that young people have a different and very distinct political agenda, so that a decline in engagement with mainstream politics does not necessarily imply disengagement from social and political issues more generally.

Others argue, however, that young people do not have their own distinct political agenda. Although the evidence on levels of political interest and participation is inconclusive, young people, seen as «citizens in the making» (Marshall, 1950, 25), have become a prime target of government initiatives aimed at countering the perceived trend of and social alienation. Citizenship education has become the cornerstone of these initiatives. While I don't want to downplay the importance of citizenship education – not least because young people themselves have indicated a lack of knowledge and understanding in this area (see, for example, White *et al.,* 2000) – inclusion of citizenship in the formal curriculum risks masking a deeper problem relating to the citizenship of young people. The point I wish to emphasize in this chapter is that teaching citizenship represents at best a partial response to an alleged 'crisis' of democracy.

This is why for Biesta (2006) we can argue that it is necessary to shift the focus of research, politics and practice from teaching citizenship towards the different ways in which young people 'learn democracy' through their participation in the contexts and practices that make up their daily lives, in school, college and university, and in society at large. The transition from teaching to learning citizenship democracy allows you to overcome the individualistic conception of citizenship that is the basis of many reflections recent regarding citizenship education. The focus on learning about democracy makes it possible to reveal the ways in which such learning is situated in the development of young people's lives and how these lives, in turn, are implicated in broader cultural, social, political and economic orders. Ultimately, it is this broader context that offers young people the opportunity to be democratic citizens – that is, to exercise their citizenship – and to learn from it.

The transition from teaching citizenship to learning about democracy emphasizes, in other words, that democratic citizenship does not have to be understood as an attribute of the individual, but invariably has to do with individuals in the context and individuals in the relationship. From a research point of view this means that it is only by following young people in their participation in different formal and non-formal practices and contexts, and by listening to their voices, that their learning can be properly understood. This, in turn, makes it possible to recognize that the educational responsibility for learning citizenship is not and cannot be confined to schools and teachers, but extends to society at large.

I believe this trend is also evident in recent developments in citizenship education, particularly in the premise that the alleged crisis of democracy can be adequately addressed by (re)educating individuals. I outline the problems associated with such an individualistic approach where the emphasis is on the individual in himself rather than on the individual in context and relationship. In this context, Biesta's research supports an approach to citizenship education that takes its starting point in the learning that takes place in the real life of young people, in school and in society in general. In the concluding section,

2. Citizenship education in a transformative way

The work of teachers, while configured as intentional and conscious, implies knowledge and representations not always validated and negotiated. People use assumptions that allow them to give meaning to their experience. Assumptions are beliefs we have about the world and are so rooted in our way of thinking that they do not need to be explained. Many scholars use different terms to describe these beliefs. Mezirow defines them as 'meaning perspectives' describing them as: a habitual set of expectations that constitutes a frame of reference, which we use in the projection of symbolic models, and which acts as a system of beliefs (almost tacit) to interpret and evaluate the meaning of the experience (Mezirow, Taylor, 2009). Brookfield describes assumptions (Brookfield, 1995) and divides them into three categories:
- paradigmatic assumptions, «structural axioms we use to give order to the world» (ivi, 2);
- prescriptive assumptions, «assumptions through which we expect that a certain thing must happen in a particular circumstance» (ivi, 3);
- causal assumptions, «assumptions that help us to understand how the different parts of a system work together and the conditions within which to imagine how to change this process» (ivi, 4).

Kelly (2004), situating his studies in the research field called constructive alternativist, according to which there are many alternative valid modalities for interpreting reality, proposes the concept of personal constructs. These are mental schemes through which people interpret themselves and the reality around them. Founding his research on Perry's psychological model (1970) and on philosophical research, King and Kitchener (2004) use the constructs view of knowledge and concept of justification. The study by King and Kitchener empirically demonstrates how the way in which the subjects represent knowledge influences the way in which they justify some actions rather than others. The assumptions tell us, for example, how people or students should behave, what should be the educational project to follow in class, what should be the respective duties between teachers and students. The assumptions that we use when we make a learning contract with the students and we expect that this increases their involvement, because we have an agreement with them. Another case is when a person uses a note on the register, thinking that it generates a positive behaviour in the future. All these contributions, while using different terms, agree that there are perspectives that determine the conditions on the basis of which the meaning of an experience is generated. For example, when a young people uses a meaning perspective she/he selectively orders what he would like to facilitate and how the learning occurs in his students. As Mezirow wrote meaning perspectives provide us with criteria for evaluating what is right and wrong, good and evil, beautiful and ugly,

true and false (2003). Meaning perspectives lead us to believe that things are exclusively as we see them and that what we believe to be reality cannot have any alternative interpretation. To be able to act intelligently in the contexts of professional practice there is a need to discuss our assumptions and the way we think about the world. We need to validate our ideas and assumptions to gain the awareness to transform and develop our courses of action. Validation is more a social process than an individual one. It involves not only our experience, in which we find evidences that support personal representations, but also the dialogue within which we use symbols, narratives and words for understanding a phenomenon.

3. Citizenship education in a complex way. The collaborative developmental action inquiry

The Collaborative Developmental Action Inquiry (CDAI) was born into the second wave of studies inspired by transformative learning theory (TLT). This second wave has tried to engage new areas of research interest around TLT, starting from some critical responses to Mezirow's theory emerged over the years (Cranton, 1994; Taylor, 1998). One major element of debate about Mezirow's theory is its emphasis upon rationality (Taylor, 1998) and its individual approach also. Many empirical studies support this contention and «concluded that critical reflection is granted too much importance in a perspective transformation, a process too rationally driven» (Taylor 1998, 33-34). The idea that transformative learning is an «intuitive, creative, emotional process» is beginning to develop in the literature (Grabov 1997, 90) and now it is increased by the idea that transformative learning as to be connected with a more social and organizational theories. The drive of the first study on CDAI (Fisher *et al.,* 2003; Torbert, Associates, 2004) investigated how adult education could support people, organizations and society to better understand the requests of 21st century life (Nicolaides, 2015). In this way CDAI is been considered as a transformational method of inquiry in and on action (Brannick, Coghlan, 2006). Fisher and colleagues (2003) define it as «a method to explore a kind of behavior that is simultaneously inquiring and productive. It is behavior that simultaneously learns about the developing situation, accomplishes whatever task appears to have priority, and invites a redefining often task if necessary» (ivi, 115). Nicolaides describe the CDAI as a method for creating conditions for adults to advance their capacity (complexity of knowing) and competencies (skillful means) to engage paradox, uncertainty, and the ambiguity generated by early 21st century demands in work, life, and society (Nicolaides, 2015). Bill Torbert (2003; 2004) describe CDAI as the only one among the action strategies to simultaneously consider three fundamental questions:

1. how to facilitate people in assuming greater awareness about the connection between why they decided to take a certain action and the effects on the present;
2. how to generate informal micro research communities (among friends, in the family and at work);
3. how to produce strategies and actions that can be adopted in the times of the community rather than in the times of the scientific production of knowledge.

Now, many studies are developing the CDAI in many ways and contexts. They have been supported to learn how manage the contradiction of higher education organization and the new challenges of the professionals functions. How to align the ethic with the mission of HE system? How to organize multidisciplinary groups of professionals where the time of work go over the contract?

Conclusion

Into a reflective approach as Transformative Theories or Complex theories, people are aware of the process of sensemaking and they can identify themselves in others' perspective. They know how to manage a dialogue that involves a conscious exploration of the relationship between their own problematic situation and similar problems related to other cultures and set of minds. To develop citizenship, the higher education should support faculties to become empathic and open to other perspectives, facilitating them to meet colleagues prepared to listen and available to reach a common background or a synthesis of all perspectives. This process develops communities where a person can experience a situation in which to access necessary information to solve a cultural problem, where it is possible to reflect critically on personal assumptions. Interaction with other colleagues is a necessary condition to identify and appreciate points of view other than their own. There are, for example, social and organizational cultures that call for excessive reliance on authority or which interpret conflicts and diversity as a disvalue, developing fear and therefore incompetence in the members to face them. There are models of thought in which the desire for unanimity precludes a realistic assessment of possible alternative courses of action. The quality of a decision-making process deteriorates when compliance dominates a group. Compliance includes self-censorship, the illusion of unanimity, and direct pressure on dissenters. Within these climates critical thinking can be replaced by homogeneity that tends to produce irrational actions against those who have a divergent position (Giampaolo, Melacarne, 2017). The exercise of critical reflection (Fabbri, 2007; 2015) assists the groups in using logic and evidence rather than authority, tradition, to the implicit rules. Consensus can be reached through a dialectic that makes possible to justify requests, apologies and decisions. It is the process of critical reflection that generates a

transformative learning that influences the relationships and the organizations in which operate those who live the higher educational system.

How does higher education help adults, organizations, and society meet the demands of twenty-first century work and life? For answer to this big question, we conducted in 2018 an experience involving 30 Master and Ph.D. students at University of Siena. Our assumption was that students need to develop transversal and vertical skills for being employable and developing citizenship competences. Transversal and vertical skills are described by Torbert (2004) theory of leadership. He uses three ways of knowledge: how adults can grow the capacity to change the way they know the word (instrumental), how they adapt and manage their experience (transversal) and develop more complex ways of knowing, doing and being (vertical) (Yorks, Nicolaides, 2013). Horizontal learning or transversal approach refers to the educational process adding of more knowledge, skills, and competencies to solve problems, to communicate more efficiency, to work collaboratively into a group. It is about what you know and how you can do something to improve your performance or effectiveness. In vertical approach, the key word is 'capacity' and it refers to growth, and includes more complex forms of knowing, doing, and being. The learning outcomes of vertical development are more complex ways of knowing, which become more systemic, strategic, and interdependent. It is about how people develop the capacity to be more open to paradox and transform contradictions. Adult learning theories that adhere to the learning demands that complexity triggers include identity formation as described by Illeris (2014), transformative learning as described by Mezirow (1991), generative learning as described by Nicolaides (2015), informal learning as described by Marsick and colleagues (2017), and whole-person learning as described by Yorks and Kasl (2002). Transversal and vertical skills are becoming an interesting area for further research to advance and innovate curricula in higher education, as well as plan training programs for professional development (Yorke, Knight, 2004).

So, our students will be engaged in new challenges into everyday life, workplaces and a knowledge society. The core pedagogical idea of this experience is that to manage the adversities, people need to learn skills that allow them to construct and critically elaborate knowledge but also «intellectual and material—information, intellectual property, experience which can be used to create wealth» (Stewart, 1997, 3).

The relationship between adult learning and complexity requires new approaches to learning that break the knowledge paradigm (Nicolaides, 2015; Torbert, 2003). Nicolaides suggests that the primary role of adult educators is to create the conditions for adult to grow more complex ways of knowing, doing, and being (Nicolaides, 2015; Snowden, Boone, 2007).

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How Service Learning Can Be a Way to Promote Civic Responsibility

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ABSTRACT: *The University of Verona is characterized by long-standing experimentation of the service learning approach, which, within the Master's Degree in Primary School Education, has taken on the specific connotation of Community Research Service Learning. The studies carried out to identify the added value and the critical issue of this program stress the presence of several advantages. This paper aims at exploring, in particular, its impact in terms of civic skills. The results of the phenomenological analysis highlight the relevance of the service perspective and the collaborative dimension. These elements are functional both to optimize the program and design the application of CRSL in the economic field where stakeholders and students can collaborate to critically respond to the contexts' real needs*

KEYWORDS: *Service Learning, transformative assessment, civic responsibility.*

1. Service Learning and civic responsibility

Service Learning (SL) is defined a «teaching/learning method that connects meaningful community service experiences with academic learning, personal growth, and civic responsibility» (Duckenfield, Wright 1995, 1). It reaches this goal through the engagement of students in service actions, aimed at responding to a need of the community in which they are involved and by promoting reflective practices able to transform these experiences into learning, according to a Deweyan perspective (Verducci, Pope, 2001; Carrington, Saggers, 2007).

Service Learning (SL) is a teaching strategy that has assumed greater prominence in the international Higher Education panorama because of its capability to develop both academic and soft skills (Stanton *et al.,* 1999; Felten, Clayton, 2011; Billig, Waterman, 2014; Eyler, Giles 1999; Astin *et al.,* 2000; 2006). However, another element that contributes to its popularity is its capability to promote a mutual enrichment between academic institutions and social contexts (Bringle *et al.,* 1999; Bringle *et al.,* 1997).

In order to emphasize their effectiveness, it is necessary to institutionalize the SL programs incorporating them into the academic curricula, and this goal can be more achievable where there is a Faculty Development Center that coordinates the implementation of these programs (Bringle, Hatcher, 2000; Furco, Moely, 2012). Indeed, a systemic vision makes it possible to capitalize the reflections derived by previous experiences and to design teaching programs in order to support the growth of the academic institution within a specific social and political framework, embodying the willingness to develop professional knowledge capable of responding to the needs of the community (McKay, Rozee, 2004).

According to this framework, the development of a service perspective is a crucial goal for a SL program but must clarify the meaning of the word 'service'. Actually, in some case, this term is read in a pietistic or philanthropic manner that considers 'service' as synonymous with 'charity', a way to 'pay' a sort of 'debt' that someone has by a supposed dominant position (Mortari, 2017). However, this concept of service suffers an underestimation of its civic role and the transformative value of these experiences (Gorham, 1992; Sandaran, 2012). On the contrary, the idea of service that a SL program should promote is based on the enhancement of a collaborative approach characterized by equity and reciprocity because all the subjects involved in a SL experience 'gain' something from it: the students gain the development of professional and personal skills, and the stakeholders gain a concrete help in the solving real problems (Kahne, Westheimer, 1996). Only within this framework SL can be part of a concretely civic engagement, in which the action at the service is not a mere corollary of the training but its 'backbone'; in other words, the service action is the element that gives sense to the whole academic experience, giving to it a solid ethical and civic dimension (Mortari, 2017). According to this vision, the service action takes the role of actualization of the ethic of care in the sense of a genuinely meant community dimension, which becomes the manifestation of an idea of civic responsibility. This approach places this concept of service into a political framework making it the core element to reach a more democratic vision of society that nourishes a public life inspired by the principles of solidarity, responsibility, and commitment to the community (Mortari, 2017).

2. Analysing the experience to increase its diffusion

2.1. The starting point

Despite its potential and popularity on the international scene, SL is far from being a standard in European Higher Education, even if its diffusion is growing (Aramburuzabala *et al.,* 2019). Moreover, the debate regarding the best way in which Faculty Development centers can support the dissemination of Service Learning programs not only from an

organizational point of view, above all, from a pedagogical point of view is still open (Abes *et al.,* 2002; Furco, Moely, 2012). Particularly within the framework here portrayed, a specifically designed program is necessary to support the social and civic dimension.

In 2014 the Verona University started a SL program within the Master's Degree in Primary School Education. The program assumes the form of a Community Research Service Learning (CRSL): the term 'community' emphasizes the role of community to which is directed the service action of the students but also the collaborative dimension that characterizes many moments of the programs (which includes many moments of shared reflection). The term 'Research' refers to the research that the students are called upon to develop to analyze their service action and write a research dissertation on this (Mortari *et al.,* 2017).

In the first three years, the program had an experimental character, and it involved about forty students and nine schools, all set in the city of Verona. Nowadays, the Teaching and Learning Center (TaLC) of the University of Verona manages the CRSL, and this means that it adheres to the evaluation process that characterizes all the teaching innovation programs promote to this Center.

FIG. **1.** *Assessment process*
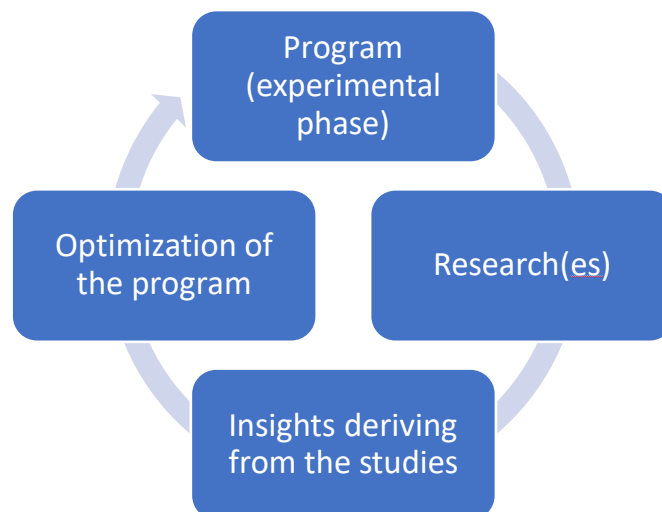
In the first step, the program goes through its 'experimental phase': it takes place following the lines established in the design documents drawn up before the program's start.

In the second phase, one or more research actions are conducted to analyse the programs. In the third phase, the elements highlighted by these studies are identified, and other elements useful for optimizing the program are defined starting from the analysis carried out in the previous phase. In the final step, these results are used to optimize the program and draft new design documents: in this way, the evaluation cycle can start over.

This model is linked to the evolutionary assessment approach because it adheres to a dynamic and transformative perspective and achieves its aim by turning an epistemically oriented gaze into teaching practices (Harvey, Newton 2004; Pointe, 2013). This vision of the evaluation put in evidence two crucial elements. On one side, it underlines how, in order to be 'useful', the assessment should be conducted to disclose what is relevant for the subjects directly involved in the context (Felisatti, 2019), but also how this goal is particularly challenging because the teaching programs are characterized by a high level of the complexity and variability (La Marca, 2018; Viganò, 2020). These elements make us reflect on how the assessment should be a continuous process, grounded in reality but open to the unexpected. On the other hand, to be effective, the assessment must be conducted in the light of a thoughtful approachable to go deep into the analysed of the experience before defining what elements should be 'transformed' and how (Trinchero, 2018). This highlights the necessity to reflect on the evaluation's methodological dimension because a so meant vision of it implies a situated and dynamic meaning-making process that must be supported by an adequate epistemological reflection (Rivoltella, 2017).

Coherently with these premises, one of the studies conducted on the CRSL is aimed to discover which achievements related to their attendance of the program the students consider most significant. The research follows an ecological paradigm according to which, in order to understand a phenomenon, it is necessary to study meanings that the ones involved in it refer to it (Merriam, 2002) and, in order to investigate this meaning, the research adheres to a phenomenological approach because of its capability to go deeper into people's lived experiences. (Lincoln, Guba, 1985). The data collected are the reflexive texts that students are requested to write at the end of their SL experience and that they have analysed through a phenomenological approach, identifying relevant units and labelling them through a shared process (Mortari, 2007). This procedure of analysis implies a precise set of actions designed to guarantee a rigorous epistemological framework that can be synthetically summarized in these steps:

- the overall knowledge of the research material gained through the repeated reading of the data;
- the division of the transcription into units of meaning to gain the essence of the meaning expressed in the unit;
- the development of a provisional coding characterized by descriptive labels;
- the transformation of the synthetic descriptions into conceptual labels examining the descriptive alignment and interpretive dissonances between them
- the redefinition of the coding through a recursive process to verify its capacity to describe contents in an adequate and effective way
- the organization of the labels into categories

- the built of a descriptive theory that defines the different aspects of the phenomenon (Giorgi, 1975; Denzin, Lincoln, 2000; Mortari, 2007; Mortari, Tarozzi, 2010).
- .

2.2. The analysis

The research was conducted between October 2017 and January 2018 and involved 40 students. The inductive process leads to develop a coding structured in three different categories referring to the achievements that the students think to have gained at the end of their SL experience.

TAB. 1. *The coding*

Professional skills	Increasing of the professional knowledge
	Completion of the professional profile
	Development of reflective skills
	Development of a service perspective
	Development of research skills
Life (or 'personal') skills	Development of the skills to learn from mistakes and to manage crisis
	Development of the skills necessary to handle the unexpected
	Development of self-critical skills
	Supporting the motivation
Inter-personal skills	Development of the collaborative skill
	Development of empathic listening
	Development of a child-centred approach

According to this paper's aim, the analysis presented here focuses on the elements that can be connected to civic skills. For these reasons, there we present those labels belonging to all three categories, which show how the competencies connected to the civic dimension are not referred to a specific 'side' of human life (professional, personal, etc.) but are linked to all the aspects of one's identity. Actually, «this diversity points to a strength of service learning in that it does not insist on any particular definition of civic and can be designed to address any of a range of context or discipline-specific conceptualizations» (Bringle, Clayton, 2012, 112). According to this vision, civic skills can be defined as «the cognitive operations that enable the learner to understand, explain, compare, and evaluate principles and practices of government and citizenship» (Patrick, 1997, 2). Hence, civic skills make people able to act for a community goal in a collective way, which leads to promoting civic engagement and enhancing participation and democracy (Putnam, 1995; Hatcher, 2011).

Going through the data, what we can observe is if and how students recognize the development of civic competencies due to their participation in the project. More specifically, we can identify four labels connected with civic skills: (a) the ability to act in a service perspective, (b) empathic listening, (c) self-critical skills, and (d) collaborative skills. In this paper, it is not possible to go deeper into all these four elements, and for this reason, we have decided to focus on the first and the last of them.

Regarding a service perspective, according to our students, the SL experience contributes to the development of an ethical posture that enhances the role of service, lived as an action that directly impacts the context in which they are involved, making the difference for someone.

> I was able to experience what it means to offer a service [...]. For the first time, helping the teacher, I really felt that what I was doing was useful. (B2)

This statement is significant because it underlines the role of direct involvement in the development of civic skills. In this regard, Komalasari affirms that the mere acquisition of contents related to Civic Education «is not able to develop students' civic skills [...] because Civic Education learning does not relate the material with students' life reality». In order to promote authentic civic skills, it is necessary to engage students in a learning process imbedded in a real contest because only contextual learning leads to developing the capability to «think critically, analytically, and participatively» (Komalasari, 2012, 180), fundamental for a real civic engagement.

Contextual learning implies being involved in a context for an appropriate amount of time and developing a relationship with others based on knowledge and respect.

> As the time goes on, you learn how to know others. Knowledge is the prelude to respect and respect leads to the desire to help the other. (S1)

Only starting from this premise, it is possible to develop a relationship with the stakeholders based on reciprocal trust and cooperation, in which both the parties involved (students and stakeholders) are willing to be enriched by the service experience.

> I felt the trust that the teacher had in me and her desire to feel supported by me (G2)

From our students' words, it emerges a vision of the service as a gesture-based on mutual support, whose aim is to empower the whole community to achieve a common goal. Only starting from these premises, the CRSL program can be really transformative for the students and the stakeholders. Indeed, only if a community 'trusts' in the student and his or her capability of being 'helpful' can give him or her the margin of action necessary to act positively. Moreover, on the other side, only if a student 'trusts' in the capability of the context of offering him or her an occasion of enrichment, he or she will be able to take advantage of the opportunities for change that the environment offers him or her.

Hence, assuming a community-based perspective and being part of the community maximizes the transformative potential of SL (Lake, Jones, 2008), but it is also the result of the development of a solid grammar of civic skills (Mortari, 2017). These considerations show us that, when we are engaged in the planning of a SL, we need firstly to expand as much

as possible the time that the student spends within the context that hosts him or her; secondly, to create moments of reflection dedicated to the stakeholders to share with them the founding bases of the project and involve them in its supportive and participatory dimension.

This last aspect gives us a link with the second label that we analyze in this paper, i.e., the collaborative dimension. That an SL program wants to promote this aspect could seem obvious; anyway, as it is clear, it is not enough to work together to transform a group of people into a community. In this regard, students explicitly state how the SL experience has changed their vision of collaboration.

> Service Learning was able to teach me the concreteness of doing, the richness and importance of working together: it was a path that required continuous collaboration between various subjects because it was co-built from start to finish. (M4)

The students moreover highlight how collaboration is characteristic of all phases of the CRSL program, and it characterizes, albeit with different feature, at the same time the relationship between the students and the academic team, between the students and the mentors (stakeholders), between the academic team and the stakeholders and within the students' group. In particular, the students who had the opportunity to work in pairs with another student during the SL experience (which, for example, occurred when two students were associated with two mentors who collaborated in the same context) consider this modality particularly enriching for them. Indeed, the constant dialogue that characterizes this way to conduct the SL experience reinforces the transformation from 'working together' into 'collaboration', making it a shared journey.

> The choice to walk together in this new experience was born from the need to confront each other, from the awareness that observing as a couple returns a richer picture, capable of acting more effectively on the context. (C1)

Actually, in any SL experience, the dialogue is what allowed the passage from an 'individual' dimension to a 'collaborative' dimension, allowing at the same time an authentic enrichment of the student's gaze.

> Sharing the reflections allowed me […] to notice what has been not yet observed. (G2)

> I continued the journey with the knowledge that I was not alone. (M3)

The students explicitly consider this capability of looking at a critical aspect of the context in a more depth way as an achievement connected to the collaborative dimension, an accomplishment that is easier to reach when (as previously mentioned) there has been built a relationship of trust and sharing with stakeholders.

> [The SL experience] gave me an example of the value of collaboration […] a co-construction based on bonds of mutual trust and on the sharing of ideas and experiences that everyone has made available to others, offering mutual enrichment. (B1)

These reflections show how the collaborative dimension cannot be reduced to a list of 'good practices' to be encouraged but must be developed as a distinctive feature, a 'working logic' that marks the entire program on several levels (in the relationships between students and stakeholders, between students and the academic team, within the peer group, between stakeholders and academic team). Therefore, in the design phase, it is necessary to insert in the planning of the SL program moments explicitly dedicated to the creation and consolidation of each of these relationships, since only if all these bonds are 'strong', the resulting collaborative network will be robust enough to bear the weight of a transformative training experience.

2.3. The optimization of the program

As previously underlined, many changes derive from the insights that emerged in the conducted studies. Nevertheless, two of them can be connected to the elements highlighted here. Firstly, since in this Degree are planned 600 hours of apprenticeship, to allow as much time as possible to the CRSL program, it was offered to the students the possibility of carrying out a substantial part of it (in particular the last two years of the course) through the modality of the SL. Organizing the experience with such extended times allows consolidating trust between stakeholders and students, allowing the latter to immerse themselves deeply in the community, reinforcing the relationship between the student and his or her mentor.

Another change connected with the analysis results is the reinforcement of the collaborative dimension, which is acted at many levels. Concerning the relationships among the students, to strengthen a collaborative attitude, each year's students are divided into four groups (each of them of about 20 students) organized according to the kind of problem they are facing. These groups, which meet regularly, approximately once a month, allow students to discuss the problems of the contexts in which they work, giving them valuable suggestions to address them in the perspective of peer tutoring. These meetings also strengthen the comparison between students and teachers since each group is assigned, as a supervisor, one of the teachers belonging to the academic team. Their role is to support the comparison among peers, intervening, when necessary, to encourage and support them without affecting peers' comparison. Finally, in order to make stronger the connection between the stakeholders and the academic staff, the CRSL program has multiplied the opportunities for the meeting by organizing both moments of one-to-one comparison between mentors and

academic tutors and moments of joint reflection that involve the entire academic staff and all the stakeholders involved in the program.

3. In conclusion: Take advantage of assessment using the know to design the unknown

The considerations deriving from this analysis elaborated concerning the CRSL give us indications for the optimization of the program, but, at the same time, they can help design similar experiences.

In this regard, the experiences of the Master's Degree programs in International Economics and Business Management and of the Master's Degree program in Management and Business Strategy, which turned to the Teaching and Learning Center of the University of Verona to establish at they ran an SL program, are relevant. The project (which has been called SL-ECO) had an informal start in the academic year 2019/20 but, due to the complexities due to the pandemic emergency, it involved a small number of subjects.

The open contacts with the students, the teachers, and the stakeholders were essential to probe the program's feasibility, identify the elements of compatibility with the organization of the courses of study, and maximize the cooperation between the territory and the academy. Furthermore, starting from the elements that had proved helpful for the optimization of the CRSL program.

The representatives of the two Masters' Degree program and the TaLC staff started from the previous experiences to identified elements useful to elaborate each constitutive element of the project, which is briefly summarized here

Its operational objectives are a) to support students in the internship aimed at the design and implementation of an intervention that addresses a need highlighted by the host company; b) support students in the preparation and writing of a research thesis starting from the internship experience.

The three main actors involved are students, stakeholders, and members of the academic team. The students will have to focus on the need highlighted by the host company to develop an intervention project, carry out this project (in agreement with the company), and write a research thesis that critically investigates this experience. Meetings between students (peer tutoring) and between students and members of the academic team, analyze the lived experience together, discuss critical issues, and hypothesize future actions will be organized monthly. The stakeholders will have to indicate the need on which the student will be called to act, support, and supervise their work and provide them feedback on the effectiveness of their performance (for this purpose, moments of confrontation between students and stakeholders will be realized to conduct a shared critical analysis). Finally, the academic team will support the students by suggesting the most appropriate guidelines

for the development and realization of the intervention, and it will provide indications and guidance during the writing of the dissertation. In order to reach these goals, structured meetings will be organized. Nevertheless, the academic team's action will not have to obscure, with its action, the comparison between peers and between students and stakeholders.

Concerning the formal elements, the SL-ECO program will value the credits attributed for the internship and those attributed to the thesis writing and the free credits; this is to widen as much as possible the outreach of the program. From an operational point of view, the program will be organized in four macro-steps. The first will include the launch of the program and initial training to both teachers and students involved. In the second macro-step, the students will be placed in the reference context and start the observational phase necessary to identify the need. In the third macro-step, the company's need will be identified in agreement with the stakeholder and, consistently, design the resolution intervention and implement it. Finally, the fourth macro-step will be dedicated to writing the dissertation to analyze the SL experience critically.

Consistently with what has been highlighted above, the SL-ECO program was designed to emphasize the collaborative dimension, consolidate the relationship with the stakeholders, build a peer tutoring network between students, and make the academic team a subject of interdisciplinary comparison. Furthermore, as underlined concerning the CRSL approach, the emphasis placed on the role of stakeholders and on the action of students, called to take a proactive attitude and work together to respond to the real needs of the context, introduces a service perspective that strengthens the students' civic skills also within the economic field. These relationships benefit all parties and foster a future committed to civic involvement, as widely recognized in the literature (Battistoni, 2002; Prentice, 2007; Diette, Helms, 2013; O'Brien-Wilder *et al.,* 2013; Henderson, 2018). The increased civic engagement related to SL programs' involvement has, therefore, the potential to significantly reconnect higher education also with economic contexts (Ziegert, McGoldrick, 2008).

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Promoting Creativity and Narrative Identity's Expression Through Digital Storytelling. An Exploratory Study

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ABSTRACT: *How to support the development of creative skills through the use of iconic artifacts? How to apply image-based methodologies in university teaching practice? Starting from those questions, the article presents an exploratory study conducted in the academic year 2019-2020 with 138 students enrolled in the first and second year of the Educational Science Bachelor's Degree. The aim is to explore the potential outcomes of the adoption of digital storytelling for the development of professional identity of future educators. The analysis of the digital storytelling produced by students involved in the study showed that those image-based methods, aligning narrative and imagination, are particularly useful to work on personal emotions and build reflective individual and collective processes.*

KEYWORDS: *image-based methodologies, digital storytelling, narrative identity, learning, creativity*

Introduction

Academic contexts face the challenge of promoting the development of knowledge and skills centered on the critical and creative thinking of college students (Livingston, 2010). How to support the development of creative skills through the use of iconic artifacts? How to apply image-based methodologies in university teaching practice? These are just some of the questions that guide the drafting of this contribution, aimed at describing a study on the use of visual methodologies applied within a university course at the University of Siena.

The scientific interest in this methodological approach can be linked to both teaching and research: in the first case it leads to thinking about practices that can be creative for teachers for developing critical thinking for university students; in the second case because it enhances the points of view of the participants through the use of narratives storytelling combined with images.

The perspective that characterizes them places the people at the center of a learning and inquiry process, emphasizing their stories and their

perspectives of meaning negotiated and validated in a process that constantly integrates the individual (as in the case of our work), the group and social level.

The analysis and description of the use of this methodology are interdisciplinary, collaborative, and situated (Tisdell *et al.,* 2012) and it is contextualized in the multi-method and multi-paradigmatic scientific reflection on the adoption of pictures in university.

1. Promote creativity in Higher Education through image-based methodologies

Images are widely used in everyday life, just think of the use made of them in virtual environments and the ways in which their use makes accessible the description of aspects related to social interaction (Banks, 2018). Their great use is due to specific characteristics, which makes images potentially useful in an interdisciplinary manner since they suggest communicating different aspects of disciplines through visual approaches (Clark, Morriss, 2017).

What is the relationship between images and learning? Inserted within the active development methodologies (Fabbri, Romeno, 2017), the image-based methodologies aim to promote critical reflection on problems of everyday life, enhancing the active participation of learners starting from the use of artifacts such as images, videos, photos, films, drawings (Wall *et al.,* 2012).

The flexibility and interdisciplinarity that characterizes them, make this methodology adaptable to different training contexts with purposes that can be didactic-educational or empirical and potentially usable in didactic and/or research work with different population groups since it does not require specific characteristics (Bosco, 2020). On the methodological level, it is possible to distinguish two key aspects, central to the teaching-learning processes that contemplate the use of this family of methodologies, namely reflection and reflexivity.

If reflection has to do with a retrospective process that recalls previous experiences and also involves the memories and emotions of the people involved, reflexivity contemplates a process that is also introspective with respect to the interpretations of one's own experiences (Watt, Wakefield, 2014). It is therefore clear that the involvement of learners is one of the key elements of this methodology. The revision and questioning of the ways in which meanings are constructed takes place by exploring the visual material, which makes the study material more concrete and more identifiable (Schell, 2009; Triacca, 2020). The analysis and discussion of the images that are presented in the classroom by students makes it possible to have a greater understanding of the objects to be learned and facilitates the acquisition of skills that can be used in future work environments (Walkington *et al.,* 2011).

The participant-centered approach places students at the center of their own learning process and makes them a fundamental part of the inquiry process, through which they can explore, together with others, the meanings conveyed by the images. In teaching practice, this can be translated into the choice of involving students in a learning process that requires them to produce images, which will then be analyzed in the classroom in order to create connections with specific elements of the teaching in which it is implemented (Wakefield, Watt, 2018).

The images thus become the pedagogical and transformative device (Mezirow, 2003) through which to enhance students' active learning experiences, learning that is thus centered on specific aspects of daily life.

1.1. Narrative identity and digital storytelling

The authors who deal with narrative identity assume that people tend to construct narrations of their existence by organizing them into a few substantial events (*Building Blocks of Life*) that are based on mnemonic emotionally vivid images, time frame of the familiar plot line and key person excerpt from cultural themes prevalent in the historical moment in which they are elaborated. This is true both for autobiographical narration (in the shape of written diary) and for verbal narrative traces or digital storytelling (Singer, 2004; Singer, Bluck 2001; McAdams, McLean, 2013; Kim, Li, 2021; Occhini, forthcoming).

Through narrative expression, individuals provide emotional intensity to difficult or complex life events, the source of substantial changes or the result of deep reflections, and incorporate them into their identity: the 'story told' becomes an identity reflection through the psychological path of internalization of the meanings. The development of identity, through narration, therefore includes the construction of a sense of personal continuity, coherence between the past, present and future self, as well as of stability between the self and social and cultural models (Tisdell, 2012; Andersen, Tisdell, 2016; Syed, McLean 2016; Morash *et al.,* 2020).

From these basic theoretical principles, the contribution articulates an exploratory study carried out with 138 students who participated at the mandatory laboratory of developmental psychology of the academic year 2019-2020. They addressed the topic of the development of autobiographical memory in childhood, the emotional correlates involved in construction of memory traces and, specifically, the role that the narration of autobiographical stories have in the organization of identity and identity awareness (McLean *et al.,* 2020). The request to generate digital storytelling as a practice exercise seemed the most stimulating solution as the different semiotic channels used give different types of information (cognitive, emotional, cultural, social) that are effectively integrated into the storytelling to build an organic narrative meaning but also – and above all – identity (Alonso *et al.,* 2013).

2. Research focus: sampling and method

The sample is made up of 138 students of the first and second year of Educational Science Bachelor's Degree at the University of Siena, attending the course of developmental psychology: 131 females and 7 males in a percentage that sees the female sample predominate with 95% of the presences. Referring to this composition, it is useful to remember that this degree course has a significant female presence which, in the different academic years, varies from 85% to 90% and the difference observed between the male and female component must be considered fully representative of university's students of the department (Occhini, 2018).

The average age of the sample is 20.7 years (min 18 – max 45) with a predominance of young people between 19-20 years (99 – about 72%), therefore of students who have enrolled in the university course immediately after the upper secondary school. A part of students (30 – 22%) is between 21-25 years old and the enrollment in the university course is the result of an existential replanning that is also evident from the individual storytelling. 5% of participants (7) fall into the age group ranging from 30-45 years in which the choice to undertake the university career is the result of an openly declared professional reconsideration with a hope to access improvement economical and career conditions.

64% of the participants to experiences are resident in the province of Arezzo and, also in this circumstance, the percentage corresponds – on average – to the students belonging to the degree course (Occhini, 2018); 21% come from other cities in Tuscany (with a predominance of Siena students (12% of the total), the remaining 15% live in areas other than Tuscany with a prevalence of the regions of the South of Italy.

The central argument of the laboratory of the course of developmental psychology concerned the analysis of the development of autobiographical memory, the emotional correlates involved in the construction of life memories and the use that can be made of such data to increase a reflection on one's own identity and on the central events that have determined it.

During the initial part of the laboratory, the students were offered the following 6-phase work outline, for the preparation and the delivery of the digital storytelling:

a. showing, in the class, some storytelling as an example for theoretical and methodological explanations as per § 2;
b. identifying, in the course of one's existence, an element deemed important to narrate because it is considered fundamental to describe one's identity or the path towards detection identity (episode, person, phase, existential theme);
c. providing their personal details (at the beginning of the storytelling) and a single Italian word that was able to describe the student's personality;

d. production of a digital storytelling (with tools available, so at no cost) and with visual, vocal, musical, iconographic, interviews, preferred by the student – the maximum time of the final work should not exceed 3 minutes – time for the delivery to the teacher 1 month;

e. upon consignment: signing of the waiver to authorize the use of the material for research purposes and a brief interview with the storytelling's author with the aim of detecting the dominant emotional experience, reflection on the usefulness of the identification process happened during the carrying out the task and reflection on the efficacy of the tool for the future profession of educator: how to use it with children, adults, caregivers, fragile persons (Chen, Chuang, 2021);

f. collective restitution of experience and formalization of learning the method (see § 5)

The vision of each single paper was followed by the qualitative processing of the topics through a double entry table that has simplified the analysis of the most common rate occurrences and themes (Table 1) but also of those experiences, which, due to the emotional intensity with which they have been narrated, can be considered qualitatively interesting from an educational and psychological perspective.

TAB. 1. *Rate occurrences*

Grandparents		43
Tattooing		21
Family 20 (generic quote)	father 3	
	mother 5	53
	sibling 25	
Bereavement		19
Bullying 10	Body shaming 6	16
Parent's divorce	absent father 9	10
Uprooting		8
SLD		7

3. Research focus: emerging narrative subject

For the analysis of qualitative data it was decided to group the students' papers according to thematic macro-areas, even if some single themes appear to be transversal a few macro-areas as we will see below.

Some examples: it's not surprising that the family is mentioned in 38.4% of storytellings (see Table 1) and conflicts, disagreements or

hardships are rarely presented. Quite the opposite: the family is told as a fundamental support both in everyday life and during the painful and problematic phases of life; parents, for example, are always cited (and commonly thanked) as key people in overcoming the psychological and relational effects in the event of bullying or as references in the transmission of common, cultural and individual values. Siblings (the most cited in the family immediately after grandparents) are described like 'behavioral models' when older than the author of the storytelling or like the beneficiary of fraternal parenthood thanks to comforting behaviour that the firstborn practices in the relationship and that is narrated as an index of responsible growth (Borchet *et al.,* 2020; Cao *et al.,* 2020). A significant element, which deserves an in-depth study, is the theme of siblings 'rediscovered' after long separations due to their parents' divorce or due to custody/adoptions and that of the fraternal bond in acquired and recomposed families.

31% of the students include in their narratives the significant bond with grandparents (with a determinant predominance for grandmother). The grandparents, a parental figure who – according to the stories we have gathered – become real attachment figure because they substitute for the working or absent parent (backup parents – Dunifon *et al.,* 2018), compensate for the distance the divorced parent (Westphal *et al.,* 2015; Sorek, 2020) or simply because they become a source of shared affectivity, often less judgmental and requesting than parental (Saddudrin *et al.,* 2017). The stories of young people who witness the physical and cognitive decay of their grandparents with Alzheimer's dementia are significant and who, in line with recent literature, tell the sense of acute discomfort in not being recognized, in realizing that the sharing memory has disappeared, in perceiving an affective distance that no longer corresponds to the previous level of relational and emotional exchange with the grandparent (Ebert *et al.,* 2019).

The storytellings can be traced back to three main macro-areas which, in terms of content, include the majority of the artifacts presented. Let's see them.

3.1. Turning Point
Any participants, certainly the majority, narrate those phases of life that can be defined as 'turning points' and which from the mnemonic viewpoint take on the function of trigger events for intense emotional experiences, for reflections on the self or for motivational impulses.

The two most common turning points in narratives are parental divorce and bereavement (which concerns grandparents, parents and, in rare cases, peers, friends or members of the family entourage – Rolbiecki, 2021). Particularly interesting are the themes of travel/growth in foreign countries, in profoundly different cultures, in places where help-care is exercised as a form of volunteering or profession. The theme of the eradication of students from foreign countries – who moved to Italy after spending part of their childhood or adolescence in the nation of origin –

is significant to be explored: the memory of the culture to which they belong is encountered (but does not conflict in the stories of young people) with the different culture to which they approach with enthusiasm, curiosity and, often, with irony. There is nostalgia but no regret.

Enrollment at university is also experienced as a turning point in one's existence, especially with regard to mature female students, formerly mothers, who are projected towards professional fulfillment.

3.2. Redemption Theme

The redemption theme is much more common than the contamination theme (McAdams, 2013). The emotive narrative that is oriented from a negative to a positive mood – regarding young people with broad and open prospects on the future – is undoubtedly the prevailing one. Objectively, it can be said that only in one storytelling does one breathe the sense of resignation and failure.

We can give some examples:
a. self-affirmation – the student who left her abusive boyfriend by moving to a new city and starting to stud after the boy was banned for jealousy or imposition of sentiment power;
b. awareness acquisition – the young woman with a specific learning disability who, despite obstacles, manages to pursue a brilliant university career «then I'm not a dumb like my math teacher screamed. Then I can do it») and at the end of the storytelling she publishes the photo of the university classroom together with a teacher. The university becomes a real moment of redemption and identity affirmation;
c. Change of perspective – mostly linked to mourning as a turning point that forces us to rethink but also to a disease that forces us to change lifestyles and use of time. Many interesting – in this perspective – are the stories of the students who have overcome (or are overcoming) an eating disorder.

3.3. Adverse Childhood Experiences

In literature, adverse experiences are considered as life events that significantly affect the psychological and physical well-being of the child and the future adult, exposing him to a greater risk of vulnerability and fragility (Felitti, 2017). The storytellings tell us that some of the adverse environmental elements are thematized in the lives of young people in the form of motivation to redeem or, alternatively, in the form of the need for detachment. The divorce of the parents with the father who becomes an absent figure (in 9 cases of 10 divorces narrated) opens to feelings of hostility and closure that commonly translate into generalized distrust (Demir-Dagdas, 2021).

Bullying is always narrated as an experience that determines impotence, as a repressed form of aggressivity towards indifferent teachers, especially when it refers to disablism against pupils or students

with SLD and as a form of relational aggression linked to the body shaming that leads (in few cases) to a clinical eating disorders full-blown. Not infrequently, these young people also endure a relational poverty that leads to real forms of generalized anxiety or panic attacks (Falla *et al.,* 2021).

Undoubtedly, it can be said that the educational laboratory has provided decisive ideas for future educational perspectives but has also offered interesting stimuli for research regarding the use of students' psychological and personal themes. These latter faced a disorienting dilemma from which learning processes arise.

4. Digital storytelling and transformative learning in the education of future professionals

As researchers, we were particularly interested in exploring the transformative elements of digital storytelling (Tisdell *et al.,* 2012). Adopting a double level of analysis, we did not focus only on collecting and analyzing digital storytelling, but also on how to support future educators to acquire an image-based methodology that they can use in their professional practices. It is widely recognized the role of the image-based methodology in sustaining processes of reflection and reflexivity upon professional identity through a narrative that is constitutively visual, multimodal, affective oriented. The majority of students (over 80% of them), during the interview following the delivery of the digital storytelling, confirmed that it has stimulated a profound reflection on their experiences and above all on the effectiveness of recovering episodes that they become 'consciously' important for the definition of their own identity. In many cases the experience has been defined as 'liberating' or, even, motivating. From the words of a student: «I realized that I am missing a piece, that I am not enough anymore. I would like to travel because I want to meet my authentic self».

The excerpts of the written reflections of the students proved that digital storytelling is a valuable tool for promoting personal transformation in students, possibly changing their representations about themselves, what they have experienced in the past and what they expect to do in the future. The personal growth that students described in their narratives represents much more than knowledge acquisition or skill development. Though most of them do not make any explicit references to transformation, their stories suggest that they experienced the learning described by Mezirow (2003) in that it was holistic, reflective, integrative, and had significant implications for their future practice. Working with a structure of facilitation in building their digital storytelling, recognizing emotions and affective dimensions and how they affected their narrative identity, were all catalysts for learning, particularly when digital narratives were about engaging and facing life challenges. Some reflections on the instrument lead students to imagine

that memory can also be facilitated and built in educational contexts through the choice of evocative images, dramatization techniques, narratives, storytelling protocol and the invention of fairy tales (Tisdell *et al.,* 2012). In this sense, the multiplicity of ideas that students have proposed as an alternative (but more often in association) to digital storytelling is surprising and stimulating as co-implementation of the applicability of the instrument to a variety of contexts.

What we do hope to highlight is the fact that future educators of the mandatory laboratory of the study not only passed through a potential transformative experiences, capable to elicit holistic transformations in their capacity to stay in the world and to know themselves, but also gained a creative and learning tool that they may adopt in educational contexts for childhood, in educational services and in training sector.

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The Training of University Professors as an Axis for Achieving Participatory Citizenship Work on Relevant Social Problems as a Starting Point

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ABSTRACT: *This study presents an investigation with university teachers in training. It analyzes the training itineraries followed by 44 teachers in terms of the introduction of citizenship education contents. The approach taken in the course seeks to achieve a model of citizenship education that is critical, participatory and committed to social transformation, through the treatment of relevant social problems. To this end, the usual practice of teachers is analyzed through a questionnaire that analyzes questions about their teaching practice (pre instrument) and a final public report (post instrument) that refers to the design, implementation and evaluation of the innovation developed in the training course. The study allows us to affirm that teachers, after participating in the training, advance in their training itinerary towards the introduction of citizenship education contents, although from a more professional than social perspective. Therefore, further research is needed to identify the obstacles that hinder the integration of this model in university teaching practice, in order to implement changes that will have an impact on them.*

KEYWORDS: *Course contents; Citizenship education; Relevant social problems; Teacher training.*

1. Introduction

The current health crisis resulting from COVID-19 has highlighted, among other aspects, the need for a socially committed and responsible citizenry (Giroux, 2020). In this sense, education systems have a relevant role to play, since the paradigm shift towards a truly democratic society that aspires to achieve social justice and commitment to public goods depends largely on them.

Although in the compulsory stages of education this reality is intrinsically considered, as we advance to higher stages such as university, these issues are blurred (Díez Gutiérrez, 2018) as if democracy were an unmovable and achieved system and, therefore, its existence and survival did not depend on the citizens who are part of it (Biesta, 2016). This highlights the role of the university not only as a trainer of professionals and specialized workers in different disciplines but also as

a key player in the formation of global citizens, capable of facing and responding to complex problems (Hammond, Keating, 2018).

For its part, the Bologna plan attempted to change the teaching approach of university professors to put students at the center of the process, as well as to give more value to the development of citizenship and democratic competencies of university students (European Commission/EACEA/Eurydice, 2018). However, some studies show how the transformation of university teaching after 20 years of Bologna has not undergone notable changes, neglecting, among others, teacher training (Fernández Fernández Fernández, Madinabeitia Ezkurra, 2020). This, although it should be key in this change, is still not regulated institutionally. This leads to a diverse and heterogeneous training offer in the different Spanish universities, although without common keys in terms of training strategies that allow progress towards a common goal that achieves the principles initially established by Bologna (Pérez-Rodríguez, 2019; Rodríguez, 2020).

Since the 1990s there has been research that has tried to delve deeper into the conceptions of university faculty about teaching and learning that pointed to the predominance of a model centered on the teacher and the subject (Prosser *et al.,* 1994; Samuelowicz, Bain, 1992). Subsequently, other studies, although minority and isolated, have tried to determine the influence of teacher education on changing teacher conceptions and teaching approaches (Postareff, Nevgi, 2015; Postareff *et al.,* 2007; Uiboleht *et al.,* 2016; Uiboleht *et al.,* 2018; Vilppu *et al.,* 2019), as well as in the development of their professional and didactic knowledge (Amunden *et al.,* 2008; de-Alba-Fernández, Porlán, 2020; Pérez-Rodríguez *et al.,* forthcoming). Despite the efforts invested in educational policies to change this situation, and the changes developed in university teaching, the citizenship training of university students continues to be neglected.

1.1. Citizenship and critical and creative thinking

Citizenship education should not be addressed exclusively from school but also in the university (Aktas *et al.,* 2017; Repáraz Abaitua *et al.,* 2015; Laker *et al.,* 2014; Viejo *et al.,* 2018). However, although there is numerous literature referring to the different conceptions of citizenship and the discussion about the ideal that we should reach in our contemporary societies, characterized by diversity, less attention has been paid to the pedagogical and curricular changes that should occur to foster democratic citizenship at this educational stage. On the other hand, in some cases studied, citizenship learning is linked to knowledge of political institutions and their processes, without developing values and attitudes (Laker *et al.,* 2014). Therefore, it is necessary to implement teaching and learning processes that favor that citizenship learning is not merely based on theoretical aspects, which can do little to change reality, but that are focused on developing democratic participation skills, i.e., those related to knowing how to do and be (Pineda-Alfonso *et al.,* 2018). Democratic engagement requires bringing into play not only cognitive

but also affective aspects (Wood *et al.,* 2018), in order to develop a critical and emancipatory citizenship (Schugurensky, Wolhuter, 2020) that is able to act even in a 'disobedient' way in the face of injustices (Ross, 2017; 2019) showing themselves as active and favoring the existence of a living and real democracy (Biesta, 2016).

We consider that in order to achieve this commitment and participation it is necessary that relevant social problems or controversial issues are worked on and analyzed at the university (Pérez-Rodríguez, forthcoming), which favor the reading and critical analysis of reality and the proposal of solutions or actions. All this will favor the development of critical and creative thinking and, therefore, decision-making for responsible social action (Estellés, Fischman, 2020; Santisteban, González Valencia, 2013; Larsen, 2014) and global citizenship education (Sant, 2018).

1.2. Relevant social problems at the university

The integration of education for citizenship in the university can be carried out in various ways. However, it has been demonstrated that, at the level of content, those contents that are left to transversality, linked above all to a participatory commitment, know-how and know-how to be, are forgotten.

Different successful experiences of integration of problematized contents focused on citizenship training have been developed in universities, although they seem to be a minority and depend on the voluntariness of the professionals involved. Of particular note are the service learning experiences that aim to link the university with the environment and are aimed at the social, personal and academic/professional development of students (Redondo-Corcobado, Fuentes, 2020). Other experiences such as those implemented by Boni and Pérez-Foguet (2006), Boni-Aristizábal, Calbuig-Tormo (2016) and Boni and Calabuig (2017), contextualized in the field of technical careers, have shown how it is possible to develop engineering students' critical thinking and awareness through the treatment of global problems. In other universities such as the University of Ibagué, they have implemented a basic cycle of mandatory comprehensive training for all university students, regardless of the area (Astaíza-Martínez *et al.,* 2019). They work from a systemic and citizen approach through complex social problem-solving projects. By analyzing the conceptions of citizenship of the faculty and students of this course they obtained an idea of active, reflective and transformative citizenship.

From our perspective, we do not understand problem solving as a merely methodological issue, which has been the most widely developed at the university. On the contrary, we understand that what is desirable is that the content proposals are articulated starting from relevant social problems or controversial issues (Pérez-Rodríguez *et al.,* forthcoming) as has been defended from the American critical social studies (Evans, 2004; Santisteban, 2019). The authors of the text, following Legardez (2017), understand a relevant social problem as a current issue, relevant from a

scientific and disciplinary point of view and that makes sense in the educational context in which it is worked. As Santisteban (2017, 559) rightly argues, reflecting on the teaching of social sciences, «disciplines are at the service of citizenship and should reflect on what they can contribute to people to solve relevant social problems». In agreement with the author, and going further, we defend the idea that all university disciplines, beyond the Social Sciences, should aspire to train university students also as citizens, allowing them not to be neutral in the face of problems and to question those assumptions and injustices that we socially accept uncritically (Pais, Costa, 2020; Waker, Fongwa, 2017).

2. Method

This paper presents some of the results of a broader interpretative and qualitative research (Pérez-Rodríguez *et al.,* forthcoming; Cohen *et al.,* 2007) contextualized in a Spanish university teacher training program. This study explores the progression itineraries of a group of university teachers in training regarding the introduction of citizenship education contents. For this purpose, we analyze how they work the citizenship perspective in their classes before participating in a training course (pre) and how they manage to change their teaching practice after the course (post).

The following lines present the context of the research, the participants and the research instruments.

2.1. Context of the research and participants

The Teacher Training and Teaching Innovation Program (FIDOP in Spanish) developed at the University of Seville has different lines of action, including a preliminary phase in which a General University Teaching Course (CGDU in Spanish) is developed and a permanent phase consisting of a Teacher Training and Innovation Network (REFID) (Porlán, Navarro, 2019).

The CGDU lasts 100 hours and is aimed at university teachers of different specialties and teaching experience. Its training strategy, based on the Classroom Improvement Cycles (CIMA in Spanish), seeks to progressively modify the teaching practices developed by the teaching staff. For this purpose, it employs different strategies, among others, peer discussion, analysis of their own practice through portfolios, peer observation and expert guidance (de-Alba-Fernández, Porlán, 2020).

The purpose of this course is for teachers to progressively consolidate a personal didactic model that is reflected upon and argued, in which the three fundamental elements of teaching practice (content, methodology and activities and evaluation) are coherent with each other and constructively aligned (Biggs, 2014).

The participants in this research are 44 teachers who have taken the course during 2017.

2.2. Instruments and system of categories

In order to analyze the progressions of the participants in the research and determine whether the course favors the integration of social problems as articulators of the contents, two instruments have been considered: a previous questionnaire (pre) in which the teachers answer questions related to their usual teaching practice and a final public report (post) in which they must collect the design, implementation and evaluation of the CIMA carried out during the course. Regarding the contents of citizenship education that teachers developed both in their classroom practice and in the innovation implemented, the system of categories shown in Table 1 was considered. As can be seen, it is a system with 4 levels in progression, where level 1 is the simplest as it does not include citizenship education contents and level 4 is the most complex as it articulates the entire knowledge framework around relevant social problems or controversial issues.

TAB. 1. *Category system*

Category	Level 1 (L1)	Level 2 (L2)	Level 3 (L3)	Level 4 (L4)
Citizenship education contents	Contents related to education for citizenship are not included. Conceptual contents, information, facts, theories or theoretical principles of the discipline of reference are considered.	Contents related to education for citizenship are not considered. The contents are formulated as disciplinary problems.	Contents related to education for citizenship are beginning to be introduced. They refer to those linked to the exercise of being a good professional: ethics and deontology.	Contents related to education for citizenship are beginning to be introduced. They refer to those linked to the exercise of being a good teacher: ethics and deontology.

Source: Pérez-Rodríguez *et al.,* forthcoming.

3. Results

The results of the study (Table 2) show that in the pre-course (before participating in the training course), the majority of teachers are at level 1 (72,8%), characterized by not including content to educate citizenship, compared to a minority level 4 who already work in their usual practice with a proposal of content articulated around relevant social problems or controversial issues (6,8%).

After the completion of the course (post-course moment), teachers move towards higher levels, especially towards level 2 (27,3%) in which they begin to consider problems, but from a disciplinary perspective, and level 3 (22,7%) in which the introduction of citizenship education contents is linked to more professional and social issues. Not many teachers manage to reach level 4 (13,6%).

TAB. 2. *Progression itineraries (pre-post)*

Levels	Pre F (%)	Post F (%)
Level 1	32 (72,8%)	16 (36,4%)
Level 2	6 (13,6%)	12 (27,3%)
Level 3	3 (6,8%)	10 (22,7%)
Level 4	3 (6,8%)	6 (13,6%)
Total	44 (100%)	44 (100%)

Source: Pérez-Rodríguez *et al.,* forthcoming.

Conclusions

The work presented here highlights how the training of university professors based on the analysis of their own practice and the implementation of changes favors the integration of citizenship education in the university, through the treatment of social problems or controversial topics.

As shown in the results presented above, most of the faculty before participating in the training course did not consider in their classes contents related to citizenship education and, therefore, did not favor critical and creative thinking of their students or ideological positioning in their classes. After participating in the course and analyzing the plots of knowledge developed in their usual practice, teachers began to introduce problematized contents focused on educating for a more participatory and critical citizenship (Pineda-Alfonso *et al.,* 2019). However, although some teachers are making progress and including citizenship education contents, these are linked to a more professional (level 3) than social (level 4) perspective, revealing different obstacles to reach the level that we consider as a reference and desirable (Pérez-Rodríguez *et al.,* forthcoming). From our perspective, the obstacles that prevent this total integration from being possible should be further investigated in order to improve the training strategies employed and to favor the integration of citizenship education at the university.

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Reinventing University. Public Engagement as Participative and Collective University

Ethnography of a Relationship Between Social Workers and Homeless People: The Educational Function of the Research and the Mediation Role of the Researcher

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ABSTRACT: *This contribution focuses on two themes: the role of the ethnographer as a mediator between academic world and social world; the educational function of the research expressed in the interactions between social workers, homeless people, and researcher. The paper refers to a doctoral research project (2018-2019) that has as main objective the exploration of the relationship between homeless people and social workers in a city in Southern Italy. This relationship can be defined as structural, in terms of a persistent pattern between social positions, because it represents an asymmetrical power relationship aimed at promoting change. The relative-relational approach to the study of poverty considers its symbolic-relational element as a determining dimension: the definition of the poor depends on the social and cultural context of reference and, consequently, changes with the frames that policies and social workers have. According to the theory of gift, inequality of position is a necessary condition for achieving the exchange that makes relations between people burn and grow. However, what constitutes inequality is the absence of reciprocity. The main questions guiding the research are: how policies are influencing the context and the organisation of services at a street level; how actors perceive and describe themselves and their relationship; whether there is reciprocity and how this affects their lives and the construction of knowledge around the issue of social work and homelessness. Thus, the research looks at the organisation of the network and the places where this relationship takes shape, the stories of the actors involved, their experiences of the relationship and the meaning they attribute to it. A mixed-methods approach is adopted to combine urban and organisational ethnography and the study of networks. The subjects involved are voluntary and professional street social workers, homeless people, and city dwellers. The ethnography (February 2019 – February 2020) integrates four types of tools: participant observations, ethnographic conversation, in-depth interviews, and oral histories. The main findings we found concern: the stratification among homeless people that the tiered model of the service system tends to create; the tension between role and self that social workers and homeless people deal with differently; the presence of reciprocity at a micro level of interaction and the absence of reciprocity at a macro level of interaction.*

KEYWORDS: *Homelessness, Social Work, Ethnography, Reciprocity*

Introduction

The research can become a receptor pool of what subjects would like or could give and communicate. This is particularly true for those considered vulnerable, the homeless, but also for those who have some form of power, such as operators, which however depends on someone else superior to whom they are in turn accountable and more generally of the level of regulation to which they are in turn required to conform. In relation to this aspect, the research can have a function of political expression, i.e. relating to the administration of the city and the policies adopted for marginality – and not only – that concern the population involved as homeless, which however also has other characteristics that concern it and which could be considered beyond homelessness.

Although the research does not fall within the scope of engaged ethnography (Casas-Cortes *et al.,* 2013) and therefore does not have direct objectives to stimulate a change in public policy regarding the phenomenon, themes inherent to the public-political dimension emerge from the research. In the context of the analysis carried out, these themes refer to what the homeless and social workers would like to give back in turn, after having received at a micro level, and to the demand inherent in what they would like to give in return, thus realising the passage from the micro-relational dimension to the macro-relational one, that is, relating to the phenomenon of homelessness and to social work understood as a public institution.

1. Theoretical and Methodological Framework

Since the modern age, homelessness has been seen as a social problem (Anderson, 1923) and the welfare system its solution (Dominelli, 2015). However, the production of a change in homeless people's lives and in the homelessness as phenomenon is still far from a political satisfying solution (O'Sullivan, 2020).

Exploring the relationship between homelessness and social worker in a metropolitan city of Southern Italy has been the main objective of the PhD research project.

This relationship can be defined as structural, in terms of persistent model between social positions (Trobia, Milia, 2011): it represents an asymmetrical relationship of power framed in a Mediterranean model of Welfare State. According to the theory of gift (Mauss, 2002), the inequality of the position is a necessary condition to realize the exchange while inequality is the absence of reciprocity (Weber, 1922). The relative-relational approach to the study of poverty considers its symbolic-interactional element as the determining dimension: the definition of the poor depends on the social and cultural context, and it changes as stated in the policies and the social workers' views (Simmel, 1908).

The research has aimed to explore this relationship looking at the network organization and at the places where it takes shape, at the stories of actors who take part in it, at their experience of relations and at the meaning they attribute to them. The main questions have regarded how policies are implemented at the street level (Lipsky, 1980); how the actors perceive and describe themselves and their relationship (Moscovici, 2005; Durkheim, Mauss, 2009); if there is reciprocity and how it influences their life and the construction of the knowledge around social work and homelessness topic (Berger, Luckman, 1996).

A mixed-methods approach (Amaturo, Punziano, 2016) has been adopted to combine urban and organizational ethnography (Park, Burguess, 1925) and the study of nets (Scott, 1997). The subjects involved have been voluntary and professional social street workers, homeless people, inhabitants of the city. Ethnography (February 2019- February 2020) had integrated four kinds of tools: participant observations, ethnographic conversations, in-deep interviews, oral histories.

I have been allowed to do participant observations in n. 6 low threshold services – a public shelter, a street mobile unit, a soup kitchen, a charity shop, a volunteer legal centre and a mobile medical centre. These are mostly volunteer services, while the public and private ones (n. 7) have been let involved through in-deep interviews and ethnographic conversations (a daytime centre, a mobile street unit, a social emergency mobile unit, three residential accommodations community based, the professional social work). Then I have also met homeless people and citizens moving in the places where they have used to live. Therefore, the sample consists of n. 58 homeless people, n. 42 social workers, n. 13 citizens: n. 113 people in total. Tools were used with all the people involved transversally and progressively, for a total of n. 54 ethnographic conversations, n. 22 in-deep interviews, 37 oral histories.

2. Main Findings

Based on the objectives of the project, the following are the main results.

I. To describe the context of the relationship we looked at the services network and we have found:
- a progressive decentralisation of the residential accommodations and the shelters in the peripherical areas of the city and a centralisation of the services aimed to satisfy the basic needs in the central areas (Thomas, Znaniecki, 1918-20; 1968)
- a high centrality of the private sector organisation and a higher density of ties between public sector and private sector organisations rather than between the volunteer sector and the private ones (Emirbayer, Goodwind, 1994)

These movements seem to produce:
- a concentration of homeless people in the central areas despite the increasing number of accommodations in the peripherical areas, which can mean that their centre of interest is closer to the socialisation needs rather than the basic ones
- a progressive stratification of homelessness based on which type of services people are users of, which can mean that the more 'capable' homeless people spend their lives in the accommodations while the fewer ones still stay on the street or around the volunteer services. This can produce competition, conflict, and discrimination between homeless people

II. To describe social representations that actors have of each other, we have found:
- Regarding social workers, a tension between the professional or volunteer role and the personal believes (Goffman, 1959)
- Concerning homeless people, a tension between the label of 'homeless' that people have in the present time, the memory of their Self they have in the past time and the wish of the Self they can make for the future (Mead, 1966)

In this case, social workers manage the tension differently, depending on: the consciousness they have about the distance between the role and the Self; the decision to be closer to the first one instead of the Self during the interaction with homeless people. We provided a typology.

In the second case, homeless people deal with their inner tension according to: the personal consciousness they can be different from the label 'homeless', the recognition other people show about this real possibility, the choice they can make to be included in the social work system to be helped. Also in this case, we provided a typology.

III. Lastly, looking for reciprocity in the social work-homelessness relationship, we have found: the presence of a symbolic reciprocity at the micro-level of homeless people – social workers interaction (Collins, 1998; Goffman, 1983); the absence of reciprocity at the macro level of homelessness- social work relation (Agodi et al. 2001; Gui, 1996).

At a micro level, it seems to be easier communicating and exchanging symbolical and material goods between homeless and social workers, who sometimes both discover to be able to see the complexity of the person under the label they have as social actors. On the other hand, at a macro level, reciprocity can mean conforming to the rules of the welfare system and trying to become autonomous going through the step model system addressed to homeless people. However, not anybody can deal with this alone and no tools nor moments are dedicated to collect what social workers and homeless people have to say in return to the system, so at a macro level of interaction, where reciprocity seems not to be.

3. The Educational Role of the Research and the Mediating Role of the Researcher

The fourth actor of the research, on which we focus in this contribution, is the researcher herself: choosing to use an ethnographic approach means being aware of becoming in turn a 'researched person' from the moment in which she becomes part of the spatial, physical and organisational field, with which she wishes to become familiar and in which she intends to immerse herself (Ferrarotti, 2003).

The researcher's access to the field, in an uncovered and participatory way, and his positioning in it, recognised by the other participants, generated a reflection on two aspects:
- the mediating role of the researcher between the academic world, the social world, and the worlds of the participants
- the educational function of the research which becomes part of the participants' knowledge – especially if it is totally new to them – and which stimulates in them an awareness of themselves and of the phenomenon with which they are theoretically associated.

It was necessary, during the fieldwork, to explain the research and the role of the researcher to make their own behaviour predictable, observable, knowable by the other.

This implied, on the one hand, the ascertainment that not everyone knew in the same way who a social researcher was, what it consisted of to carry out a research, what methods were adopted, what the aims were and why one should participate in it; on the other hand, the identification of the motivations that pushed everyone to choose to take part in it or not and the different uses that everyone could make of the research and of the relationship with the researcher, explicitly or implicitly.

Therefore, first, it was necessary to reflect on how to construct one's own presence in the field, how to communicate with different languages and at the appropriate times to the different participants the reasons, the duration, the motivations, the characteristics, and the meaning of one's own presence. The progressive use of information gathering techniques and the adaptation of languages for each participant was fundamental for this, trying each time to calibrate it according to the known characteristics of the interlocutor.

Second, the gaze with which the analysis was carried out had to understand the expectations and motivations of the participants and defined a research objective that did not coincide with those set by the researcher in the research plan but with what the participants manifested with their collaboration and in their narratives.

There are three levels that the role of the researcher and the function of the research bring to our attention, and they concern the ethical, emotional, and political dimensions.

1. The ethical dimension, closely linked to the educational function of research, is expressed in terms of liminality and duplexity (Parker, 2007):
   - on the one hand, the researcher is called upon to inform and negotiate consent to participation, setting the boundaries of the research context in which the relationship between researcher and researched is realised, moving in this sense along a threshold between the research context and the life context of the participants in which she asks to enter
   - on the other hand, she is called upon to ensure respect for the confidentiality of the other while always keeping in mind the objectives of the research to which she is called to account. She therefore finds herself having to deal with the duplicity of the referents and having to understand from time to time how it is right to act and whether to act.

2. The emotional dimension straddles the educational function of research and the mediating role of the researcher. Reflections by other authors (Tillmann-Healey, Kiesinger, 2000; Gould, Nelson, 2005; Perry *et al.,* 2004; Sword, 1999) who have used qualitative research in sensitive fields of investigation and in contact with vulnerable populations dedicate space to reflect on emotionality as a legitimate dimension to be part of the research itself, because it concerns all the actors involved, including the researcher.

   At various times during the fieldwork, the recognition of emotional states determined by certain events led, for example, to making certain decisions rather than others. In the initial and final phases, for example, for different reasons, levels of intrusiveness were avoided that might have been excessive or unsustainable, either because they were premature or because the necessary time could not be devoted to them. The fact that the researcher was female, young, Italian, a social worker and alone, i.e. not part of a research team, should be taken into account.

3. Finally, the political dimension, which is closely linked to the mediating role of the researcher, concerns the communication of the research and the objective that participants can add to it. In other words, the research can also become a political expression, i.e. relating to the administration of the city and the policies adopted for marginality that concern the population involved as homeless and as social workers.

   Although it does not fall within the scope of engaged ethnography (Casas-Cortes *et al.,* 2013) and therefore does not have direct objectives to stimulate a change in public policy regarding the phenomenon, themes inherent to the political-public dimension emerge from the research.

   In the context of the analysis carried out, these themes refer to what the homeless and social workers would like to give back in turn, making that transition from the micro-relational dimension to

the macro-relational one, that is, relating to the phenomenon of homelessness and social work understood as a public institution. What both populations require is expressed in the themes of 'recognition' and 'participation' in the planning of individual interventions and in the political programming that concerns them as beneficiaries and street-level operators.

Conclusion

Research can have a formative-educational function if it can be explained to participants. The moment it is presented, information is given, the limits and boundaries of the context in which one wishes to move are indicated and reflection and awareness are stimulated in those being questioned.

The moment of dialogue is when subjects think about what to say, what to answer, what to present. The selection they inevitably make is never completely controllable by the researcher – who may try to bring the participants back into the defined boundaries of the research – but it reflects their choice and their desire to share some aspects and not to share others.

In these first two points the ethical dimension of research is expressed, in terms of liminality and duplexity (Parker, 2007): on the one hand, the researcher is called upon to inform and negotiate consent to participation, setting the boundaries of the research context in which the relationship between researcher and researched is realised, moving in this sense along a threshold between the research context and the life context of the participants in which she asks to enter; on the other hand, she is called upon to ensure respect for the confidentiality of the other while always keeping in mind the objectives of the research to which she is called to account, she therefore finds herself having to deal with the duplicity of the referents and having to understand from time to time how it is right to act and whether to act.

Explaining the research and gaining consensus varies according to a crucial character that concerns the participants – their level of education, understanding, trust – but also concerns the researcher, regarding his ability to explain, to make himself as understood as possible and to inspire trust. In this case, these elements took time, pushed the researcher to clarify and express himself in a way that was as comprehensible as possible to all the different subjects, guaranteeing each time adherence and transparency with respect to the actual intentions that the research brought with it.

This becomes a formative-educational moment when the interlocutor does not have the slightest idea of what research is and what a researcher does, but it is also the moment in which the ethical value of research is expressed and in which the methods and techniques chosen to become the instruments to be used to act.

It is inevitable, however, that the field of ethnographic relationship in a research context that coincides with that of life leads to confusion. Again, research techniques become fundamental to observe this confusion, analyse it and design subsequent actions. The moment of the researcher's reflection – expressed in the field diary – represents the moment in which the researcher also tries to become aware of himself. However, one cannot deny the existence of an emotional dimension, which concerns the researcher even beyond the role she plays in the field, which is not absent, it cannot be eliminated as much as trying to keep it under control but being aware of its existence.

The reflection that we want to bring with this contribution concerns the recognition of the importance of University and Research in the local territories that we inhabit. We are not only researchers but also educators and mediators between the world of theories and choices of intervention practices, in this case concerning social policies. But we are above all collaborators of the participants in research, vulnerable people, professionals, politicians. We need to place at the centre of our action its ethical premise and its political significance, without forgetting or underestimating the emotional dimension that affects us all as human beings.

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Transformation of University, between Residues and Derivations

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ABSTRACT: *Pareto's dichotomy of residues and derivations can help understand whether the adherence to facts – as outlined in Transformation of Democracy (1921) – may be useful in the analysis of the current transformation of universities, so as to cope with the countless drawbacks that came to light soon after the introduction of the 1999 double degree system, that has deeply changed academic life. Normative discourses seem to fuel some argumentative derivations aimed at stifling academic residues (sentiments and individualism) nowadays still determining university policies. This is a sociological approach highlighting the permanent reformist process supporting rationalization and inclusion, in order to replace the erratic (and sometimes illogic) policies implemented by our early university system. To the fore is the gist of rationalization inspiring the reformist process that Italian universities are handling in order to promote merit, efficiency, transparency and proper evaluation. Hence recent functional transformations have reduced the autonomy of universities and increased centralization, for the purpose of tackling some of the drawbacks and flaws affecting the academic sphere over the last two decades.*

KEYWORDS: *University, Reformism, Rationalization, Evaluation, Social system*

Introduction

Italian University reformism of the last two decades has featured a normative hypertrophy that has burdened the way to modernization and rationalization. The flourishing of ministerial decrees has often been inspired by political pressure leading to norms that partially make our universities efficient and inclusive. The analysis of these norms allows to highlight the argumentative flair inspiring ministerial strategies, in line with a well-planned metaphoric discourse. This is true in reference to the tenet of rationalization inspiring the reformist process that Italian universities are handling in order to promote merit, efficiency, transparency and proper evaluation. The recent functional transformations have reduced the autonomy of universities and increased centralization, so as to contrast some of the drawbacks affecting the academic sphere the last two decades.

This process of transformation is fueled by a normative flood that has not yet stimulated a different cultural mindset. In this account, the legacy

of some important sociologists who have analyzed the academic environment in the past – also through metaphoric insights – can help understand the argumentative techniques inspiring our academic reformism. In conjunction with McLuhan's definition of the university as a 'marketplace', Jürgen Habermas's focus on the University 'in democracy' and Jacques Derrida's vision of a university 'without condition', it may also be necessary to focus on Vilfredo Pareto's dichotomy of 'residues and derivations'.

One century later, his sociological effort can still provide some epistemological insights into the reformist shifts bolstered by the self-evaluation, periodic evaluation and accreditation (AVA) system. Such bureaucratic incumbencies as a whole seem to be inspired by a meta-language founded on an over-explanatory normative flair (Lombardinilo 2019, 2018).

1. Experimental facts or the imaginary: notes on academic criticism

Over the last century, some eminent sociologists have analyzed the complexity of the academic environment with the aim to highlight the best practices and drawbacks of higher education. In the second half of the twentieth century, Talcott Parsons, Marshall McLuhan, Jürgen Habermas, Pierre Bourdieu, Zygmunt Bauman tried to probe – from different epistemological perspectives – tried to probe the contradictions afflicting the behavior of the *homines academici*, whose didactic mission has been indissolubly interwoven with scientific research. In other words, while echoing Nietzsche's pamphlet 'on the future of our schools', the theoretical reflection on the future of our universities focuses on the most common criticalities besetting academic institutions in the era of digital complexity. In the Sixties, Habermas concocted a 'university in democracy' (1967), somehow inspiring Grabaud and Ballotti's (1970) vision of the 'embattled university'.

In 1918 it is worth remembering that in 1918 Thorstein Veblen published his biting pamphlet, *The Higher learning in America* that at the time was acknowledged as one the profoundest analyses ever made of the American system. Veblen's criticism of the «follies and fallacies» of higher learning was welcomed by most critics, and some felt that he had paved the way to an improved higher education. In the meantime, Max Weber was engaged with the text of his well-known conference, *Science as a Vocation* (1919), focusing on charismatic teaching: «his starting point is to acknowledge that a significant aspect of what it means to engage in scientific work (or to embark on a scientific career) is to work within a set of university institutions that are subject to the processes of rationalization and bureaucratization characteristic of European cultural life at this time» (Owen, Strong, 2004, xxi-xxii). Their sociological analysis can still provide insightful reflections on university reformism. Nowadays, rationalization and bureaucratization seem to inspire the

assessment standards of higher education in line with the purpose of reducing autonomy and strengthening centralization. The dichotomy of qualitative and quantitative evaluation also concerns two different ways to exalt the scientific vocation in accordance with the conservative tendency to preserve the corporatist inclination of full professors.

In this account, Pareto underlined that scientists should adhere to facts without roaming in the «boundless space of imagination» (Pareto, 1921, 52). This is what he highlighted in *The Transformation of Democracy* (1921) also hinting at Vico's theory of historical courses and recourses. Pareto further investigated the principle of transformation not only in reference to the political and economic situation, but also to the cultural scenario after the end of World War I. The alternation between residues and derivations showed new social dynamics, also in the field of knowledge and higher education. Residues correspond to «sentiments», whereas derivations are «products of thought» (Pareto, 1984, 26) that allow us to analyze the origins of social facts: «interpretation of facts is determined by sentiments, desires, prejudices, and interests which often unknowingly motivate action» (Pareto, 1984, 38).

The dialectics between rational and irrational factors comply with the fluctuation of residues and derivations, as Pareto attentively mulls over in *The Treatise of General Sociology*:

> Oftentimes a person following the method of the logico-experimental sciences will begin with a derivation and proceed to subject it to experimental test. In such a case the derivation is just an instrument of research and may have its place in logico-experimental science – though never as an instrument of proof or persuasion (Pareto, 1935, 900).

Facts may be either experimental or imaginary, in line with the separation of sciences and humanities. Pareto had cleverly understood not only the political consequences of war, but also its economic impact on higher education, with particular regard to the plutocratic privileges denounced by Veblen (in America) and Weber (in Europe) (Highley, Pakulski, 2012).

Thanks to Pareto, the critical discourse on university acquires a deeper sociological relevance, since his academic standpoint is substantially a critique of scholars who do not focus on facts. In the first chapter *The Transformation of Democracy* entitled *Generalizations*, Pareto underlines that the academic endeavor should be pursued in conjunction with a necessary focus on specific subjects. Thus, he criticizes the sociological tendency to link science to abstraction and imagination: «It was appropriate for Newton to limit himself to consideration of the gravitational universal, while it is appropriate for modern engineers to want to progress further, and it will be appropriate for people of the future to move beyond modern advances. One should also take careful notice of the fact that it is important to be able to restrict one's own research» (Pareto 1984, 33). Conversely, Pareto saw that academic engagement

showed a detachment from reality, thus resulting in a mere display of intellectual prowess. Hence the need to legitimate, in a conversational way, the circulation of publications not closely related to empiric research and inspired by those sundry imaginaries still present nowadays in the academic sphere. As Bowden and Marton (1998, 9) remark, «in research, one is frequently moving in much wider circles in much narrower fields».

The power of imagination may attract and influence the researcher's work since he frequently has to justify the theoretical dimension of his work logically. This is why derivations are so important in the analysis of social complexity as well, inasmuch as they give a logical legitimacy to a countless number of non-logical residues. To some extent, Pareto seems to link the transformation of democracy to the metamorphosis of university, in a time in which the democratization and globalization of university research were far from being achieved (Slowey, Schuetze, 2014). The juxtaposition between experimental and imaginary facts hints at the dialectics of residues and derivations, insofar as the latter characterize every attempt to confer a logical explanation on non-logical facts. Pareto's academic criticism can still shed light on our cognitive complexity, thanks to an epistemological approach embedded in the devious ambiguities of academic reformism.

2. Academic self-limitations: experience and imagination

A century after Pareto and Weber, adherence to facts and scientific vocation can still be considered as tenets inspiring the academic act, and this holds true in a phase characterized by the digital transformation of learning. Pareto's dichotomy between logical and non-logical actions investigated in the *Treatise of General Sociology* provides an insight into the influence of residues and derivations in higher education, where the oscillation between tradition and innovation can be seen as a permanent functional principle. In the era of evaluative hypertrophy, compulsory accreditation of courses and venues, taxonomic anxiety, and the spread of e-learning, universities have to prove their efficiency, in conjunction with transparency and inclusiveness, in line with social and scientific accountability (Peters, Roberts, 2021). Pareto's metaphor of the transformation of democracy can be the benchmark for observing transformative processes related to the innovation of functional agencies. This is also true for educational agencies coping with the complexity of circular and connected knowledge. Liberal arts are no exception, as Weber demonstrates while retrieving the legacy of poets, writers and thinkers who gave imagination a significant role in the study of social facts, as well as Augustine and Tolstoi's Christian perspective on life (Weber, 2004, 39-42).

How is it possible to conciliate facts and imagination? According to Weber, professors should avoid a demagogic stance and comply with the principle of self-limitation. Furthermore, scientists investigate the most

hidden facts without any fear of spoiling consolidated conviction: «To make an initial point: the first task of a competent teacher is to teach his students to acknowledge *inconvenient* facts. By these I mean facts that are *inconvenient* for their own political views. Such extremely inconvenient facts exist for every political position, including my own» (Weber, 2004, 22). Weber stigmatizes the auto-referential dimension and the political distortions of academies, in line with an anti-rhetoric aiming at demystifying those conversational derivations – as Pareto would put it – conferring a hint of logic to practice and behaviour that draw apart from the principle of science as a vocation. Insofar as residues evoke «sentiments» and derivations are «products of thought», it is possible to understand the artificial dimension of some conversational practices that fuel the illusion of renewal. Hence follows the concept of scientific subjects – including sociology – capable of accurately segmenting reality, «The task is more exhausting, more modest, more prosaic, but yet much more useful than allowing our imagination to wander in infinite space beyond the realm of experience» (Pareto, 1984, 34).

3. The critic discourse on university as a sociological effort

Pareto's analysis dwells on the perfect balance between centrifugal and centripetal forces, both in restricted social contexts and complex functional systems (Rabot, 1984). After all, a hierarchical organization of roles does not guarantee agreement among actors, as Veblen pointed out in 1918, at the time of Weber's conference and Pareto's articles. Veblen criticized concentration of power across apical roles of faculties, he also shed light on some specific flaws in the university, whose professional vocation could cause diverse intellectual drifts.

Some of the aforementioned insights inspired reflections on democratization of higher education in the second half of the twentieth century. Fifty years after Veblen's *The Higher Learning in America*, Habermas identified communication, information and transparency as three cornerstones of the new *University in a democracy* triggered by the student unrest in the Sixties. In line with Weber's criticism, Habermas delivered a speech in Hanover on 9 June 1967, which drew on an anti-corporative reformist program in stark contrast to his academic background. Habermas called for independence for researchers, autonomy for young scholars and development of a constant debate and improvement of strategies concerning communication. Such reforms were highlighted by Habermas at a time when the balance of academic power was about to shift and, in the meantime, deceptive conservative derivations – echoing Pareto once again – were fading away, as they were about to be replaced with other political and ideological argumentations.

Practice and theory interlace in a profoundly changed educational context, especially if we consider the mutation of geopolitical scenarios in the aftermath of World War II. While underlining that «there is

something new with the German Federal Republic's Universities», Habermas (1968, 99-100) depicted an ambitious – and to some extent – utopian reformist program for the academic institution (not only German) called upon to pay more attention to students' needs: «Briefly, we deal every time with the political function of students, the re-organization of teaching and democratization of universities at large».

Meanwhile, wars in Korea and Vietnam monopolized public opinion. Moreover, Benno Ohnesorg's assassination might have destabilized the students' community of the German Federal Republic. Retrospectively, it is important to emphasize the influence that World War I and the conflict in the Balkans had on the Paretian analysis of the transformation of democracy. According to Habermas, the mission of universities complied with social, cultural and scientific paradigms and the progressive convergence of educational needs and functional innovations. Hence follows the imaginary of a higher education capable of transmitting «extra-functional skills», handing down «cultural traditions» and developing students' «political conscience» (Habermas, 1968, 110-114).

These are the three cornerstones of a university innovation also pivoted on the reform of course degrees and the joint commission of students and professors, with the aim to lay the foundations of a fully cooperative and «faithful to its roots» university. The aforementioned tenets entail a reset of academic classes in the ever-changing society of knowledge, as both Weber and Veblen foresaw from different epistemological perspectives. The criticism of privileges and academic self-reference has recently become necessary to debunk the argumentative rhetoric rebutted by Morin (2000) and Derrida (2002) when the Nineties were coming to an end. The emphasis on students' political consciousness is one of the most insightful traits of Habermas' criticism: «Along with the long-term structural shift of society, we know that the academic class has disappeared, as it was characterized by a common mentality. Does this mean that our universities no longer need to implement political education?» (Habermas, 1968, 113-114).

4. Symbolism and the rhetoric of scientificity

The previous query can also be referred to the Italian University, whose political endeavor has developed in line with a hyper-evaluative perspective offsetting meritocracy and transparency and influencing the planning of universities in compliance with a real 'ideology of evaluation' (Borrelli, 2015). Permanent reformism and the reduction of autonomy generated a substantial transformation of the academic actions supported by professors, who have to cope with a load of administrative tasks that have increased tenfold since the introduction of the AVA system:

> The transformations sweeping over the world of education and academia in particular in recent decades are part of the international mainstream deriving from supranational actors such as the European Commission and ENQA – the European Association for Quality Assurance in Higher Education. These actors pushed toward the isomorphization of university systems, evaluation and accreditation in view of the creation of a European educational area (Colarusso, Giancola, 2020, 19).

Hence, the re-consideration of the transformative power of universities, that the current pandemic has unavoidably modified:

> Along this linear time, the academic subject and her practices are segmented in series of attributes, within an ordered sequence that seems to guarantee the rational planning of careers, research, third mission activities, as well as the design of teaching programmes, according to common standardized parameters and in relation to given and known strategic horizons» (Grimaldi *et al.,* 2020, 448).

The aforementioned changes concern not only the functional territory of universities, but also its symbolic sphere, without considering the rhetorical connotations that are peculiar to the journalistic discourse:

> For its part, teaching has been influenced by the changes in the cultural backgrounds of the students and their increasingly utilitarian outlook. It follows that academicians have been forced to face requests for new forms of learning of non-traditional forms of knowledge coming from the outside world (Moscati, 2021, 411).

Bourdieu reflected on the «rhetoric of scientificity» in the first half of the twentieth century, when he stigmatized the corporativism and self-reference of the *homo academicus*. Scientific skills find their place in the public dimension of knowledge:

> Thus the work of construction of the object determines a finite set of *pertinent properties*, established hypothetically as *effective variables*, whose variations are associated with the variations of the phenomenon observed, and it thereby defines the population of *constructed individuals*, themselves characterized by the possession of these properties to varying degrees (Bourdieu, 1988, 9).

The symbolic efficiency that Bourdieu deals with intertwines with the shift of social paradigm which the digitalized university has to comply with, even when the academic environment becomes a relational non-*lieu* that has been projected into the internet (Balzola, 2020). The challenges of university democratization concern some specific forms of free access that ought to be digitally efficient, thus implementing the public representativeness of didactic practices (Pellegrino *et al.,* 2019). Pareto's analysis of the transformation of democracy acquires a prophetic meaning from an epistemological perspective, also in reference to the

adherence to facts and the processes of sharing that might characterize research activities in social contexts.

Habermas' metaphor of the university in democracy can be exploited as an interpretation of the academic public discourse that evolves in accordance with its symbolic perception. To the fore is not only the reliability of the *homo academicus*, but also the social acknowledgment of his educational action, resulting from TV debates involving virologists, politicians, journalists, pundits and professors, thus confirming that «the debate on the Italian university has recently taken off, by getting out of the narrow boundaries of specialists and setting aside the most traditional confrontations» (Capano *et al.,* 2017, 7). The so-called planned obsolescence of university can be tackled by avoiding personalisms. Weber had already focused on academic self-limitation and criticized the personal cult that Bauman too dealt with: «the relentless, but slow and circumspect search for truth or justice is ill fitted for being conducted under the public gaze, unlikely to attract, let alone to hold, public attention and most certainly not calculated for instant applause» (Bauman, 2001, 133).

Bauman longed for a science deprived of the devious glimmers of mainstream culture, in a historical phase still far from the communicative evidence of online communities. He suggested avoiding the footlights and «imaginary spaces», as also Pareto also recommended to social scientists at the dawn of totalitarianism and the start of World War II. The later invention of the nuclear bomb shows, according to Sennett, the risks stemming from politics and the manipulation of science: «knowledge is additive and accumulative; it builds up in time as people stand on the giants' shoulders, like those human pillars in the circus» (Sennett, 2008, 79).

5. University and pandemic: the challenges of rationalization

The metaphor of transformation usually inspiring media narrations and political reforms also concerns higher education systems (Gidley, Inayatullah, 2000) and this holds true especially for the European education area. The array of normative acts issued by the Italian Ministry of University and Education comply with some strategic policies pivoted not only on the development of quality and efficiency, but also on the evaluation of teaching and research activities. Nonetheless, the current reformist process of Italian Universities appears to be burdened by a normative hypertrophy that has unavoidably reduced universities' autonomy when complying with ANVUR's (Italian National Agency for the Evaluation of Universities and Research) guidelines: «Increasing engagement with the outside world has led to changes in academic work, specifically in the sense of interacting more with the various stakeholders interested in participating and exercising some control over aspects of academic life» (Colarusso, Giancola, 2020, 465).

Evaluation Committees and Presidia of Quality of Universities play a relevant role in a system of assessment supported by the need to tackle the traditional self-reference of academic actors. The opposition to self-reference, fragmentation and lack of transparency led to the 'controlled autonomy' of universities, as stated in the 2019-2021 triennial plan and ministerial decree no. 989/2019 (prior to the 2020 COVID-19 outbreak). The new functional scenario engendered by the digitalization of almost all academic activities required prompt governmental support so as to make Universities capable of managing the pandemic emergency. This is why ministerial decree no. 435/2020 enabled our universities to revise their triennial planning, in compliance with social distancing measures. The above decrees concern distance-learning strategies, economic support for students, scholarships and loans (Lombardinilo, Canino, 2020).

These measures are set within the strategy for revamping Italian Universities, as stated in the 2019-2021 triennial plan. Such planning has been conveniently readapted, in the light of the new pandemic scenario, so as to improve the «quality of educational environments», availability of services for students and the number of research activities. The main purpose is to cope with the impact of economic cutbacks on the University system. In this account, the Government has financed innovative activities concerning didactic methodologies, University placement and economic support for higher education studies. Furthermore, the Government intends to improve the certification of degree courses, in accordance with scientific evolution and productive and territorial features. Research activities will be supported through hiring, infrastructure improvement and partnerships among universities so as to enhance universities' attractiveness.

Hence follows the chance to interpret the recent governmental measures in line with the new economic and social environment which calls for responsibility, transparency and accountability. These are some of the inspiring principles of the new three-year planning cycle for universities 2021-2023, as stated in the ministerial decree no. 289/2021. This decree is part of a regulatory framework regarding strategic planning activities for Italian universities, in an era characterized by overwhelming uncertainty regarding the economic and social effects of the pandemic. This situation affects the demand for university courses and their economic sustainability, which should be pursued in conjunction with full autonomy and reliable corporate accounting practices. The goals set by the Ministry of University and Research to support the university system in the three-year period 2021-2023 also concern the convergence between performance and budget, while improving the quality and efficiency of both individual structures and institutions as a whole.

It is quite clear that the recent 'unpredictable changes' (Moscati, 2020) have deeply altered the priorities that Universities have to pursue. Such academic shifts also concern the digital transformation of the academic

environment, as Bauman pointed out in 2001, when he focused on higher education in the age of complexity:

> The world to which the institution adjusts leaves its imprint on the shape of the institutionalized routine, on the monotony of pattern reproduction. But it also shapes the institution's way of coping with crises, reacting to the change in the environment, articulating problems and seeking solutions (Bauman 2001, 136-7).

The metamorphosis of academic institutions is related to the frenzied transformation of the public sphere as well, in line with the rapid evolution of knowledge that the current rationalization process of universities cannot set aside. This is what Losh reminds us: «Despite being busy stage-managing increasingly complex PowerPoint presentations or elaborate clicker quizzes recommended by instructional technologists, professors notice student apathy and preoccupation, and their feelings do get hurt» (2014, 30).

Conclusion

> The reforms launched with the Bologna Process were not meant to undermine 'academic freedom'. Instead, by interacting with QA requirements, they brought out forms of procedural alignment concerning the different spheres of teaching and research, hybridizing and modifying them (Pompili, Viteritti, 2020, 420).

The analysis of the aforementioned norms and the survey of the annual reports released by the Evaluation Committees and Presidia of Quality of universities allow us to understand what the academic rationalization aims at and can emphasize the importance of quality and rationalization (derivations) in contrast with some old-fashioned academic habits (residues). Hence follows the focus on the ongoing process of evaluation aimed at detecting some weaknesses regarding didactics, governance, internationalization, the third mission and student's involvement: «Economic, political, social and cultural pressures, and endogenous and exogenous factors have together helped form a profoundly changed framework which, in turn, has both stimulated and, at the same time, been characterized, by different processes» (Mazza, Valentini, 2020, 521). In this regard, universities' annual reports mirror ANVUR's normative and discursive tenets, aimed at replacing the 'non-logic' habits of the past with the more 'logic' policies promoted by means of the AVA system.

The normative discourses seem to fuel some argumentative derivations aimed at stifling academic residues (sentiments and individualisms) still nowadays determining university policies. Pareto's dichotomy between residues and derivations can help understand whether the adherence to facts – as outlined in *Transformation of Democracy* (1921) – may be useful in the analysis of the current

transformation of universities, so as to cope with the countless drawbacks that came to light soon after the introduction of the 1999 double degree system that has deeply changed academic life (Pitzalis, 2001). This is a sociological approach highlighting the permanent reformist process supporting rationalization and inclusion, in order to replace the erratic (and sometimes illogical) policies implemented by our early university system.

To the fore is the juxtaposition between facts and imagination, as Pareto wisely pointed out:

> The degree to which one can engage in experimental abstraction is infinite. Every general principle can depend upon one even more general, and so on, without limit. But following this track is not always useful or suitable to our purpose. One should avoid the risk of generalizing beyond the boundaries of present experience and roaming in imaginary space (Pareto, 1984, 33).

Pareto reminds us that every reflection on academic endeavor should be deprived of misleading argumentations and obscure narrations, so as to shed light on the logical factors founding research activities within our risk society as Ulrich Beck (2016) depicted when referring to the postmodern «metamorphosis of the world».

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Universe of Knowledge. When Professional and Academic Knowledge Meets

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ABSTRACT: *The contribution describes the research and the self-training experience of social works, psychologists and university scholars who participated in the Board on Professional Knowledge formed in 2019 within the research project Professional Social Practices in Services Throughout the Territory: Explicating Knowledge. Through the use of participatory and collaborative research methodology tacit knowledge is expressed, conceptualized and externalised with the intent of building new meaning in professional practices and procedures in services and organizations. This contribution, written by the members of the Board, describes the experience and the first repercussions on the modus operandi of the social operators involved.*

KEYWORDS: *participatory research, tacit knowledge, social workers, university*

1. Assumptions and theoretical framework

The research work entitled *Professional Social Practices in Services on the Territory: Explicating Knowledge* began in 2018 and is still in progress. The research question is vast and complex. It can be summarized by the intent of analysing the processes that drive knowledge incorporated in social practices to be explicated, shared, conceptualized and finally disseminated (Polanyi, 2018; Rullani, 2014; Nonaka *et al*, 2000). The research area involved is the helping relationship within territorial social services. The methodology, as well as the research techniques used are situated (Lave, Wenger, 2007), participative and collaborative (Tarsia, 2019; Hilton 2018; Allegri *et al.,* 2017; Van Katwyk, Ashcroft 2016; Braye, McDonnell 2013; Beresford, 2002). The place where the knowledge has been shared, explicated, implemented and externalized is the *Participatory Teaching and Research Board*. It is a physical and mental setting, situated in an office on the 3rd floor at COSPECS Department, University of Messina, which also became virtual due to the medical emergency. In this space, which can be defined as relational, the various social actors meet and exchange views starting

with the solicitations and questions posed by the research coordination team. The final goal of this exchange of ideas and reflections is to articulate a co-teaching lesson beginning with a personal experience of the help process. There are four 'boards', each one regarding a different area: mental health, reception of refugees, drug addiction and people who have committed crimes. After the experience of the first year of the 'boards', the decision to set up another board was made, a transversal one connecting all the groups. In 2019 the *Board on Professional Knowledge* was established. A group of professionals with the coordination team initiated a process of reflection on the construction of knowledge in each organization and in personal professional practices. The group comprises 14 members, 11 of whom also belong to other 'boards' and only three to this one. These professionals work in social and health fields (Provincial Health Department, therapeutic communities for drug addiction, day centres, polyclinics, communities for psychiatric patients) and in territorial services (Municipality) and they are highly experienced in their area of competence. In this paper we will focus on this 'board' because we believe that the analysis of the processes of knowledge construction in this group can help us answer a research question which we consider interesting. We asked ourselves what the useful conditions could be in order to facilitate a process of contamination of practical-operational, normative and theoretical knowledge within the study courses which form future social workers (social assistants, educators, psychologists), and the public and private organizations which often host students for their training. We started from the degree course in *Social Sciences Services* and although we later progressed to other courses we think it is useful to start from the production of knowledge in this area. It is a consolidated idea in literature that knowledge in social services is eclectic knowledge which draws from several disciplines. It is knowledge incorporated in theoretical models necessary to understand the needs and the problems of people but it is also the outcome of the elaboration of the professionals' experiences, progressing from personal social practices, which define lines of interpretation, practical-operational knowledge, aid interventions (Sanfelici, 2017). In this way, a continuous dialogue is deemed essential between University, services and the various professional communities in order to implement innovation and change processes which start from the reflection of knowledge situated in help processes and in organizational procedures. This is why the *Board on Professional Knowledge* decided to explore the interpretative categories and action approaches related to social issues that each professional decided to share with the group. The intention was to capture the processes of production of knowledge which is used to make interventions but in many cases is difficult to be conceptualised. The long-term goal is to convey these reflections to the relative bodies recognizing, even more, the importance of public engagement in universities and the possibility

to co-design pathways and co-construct professional knowledge in the territories where one works (Tarsia, Tuorto, 2020).

2. Methodology

In the research project teaching methodology and situated (Lave, Wenger, 2007) and participatory research was experimented because it is thought that knowledge is co-constructed by different social actors through necessary debate and confrontation when it comes to revealing how knowledge is produced and reproduced in the helping relationship context. The theoretical assumption is that all the actors involved in defining social intervention are subjects holding knowledge that they can combine with others. Experimentation in the groups was then delineated with various techniques and tools, in particular the *Board on Professional Knowledge* decided to enhance autobiographical and narrative aspects (Abbott, 2018; Cardano, Ortalda, 2017; Demetrio, 1996). In the various meetings, approximately four or five in a year, the professionals worked in pairs and in small groups using open-ended interview questions focusing on the narration of the professionals' life stories. The interviews were always followed by briefings during which it was possible to discuss the content of the anecdotes and the emotional climate that was generated. The stimulus to narrate and to write characterizes this group experience. During last year, for example, the different interviews and reflections which have been carried out led the group to organise in-depth seminars directed externally. The intent was to propose a style of thought and social work, which was taking shape in the group, highlighting the centrality of the people, the differences between working in private social organisations and public bodies and the effort of trying to produce a change in the services.

The medical emergency also led to a reflection which resulted in the publication of an article written by several authors (Tarsia, 2020). The working method followed the production process of knowledge which refers to the SECI model (Socialization, Externalization, Combination, Internalization) by Nonaka, but without replicating it in its entirety. As Nonaka (Nonaka *et al.,* 2000; Nonaka, Konno, 1998) explains there is an initial moment of explication and knowledge sharing and then a second phase whereby this knowledge is enriched and implemented by the experiences of others and by the study of articles and books. Finally, it was possible to make a start on externalising and disseminating knowledge, but it has still not been possible to bring innovation and change to the specific organisations, as explained below. This article is also one of the results of the reasoning which arose on the *Board on Professional Knowledge*. The procedure followed is the one just described. Starting from the encounters and seminars carried out, during which the information was compared (Socialization) and implemented by the study of sectorial scientific articles (Externalization), part of the group

decided to summarize the 'Board's' reflections and to present them in the Conference and then draft a contribution on a joint basis (Combination). As previously mentioned this is the last phase which has yet to be developed and experimented and will require investment in time and resources where the number of socials actors and networks involved will increase but this will also allow for the implementation of the production and reproduction process of knowledge starting from a new incorporation and experimentation of new knowledge.

After this first part characterized by a more theoretical and methodological cut, we will introduce and describe the experiences of three members of the group, who are professionals in the field and all three are social assistants from three different bodies.

3. Board on Professional Knowledge

Below we will try to answer the questions posed by those who participated on the 'Board' about the experience and which have been the force which has pushed each and every member to be present and to avoid skipping the appointments.

Considering these statements, we decided to face the challenge which led to these questions: Is it possible to connect knowledge and professional practises? Is it possible to contaminate knowledge to build participatory and situated university teaching? Is it possible that the experience of a mixed group of social operators belonging to different worlds and services can covey a motion of change which may turn into a virtuous circle between university, teaching, operators and services? Can we imagine training courses adapted to current social phenomena in order to prepare a new generation of social workers? How can we perturb our working environment, which is often overwhelming and hostile to change, and bring our experience inside of it? How can we learn from mistakes and transform them into possibilities of personal growth and improvement in the quality of services (Sicora, 2010)?

When two worlds meet, the Public administration and the social private related to Services for people, a new reality, a new universe takes shape, engaging and changing the person forever. It is a pleasure to feel part of a great community that shares the same mission, that is contributing to the wellbeing of people in need.

It is the experience of the last three years of professional and human life which has developed thanks to the participation on the *Board on Research and Situated and Participative Teaching* and the *Board on Professional Knowledge* at COSPECS Department at University of Messina.

The first step can be traced back to the path already experimented in 2018 on the initiative of Professor Tarsia with the *Boards on Research and Situated and Participative Teaching*, concerning specific sectors of intervention typical of social work whose main aim was to organise co-

teaching lessons to propose to students in the first year of the course of study in *Social Service Sciences*. Having recognised the innovative weight of the research method experimented, a mixed board was activated, and in 2019 the *Board on Professional Knowledge* was created, where sociologists, psychologists, social works from public 'boards' and private social areas and university researchers could share their own human and professional experiences and reflect on knowledge which cannot be found in textbooks and which usually remains caught up in professional practices and consequently is not conceptualized and transmitted externally (Tarsia, 2020a, 2020b; Pellegrino *et al.,* 2019).

The members of the *Board on Professional Knowledge* moved from a common prejudice related to Public Services on the Territory, considered as being bureaucratized and little attentive to the needs of the individuals. There was a certain feeling of distrust in the Institutions which was traced back to the awareness of the failure of social policies. The discussions were often characterized by resignation which sometimes impedes us from believing in change and how much our contribution as professionals can be important. Meeting after meeting the atmosphere became lighter and less dull. The situated experience started to emerge from the discussion among the participants. The position between public bodies and private social organisations also started to become clearer. What emerged, for example, was how social workers in public services often complained about the lack of appropriate tools and the risk of being transformed in bureaucrats or economic managers, occupying most of their time filling in forms, protocols and making their work sterile and mechanical. It is a matter of light and shade. People who work, for example, for the Azienda Ospedaliera (Hospital Sector) deal with methodologies that contradict the professional mandate.

The group referred to the Gelli-Bianco Law (24/2017)[1] as an important legislative framework which made the use of specific tools mandatory. Guide lines, protocols, procedures, assistance plans guide the health workers to make the professional's action more homogeneous. Such methodologies refer to national and international standard cures to reach common objectives on the territory and in the sector.

During the discussion phase the difficulties reported at all levels of management, administration and of the workers emerged, leading to the proposal of change within each organization.

Another controversial element, which emerged on the 'board' and which is emblematic of the mistrust in the institutions and of the distance currently governing the needs of the citizens and the social policies, concerns workers who carry out their service in the Ser.D. (Servizio Dipendenze-Addiction Services), and workers of therapeutic communities for drug addicts; both can only treat drug addicts and alcoholics, but in the meanwhile the world of addictions has changed.

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[1] Law 24/2017 *Provisions concerning personal health and safethy services and professional responsability of operators in health professions*.

For 20 years now successive governments have not called a national conference on addictions in order to open a serious debate – between the academic, public, social private world and the citizens, the bearers of distress – in an ever changing world. The condition to start experimenting the debate between all the social actors was created on the *Board on Professional Knowledge* and in other *Boards on Research and Situated and Participative Teaching*.

A series of dichotomies became visible in the research and the self-training group which can be defined as 'distances' needing 'bridges', connections: a) the distance between knowledge and professional practices; b) the distance of politics from the citizens' real needs; c) the detachment between public and private institutions.

We discovered how the inadequacy that the social workers feel every day when dealing with people's needs has lead us to search for creative solutions, which are the result of knowledge and experience. The 'Board' diffused the knowledge and professional practices put into effect by each worker, making them accessible to all participants. This demonstrates how different realities, all having in common peoples' needs and dignity, can lead to a universe of knowledge and practices which can contribute effectively to the Italian social-assistance system. If this universe of knowledge were valued by governors it would bring a leap in quality in our country's social policies. As the meeting proceeded it became clear how resignation, anger and delusion gradually gave way to the possibility of co-planning. The heterogeneous 'Board', time after time, enabled us to deal with the themes from various points of view. This apparently simple condition set the possibility to make discrepancies, differences, contradictions in social work explicit and experience them not as a problem but on the contrary providing added value to everyone's position. During the 'Board', we reflected on how to put one's knowledge so that everyone could reach it and how professionals first of all have to become aware of it in order to make it explicit and then make it accessible (Tarsia, 2020a; 2020b). As the group grew both the content and the dynamics changed, and throughout the entire experience it was possible to perceive the constant and continual effort of repositioning and reconnecting oneself to the present.

Another evolution, during the two years, was the collective growth related to the narration of the experience from the outside about the research itself. In fact, while the shared work on the reflection lead to further investigation, even more important from the point of view of knowledge on praxis and also on the related difficulties, the group of participants following the scientific coordinator's suggestion started to wonder about how to make all the richness, which the research method experimented was producing, visible in terms of knowledge and training.

Initially, this was the reason why we thought about possible pathways of collective writing and then about the organisation and realization of events in order to disseminate the new knowledge elaborated during the research experience. In some occasions, such as this one, where we are

the authors of the present paper, voluntary teams formed and became spokesmen of the 'board' with the aim of narrating the work carried out and the little accomplishments achieved by the group, as well as externalising points for reflection to improve social work. With this intent in 2020 the 'board' organised a cycle of seminars, still undergoing, in which four participants at a time report on one or more aspects of professional practice, which came to light during the participative research work.

4. Final conclusions

All the participants on the 'board' had the opportunity to imagine and discover they could be co-researchers engaged in the reflection and discussion on themes they had individualised during the various meetings with the objective of exploring the questions of professional interest. With surprise and against all predictions the resistances gave way almost immediately to the need to undertake an active and participative role. The 'Board', where no one was better than the other, has become an occasion for lively discussion among other professionals who have accepted to question themselves, remodelling their personal points of view, their convictions and trying to embrace those of others, thus generating realities of virtuous collaboration and synergies within the organizations, becoming the expression of functional circularity between University and Services.

A universe of knowledge which in many occasions has provided new visions and modalities in the research of solutions in favour of people in fragile conditions. A constellation of services, discovered thanks to the experience of the 'Board' which was then transformed in a resource for the same participants. The former, during the most difficult moments had the chance to imagine and use different solutions to help their patients and consequently fight the resignation and the fear of the impossibility of change. These 'creative solutions' cannot be found in books. As Schon (2006) states, the single case falls outside the category, the theory and the existing practices and professionals cannot treat it as an instrumental problem to be solved through the application of one of the rules stored in their professional knowledge.

It has been a way for the professionals to discover University as a training place, not just a purely abstract one. Vice versa, it has been a way for the University to meet professionals within public and private organisations. In fact, there has been an alternation over time of meetings within the university and in the locations of the operators involved.

Beyond this it has been interestingly dynamic in terms of adopted research methodology which has represented a way to overcome the historical dichotomy between theoretical and practical knowledge in Social Services.

The participatory research has helped all the participants to overcome

the doubts dictated by prejudices regarding this type of experience because right from the first day, surprisingly enough, the categories of study acquired during the years of study and those used during the research together with the narrations of the participants on the 'boards' have been reconnected to daily situations experienced and faced within one's own services.

We are aware that the 'board' has put into circulation new words that contain new content and we know that if something is mentioned in a different way it can make a change in terms of social intervention. The meetings have given the participants the opportunity to confer new meaning to words, which are usually used within social work, such as the term 'conflict', which in the collective imaginary lacks a positive meaning, a functional one; it is instead synonym of battle, aggression, intolerance towards the mistakes of others, but when interpreted from a proper perspective, facing them in a constructive manner, they can help to find new solutions. We seize the need to transmit knowledge in a new way, which are not simple presumptions anymore but the fruit of transformation, an inevitable process of change. Seeing the social phenomenon from a new perspective has helped us give new meaning to concepts. It is not a matter of transmitting accumulated knowledge, but stimulating critical thinking, capable of developing new knowledge, that makes us aware of being on the path to new knowledge (Morin, 2000).

A reflection is therefore posed on the theme of academic pathways within Universities to improve them, in favour of the future social works. During university preparation, the social service student asks questions himself or herself about how theories, models, academic writings can be connected to a complex and particular work, which in his or her imagination deals mainly with people, relations and often emotions. Would it be possible to introduce and structure professional knowledge boards throughout the courses of study by using the participatory and situated research? Would it be possible to involve social public and private professionals so that they would have the opportunity to value and transmit their expertise, providing additional value? Can we use group sharing, which for its intrinsic characteristics sets all participants at an equal level, making it easier to transmit knowledge? Concerning training, is it possible to activate the synergy that puts university and public and private territorial services into a common network, in order to value each of them and reduce the distance between knowledge and professional practice? The *Board on Professional Knowledge* has proved that changes within universities are possible. Years ago it would have been impossible for a professional in the social private field to step into a university campus.

4.1. An example of a first impact on the services
We are aware that part of the outcome of the research is already around. One of the authors of this contribution, for example, is trying to convey, in his own institution, the experiences of the 'boards' with the explicit

intent of perturbing the complex macro-system, and with the belief of being able to actually contribute to the process of change. The initiatives taken have regarded various levels of the organisational dimension of the body, and are expressed in the ways mentioned below.

Involving various colleagues on the 'boards'. From their feedback on the experiences many interesting points have emerged. We stopped to reflect on the improvement of knowledge about the themes related to each person's working environment, which is not only the result of sharing experiences but also the discovery and the subsequent interest in a new type of literature, unknown to most. Another important point is the discussion about other people's experiences which has favoured relations within the work group. We know how difficult it can be to work in a team and how often it can be undermined by rigid positions, by prejudices and lack of experience about phenomena which we want to challenge. Revision processes of one's personal and professional experiences are triggered, certain beliefs are questioned and the will to look into one's professional practice from a new perspective is brought forward and, moreover the attempt to conjugate all of this with the newly acquired knowledge. All the operators involved, a psychologist, a professional teacher and a voluntary worker, have accepted this new experience enthusiastically. Other people have been involved from the therapeutic community, from the *Board on Addiction* and from the co-teaching lesson with university students and one of the seminars on professional practices. During three years four people have been placed during the phase of social reintegration of the therapeutic community F.A.R.O. and were able to share their experience, express their opinions on the addiction phenomenon and the drawbacks about the work of the public services (Services for drug addiction), and also on the organization where they were developing a rehabilitation programme and actually gave suggestions to improve both services. The intricacy of the points of view between people, public service workers and private social workers has enriched everyone. Two people out of four have referred to their assistants about how speaking about their experiences has increased their awareness and the opportunity to perceive themselves in a different way, triggering a process of change that obviously has to be developed. Finally, engaging on a managerial level a reflection on the operators' training processes working in the therapeutic community enforcing the activities of the study centre, recognizing its prominent role, not just an auxiliary role anymore for the objectives of the body. We know very well that in the work activity there is a deep gap between the world of theoretical knowledge and the working world. As a consequence of the enthusiasm that the operators involved on the 'board' brought inside the organisation, the latter has opened an attentive debate on the theme of worker training and through the study centre important training opportunities for the workers are being grasped, such as the FQTS (manager training third sector), financed by Fondazione con il Sud and joined by a large number of workers – this outcome was absolutely

unexpected. The study centre is also preparing to host training courses within the operational structures. The community, in light of the new experiences is aware of its responsibility towards trainees. Knowledge and practices must form future workers in order to prepare them for new social challenges. We imagine the possibility of promoting synergies between Organization, University and Services to people, present the territory capable of processing and making the social planning activities more efficient. We have already drafted and proposed two projects (undergoing evaluation): the first concerns territorial cohesion and the second contrasts poor education – this would never have been possible to imagine two years ago. It is again thanks to the 'board' that these two worlds, University and therapeutic community, have met, enriching each other permanently. A universe of knowledge which will be within the reach of all citizens who may be in search of assistance.

In conclusion, we can state that this research and self-training experience represents, for those taking part in it, an unequalled resource for their professional, training and human career, since it is a course that does not remain confined to itself and does not lead to a dead end, but it inevitably transforms the way of looking at the world, revealing new perspectives and providing dignity and value to all knowledge even that which is not conventionally recognised as such.

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When University Meets the Needs of the Territory: The Case of the Edge Project Presentation

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ABSTRACT: *This contribution aims to capture the dynamics of institutional innovation in university work during an informal moment of its manifestation: an online webinar which presented the results of the EDGE project, a European project on employment inclusion of people with intellectual disabilities undertaken during 2018–2021. The analysis highlights a bottom-up innovation path through participants' identification in the webinar and the understanding of the communicative situation arisen among them. The exploratory critical logic followed by university professors in the organization of the webinar and the participation of a competent public composed of the members of a provincial association of families of people with intellectual disabilities contribute to the emergence of a specific public role of the university. A role in which the University, rather than describing the needs of the territories, is involved in their discovery and transformation into conceptions, in the elaboration of public actions, considered as effective by the social actors to whom the policies are addressed.*

KEYWORDS: *University innovation, Territorial needs, Public engagement, Project network.*

Introduction

The participation of universities in the promotion of territorial development is one of the main elements of the innovation model of university work of the last twenty years (Moscati, Vaira, 2008; Collini, 2009). Since the end of the 1990s, the emergence of the knowledge economy not only reveals a new conceptualization of knowledge but also produces a modification of the universities institutionalization processes. The change concerns the conceptualization of knowledge which from pure public good becomes increasingly an economic good and, above all, the mechanisms through which the universities participate in other social systems and the ends of their participations (Baldacci, 2019; Colarusso, Giancola, 2020).

To paraphrase Weber, from institutions that legitimately held the monopoly of higher education through the construction of the good citizen (Weber, 1919), universities become specialized production units

within knowledge networks that aspire to the training of the most suitable worker (Bruno, 2005).

In such a model, the link with the labour market is twofold: on the one hand, the training offered must be market-oriented, and on the other, the universities themselves become market players: they must assimilate its logic and its agency models, establish strategic interinstitutional relations, compete for the supply of resources and for their efficient allocation.

If the design of the innovation model appears clear, its implementation mechanisms and its outcomes appear territorially uneven. According to Antonelli (2005), spontaneous interinstitutional interaction is not obvious and, in many cases, as Trigilia and Regini (2019) point out, the interinstitutional configurations that emerge contribute to reproducing the known territorial inequalities.

The territorially heterogeneous learning of institutional innovation in which universities are protagonists (Viesti, 2016) could be reconstructed through the contribution offered by the rich literature on local development and, more recently, by innovation studies (Trigilia 2007; Sacco *et al.,* 2012; Ramella, 2019). This approach would incentivise the focusing of the different phases of the innovation process and the functions exercised by interinstitutional relations, but, like numerous neo-institutional studies, it may not grasp the dynamic of change in its depth, the social logic of which change is a vector and, particularly, its cognitive and normative components (Boudon, 1979).

Applying concepts and categories of analysis widespread in the sociology of public action (Duran, 1999; Moini, 2013) territorially heterogeneous learning of institutional innovation could also be reconstructed through another, more pragmatic way. This approach is based on the problematization of the university's match with the territory and tries to reflect on what happens in concrete and informal situations of interaction, such as those in which the results of research are returned to the territory.

This contribution brings to light the dynamics of institutional innovation in university work during an informal moment of its manifestation: an online webinar which presented the results of the EDGE project, a European project on employment inclusion of people with intellectual disabilities undertaken during 2018 – 2021, in which Universities, social cooperatives, and bodies specialised in the training of people with disabilities from different European countries participated.

The analysis outlines a bottom-up innovation path, identifying the webinar participants, distinguishing their institutional roles, and reconstructing the communicative situation that allows the different participants to experience an active involvement in the innovation process.

The reflection is divided into two moments.

The first illustrates the webinar organization and the logic of the research that animated it. The second analyses the cognitive and

normative dimensions of the innovation generated among the participants in the webinar, focusing their effects on the meaning of scientific and, particularly, academic research.

1. Presentation of The EDGE Project: from The Final Moment to The Communicative Situation

The presentation of the results of the EDGE project takes place in March 2021, and given the restrictions imposed in Italy by the pandemic situation, it is organized through an online webinar. The organizers are some university professors including one who participated directly in the realization of the EDGE project. The webinar is attended by three university professors and the president of a provincial association of families of people with intellectual disabilities as speakers, and by some partners of the project, several university students, and numerous parents of people with intellectual disabilities members of the provincial association as public audience. Altogether about fifty people.

The presentation of the EDGE project impresses the sociologist of public action for the communicative structure of the situation that emerges.

The webinar stems as the final moment of the EDGE project and aims to disseminate the results reached. However, following the speakers' contributions, its predefined structure, marked by precise shifts and speaking times, is completely redefined by the debate born among the participants.

The debate takes on an unexpected duration, expands, becomes collective and polyphonic because it is animated by almost all the participants. It takes the form of a set of communicative acts, i.e. a situation whose communicative form modifies the subjectivity of the participants (Mead, 1934) allowing them not so much to participate in a collective discussion or transmit a message but to communicate the personal interpretation of their life experiences and request from other participants the sharing or modification of the personal meaning that the subject has pre-attributed to the experience (Matteucci, 1994).

From this point of view, the communicative act uses communication with the aim of involving the other in a process of common redefinition of the personal meaning of actions, it hosts the other, offers them the possibility of inhabiting one's own inner subjectivity, nourishing trust in the possibility that the other takes the subject out of the fortress of their own subjectivity, in the search-discovery of the possible existence of an us.

The sociological analysis of the communicative situation that characterizes the webinar reveals a specific performative dynamic. It moves from a lived experience, from a personal and biographical story, identifies in its own story the personal need and presents it to the participants of the webinar, to a defined public, with a double purpose.

At first, with the implicit request for an agreement by the other participants on its shareability. Subsequently, with the more interlocutory request for a possible mutual adjustment, almost with the request for its de-particularization, and, finally, with the urging of a common response suitable to satisfy the need, with the request for political imaginations, with the design of public actions.

1.1. The institutional pre-conditions of the webinar

With the aim of understanding how a final moment of a research could be transformed into a communicative situation in the sense that Mead gave to this expression, it seems useful to reconstruct the institutional preconditions that guided the organization of the webinar.

Already at the time of its conception, in the logic of the teachers who organized it, the webinar did not aim exclusively to present the results of the research. The university researchers who had participated in the EDGE project were aware of the partiality of the results obtained, of the non-existence of univocal paths of work inclusion and of the institutional rooting of success stories. The researchers wanted above all to present the interinstitutional rooting of inclusion pathways as a condition of their success and wanted to understand the specific role of the University in building a strategic territorial partnership.

For this purpose, the presentation of the webinar was organized on the basis of the following two criteria:

a. encourage dialogue with other similar research, to checking the fallibility of the research path followed and verifying the recurrence of the results obtained in other similar researches.

b. Take the research out of the network that had conceived and implemented it and verify the reactions/refractions that it could arouse not in an occasional audience but in its target public, in families and subjects who live the challenge of work inclusion of people with disabilities daily.

The two criteria respond to a dual mechanism of reflexivity.

The first is internal to the scientific construction of research and appears consistent with the principle of scientific fallibility, with the search for the specific conditions that make the paths of inclusion emerging from the research true and, if necessary, reproducible. The second concerns instead a transformative interinstitutional reflexivity of university research, the exploration of the possibility of connecting academic research with forms of research-action frequently informal and glued to the experience of a competent public directly involved in the management of that particular problem. The logic of this research has led to the abandoning of the predefined research presentation model to the public predominantly composed of academics and project partners to follow that of the critical presentation of results.

The critical presentation of the EDGE project was achieved thanks to its presentation together with three researches with a similar theme, but developed by other researchers in the context of other research projects,

and thanks to the invitation as speaker to the webinar of the president of a provincial association of families of people with disabilities, himself parent of a person with disability.

The logic of research that the webinar organizers shared conceives the moment of presentation as a continuation of the research and has a specific pragmatic scheme. The latter develops through the research of other scholars working on the same theme, through the knowledge of their research and through the attribution to the public present of the role of co-protagonist in the process of analysis of the results of the research. The logic of research questions from within the monopoly of academic knowledge in the production of scientific knowledge, includes in the generative mechanisms of scientific knowledge other knowledge deriving from lived experiences. At the same time it is a logic that tries to actualize the meaning of scientific and academic research in the contemporary world, identifying the elements that could characterize it and rethinking its public meaning.

2. The webinar innovation

In the analysis of the innovation generated by the webinar, the sociologist of public action is impressed first of all by the participants in the webinar. The model of the presentation of single research narrated by the partners who participated in its realization themselves appears deeply redefined, in its place instead, in an almost unexpected way, a critical-dialogical presentation based on a conversational scheme is built.

In the conversation two dialogical levels are identifiable, the first among the same speakers who discuss research with a similar object of study but different methodologies of analysis and different thematic focuses, the second is instead identifiable in the debate between the speakers and the public. The relationship between the speakers and the public has a specific structure, one of the speakers has in fact the dual role of speaker as president of a provincial association of families of people with intellectual disabilities and of public as parent of a person with intellectual disability. In the development of the webinar, the dual role of this person is significant. First and foremost, he divulges greatly the event and, probably, thanks to the online mode of the webinar and the lock-down period, a large number of members of the association participate in its realization, about 40 parents.

2.1. Problematization and proximity
As a mother will say in her speech to the webinar:

> talking about a problem and not a model, knowing different research, carried out at different times, for different purposes, was a surprise [...] Then the presence of our president, his speech [...] highlighted the main issues.

This mother in justifying her intervention captures two distinctive features of the innovative dynamics of the webinar. She notes the competent participation in the webinar of the President of the association which, as she emphasizes, «has highlighted the main issues» and she also underlines the critical character present in the organizational logic of the webinar and emerging from the debate. As she herself says, beginning her speech: «talking about a problem […] was a surprise».

There is certainly a third trait, more implicit in the intervention of the mother just mentioned, namely the role of trait-d'union between the speakers and the public, played by the President of the association in his dual role as speaker and public. This circumstance, far from being incidental, seems decisive in encouraging the participation of many parents in the debate. The president of the association, asked with the university professors, to intervene at the webinar for a first reaction to the presentation of the different research, immediately shortens the distances between the role of the university professors who present the various research and the public, that is, the parents who, despite not having participated in that research, experience the problem daily.

The presence of the president of the association among the speakers creates next to the world of theory, represented during the webinar, by the university professors, and the world of practice, represented by the parents of people with disabilities, a new world, more vital, inhabited by both categories in a situation of mutual listening.

The same mother, in the same intervention, a little later adds:

> Generally, I never participate… I am very reluctant… I think really… the others… doctors, professors… healthy people cannot understand… There was a moment this evening when I felt I had to speak… had to recount… at first, I was intrigued… then I felt that I too had to recount.

The participant expresses what made her participation possible. During the webinar, this mother did not hear the presentation of a well-packaged and well-communicated truth but felt the thematization of a problem and felt that in the elaboration of her problematization she too had to participate. The problematization defines a space of sharing that acts as background to the collective participation and brings out the individual contribution to the clarification of problems no longer as an option but as a necessity, as a useful information for everyone: «I felt that I too had to recount».

The surprise of a research presented as a problem to be known, to be identified in its critical elements and in whose work of clarification all participants can participate, bringing the specificity of their experiences, favours the formation of *a*n atmosphere of proximity. It is a new mutual cognitive and normative condition resulting from the interactions that emerge during the webinar, very far from a fusional emotional situation. It is not born from the identity of the living conditions of the different

actors, but rather from their difference, but it is nourished by mutual attention, almost by a mutual revelation, as if the different participants had, now, during the webinar, the opportunity to discover each other, to know their different points of enunciation.

The polyphony of the stories that soon emerges from the collective participation in the debate is not in fact a story that is evoked between people who share *ab origine* the same existential condition. This is its novelty: it is a story that is established between different people, between people who speak from different life conditions and from different professional positions. However, it is also, especially in its collective dynamic, the story of people who have ceased to perceive themselves as different, alien to each other, and united only by an occasional and formal circumstance such as the presentation of a scientific research. These people have begun to perceive that, beyond the differences between their lives and their roles in the webinar, they are united by a problem, they have something to learn from each other and, probably, they have the opportunity to help each other.

The configuration of a space based on a state and an attitude of proximity, favoured by problematization, is fundamental to understanding the activation of participation, the voice. In the above example, in the mother's decision to take the floor, there is the idea that her story is understood. There is an act of trust in the possibility that those present will understand, will appreciate that participation, that it can help to understand the problem better.

2.2. From individual needs to common desires

The different stories, from the point of view of participation in a common work of scientific problematization, outline a competent solidarity. The involvements are frequently functional to asking a question to the university professors, to bring out within a specific definition of the problem an unsaid, an omitted, but also to ask for insights on the proposed theorizations, to enhance the theorizations and the possibilities of theoretical approaches to order the magma of life experiences, of the perceived, to give it a form, to extrapolate its common elements. On the other hand, in the eyes of the university professors, the contributions of the many parents conduce to highlighting the most problematic aspects of the theoretical approaches, the greater limits of the possibilities of the theories and normative provisions to represent the real problems in their many facets and to provide effective answers to these. In the dialogical dynamic that is established, however, there is also something else. The comparison that moves from a real experience, from the primacy of direct experience, is the vector of a specific materiality, the experiences told by the many parents who participated in the debate are real, they are structural conditions of their lives, not only of those of their children, but entirely of their families.

The online webinar gives to the debate, to the different contributions, and their possibilities to be understood, an extraordinary materiality. The

webinar in fact does not take place in a university classroom, nor in a conference room, but makes co-present, through the use of a digital platform, the different family environments of the participants, environments in which the children with disabilities themselves frequently appear next to the parent.

The many windows on the lives of the participants allow a perception of the needs in their materiality. The materiality of the image has in itself an extraordinary pragmatic power, it facilitates the transformation of the perception of an individual need in something new. This transformation follows a specific cognitive dynamic, it is a seeking that, first of all, before being sharing, is configured as an individual inner search. The parents who speak in the debate but also the university professors, do not tell common opinions on the problem, nor facts known on the basis of hearsay, but personal experiences.

The dialogue that emerges from the stories has a specific transformative tension: those family members need to be heard, they require their needs to be known and understood. In the context of the webinar, the request for understanding, however, has its own specific form, it does not impose itself as an external request, almost predetermined with respect to the situation, but thanks to the atmosphere of proximity that has been created, it arises from the interiority of the participants, it has, prior to a horizontal dimension, nourished by the mutual sharing of the story, a vertical dimension, as if it were first of all the subject with his story who wanted to make himself transparent to the others, to seek in himself his own representation of the problem and the facts that contributed to its construction. It is the inner search conveyed by autobiographical stories and the individual acceptance of the risk of their understanding or misunderstanding that allows, in the dialogical dynamic, the transformation of individual need in a common desire. This happens when even the university professors begin to tell of their difficulties in relating to such a specific theme, to strip themselves of the numerous social stereotypes about disability, to highlight themselves the difficulty of such a path marked by so much rhetoric and false representation of problems.

The common desires themselves then take on almost a material form. They are not great statements that solve the many daily difficulties encountered by all the people who, even with different professional roles, are involved in processes of work inclusion of people with intellectual disabilities. Common desires are presented instead in the form of a collective work of idea-action, such as numerous ideas useful to smooth out some critical points of the current legislation on the occupational inclusion of people with disabilities, or some bottlenecks in contemporary paths of inclusion, such as those existing, in Italy, between the end of school and work. These are ideas that want to be transformed into actions and that to this end require some collective work not only of sharing but also of adjustment, of critical screening, in some cases of selection. The voice of the parents who participated in the webinar is not

the desire for a legislative response to their needs but is the desire, at one and the same time, for defining the problem more closely to reality and understand its common elements, of the search for the political soul of the problem. These parents assert that the need of the parent of a child with intellectual disabilities to see the child inserted in a work context can become a common desire that concerns the person with disabilities themself and their family and the whole of society only if from the beginning all work together at an institutional and social level on the child's life project. This can happen – as explicitly stated by one parent during their contribution at the webinar:

> only if those who study these problems themselves understand that the work inclusion of the person with intellectual disability is a problem that concerns the whole of society and that it is first and foremost a cultural and common problem. As long as it is just my or your problem... as long as there is no active involvement in life projects, unless paths of inclusion are built in the different territories aimed at the autonomy and recognition of people with disabilities first of all as people, the problem will be misplaced.

The webinar and, specifically, the voice of the family members of people with disabilities who participated in its debate, transmits to university researchers specific instructions on the public role of the university and, particularly of the social sciences, in contemporary society.

These are instructions that concern in the first place the method and in particular the possibility of research not to elaborate hypotheses in the perimeters of laboratories or predefined and strategic partnership networks but to listen, to discover the logic of the social.

Secondly, they are instructions that concern the aims of research, the possibility of restarting from the needs of individuals as essential elements of their living conditions and of society's possibilities of understanding them, of translating them into rights and of giving them effectiveness.

What is outlined is a research program in the Lacanian sense of the term, that is, a program that includes the needs of individuals not with the aim of reproducing, even unknowingly, the logic of social exclusion but with that of helping to offer adequate answers, to arouse political imaginations.

Conclusions

Can the final moment of a research such as the public dissemination of its results turn into a communicative situation and constitute an opportunity to rethink the formation of the territorial project networks in which universities increasingly participate?

The rich scientific literature on the design of local development, including the one that focuses on the role of universities, insists on the strategic nature of the project network, on its pluralism, on the importance of its non-occasional and non-instrumental nature with respect to obtaining funding.

But how does the participation of the university in a territorial project network generate innovation?

Situated in the theoretical framework of the sociology of public action and thanks to a methodology of analysis widespread in the research-action paths, this contribution analyses the final moment of an interuniversity research on the occupational inclusion of people with intellectual disabilities and the conditions that favour the generation of innovative institutional mechanisms in its unfolding.

In the reconstruction of the morphogenesis of innovation, the logic of the public presentation of research appears fundamental. The university professors who organized the presentation were moved by a critical and exploratory attitude. The presentation, given the health restrictions present in Italy during the spring of 2021, took place through an online webinar. For the organizers, the presentation of the research was an opportunity to dialogue with colleagues who developed research on the same theme and with a specific and competent public composed by members of a provincial association of families of people with intellectual disabilities, a provincial ANFASS. In order to involve the provincial ANFASS, the organizers also invited the president of the association, himself the parent of a person with intellectual disabilities, among the speakers.

The presentations were followed by a debate that surprises analysts because of the number of its contributions, the interaction it generates and its duration. The analysis of the participatory dynamic reveals the fundamental role of the president of the association in reducing the distance between the role of university professors and that of the public. However, as one of the mothers themselves reported during her contribution, what was for her surprising and decisive was to discover not so much the results of one or more of the researches, but their problematization.

It is the critical and exploratory atmosphere that animates the relationships, underlined by the contribution of the President of the association itself, which favours a state of proximity among all the participants in the webinar and pushes the different parents to feel the duty to contribute by telling their biographical experiences. The communication of need, according to Marx perceived in its materiality and almost in the inevitability of its generative condition, is not in itself a transformative element but becomes so during the webinar thanks to the individual mechanisms of its revelation and the collective mechanisms of its sharing. Individual needs are then transformed into ideas that bind the participants and that prepare innovative political actions.

The webinar presenting the Edge project might only be a communicative exception favoured by its online mode, but it could also constitute a scheme to rethink the public role of the University in contemporary project networks. The formation of the public role of universities seems to be favoured by specific institutional conditions. Firstly, by a logic of critical-exploratory scientific research aware of the fallibility of scientific results and their always partial and provisional character. Secondly, by the search for the collective needs that structure the vital contexts of the different territories. The search for these vital contexts and the needs sometimes well concealed in them, does not have the external purpose of describing them but the much more participatory one of contributing to their revelation and their transformation into social desires necessary to devise effective public actions.

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Tertiary Education in Italy:
The Prism of Differences

Foreign Students in Italian Universities: A Statistical Analysis of the Last Decade

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ABSTRACT: *In recent years university students' mobility has become increasingly important at a national level. It has been the subject of numerous studies on the South-Centre and South-North mobility flows of Italian students who choose university out of their residence region. The aim is twofold: to provide quantitative information on the university enrollment of the foreign students in the Italian universities (the size of the flows of foreign students enrolled at Italian universities, according to some socio-demographic characteristics); to measure the dropout rates and the time taken to obtain the degree comparing to the Italian students. Foreign students (FS) were classified into two groups: students with a high school diploma obtained abroad (i.e., IST international students) and foreign students with a high school diploma obtained in Italy (i.e., SGI second-generation immigrants). The analysis is based on the database 'Anagrafe Nazionale Studenti' (ANS) of the MIUR, concerning the careers of the university students enrolled in Italy from 2008/09 to 2017/18 (Mobysu.it). The results show that the IST and SGI enrolled in Italy have increased in the last decade, especially from 2014 to 2017 (+19%), but their presence is still very limited if compared to other European countries: 4.5% in 2011 and 5.3% in 2017. Their university performance is poor with much higher dropout rates than the Italian ones, even if the SGI perform better. Only a small amount of IST and SGI students enroll in Southern universities. Finally, the results confirm that the dramatic dropout rates at university are in line with their performance in the high school.*

KEYWORDS: *University student performance, Foreign students, North-South divide.*

Introduction

University student mobility is a phenomenon that recently became very important at a national level. In fact, it is the subject of numerous studies on the South-Central and South-North migratory flows of Italian university students who choose universities located outside their residence. In the last years, the dimensions of these flows have become increasingly consistent, with certainly not negligible consequences on the socio-economic structure of the areas of origin. Student mobility

plays a relevant role in widening the 'gap' between the regional macro-areas (North-Central and South and Islands), that is the socio-economic gap that has always afflicted our country. Recent literature has produced several works on the mobility and the university success in general (Enea, 2018; Attanasio, Enea, 2019; Contini *et al.,* 2018), and with reference to the Government Fund towards universities, as an element of further depletion for the southern universities (Ezza *et al.,* 2019). This work belongs to the previously described context, and its objects are the mobility of foreign students and their university performance. The university career of these students is the object of this paper. In addition, we include students with foreign passports who have attended a high school in Italy to compare the two groups with each other and with Italians. Our goal is to provide quantitative information on the failure/success of foreign students in Italian universities. We will consider students' data at enrolment, in terms of the students flows enrolled at our universities, according to some socio-demographic characteristics, such as gender, citizenship, and the country where they attended high school; and during the course, in terms of number of graduates or dropouts and the time to get the bachelor degree.

The work is organized as follows: the first section is dedicated to the data, the second to the descriptive analysis at enrolment, the third to the analysis of the career at the end of the first year, and, finally, the fourth to the analysis of success/failure in terms of the bachelor's degree.

1. Foreign Presence Data in Italy

The data used here to describe the foreign students' mobility to Italy come from the database of the MIUR National Student Registry (ANS), containing the careers of all the students enrolled in Italy since the academic year 2008/09 to date (Mobysu.it). These are longitudinal individual data, with a record for each student and each cohort, containing both socio-demographic and university career information, from the enrolment to the 'exit' from the system, that can be due to one of the following events: graduation, dropout, or moving to another university.

We analyse the data relating to three cohorts of students enrolled in any Italian university, in the academic years 2011/12, 2014/15 and 2017/18 with respect to some relevant the relevant information, as:

1. the citizenship.
2. the country where they attended high school.
3. the gender.
4. the macro-region of the Italian university of enrolment.
5. the field of study of the enrolment course (Health, Scientific, Social, Humanities).
6. the University Credits per year.

7. the *status* at the beginning of the second year: stayer (student remaining in the same degree course), mover (student changing the degree course), or dropout.

8. the response variable: the number of years to get the degree (BA's). For comparative purposes, the analysis will be conducted considering, on the one hand, the country where they attended high school, on the other hand, the citizenship of the student.

The aim is to highlight differences between 'real' foreigners, i.e. those who have attended high school abroad (i.e., the international students, IST), and 'Italian' foreigners, i.e. those who have attended high school in Italy (i.e., the second-generation immigrants, SGI). Considering these two groups is important to better understand if the university failure rates of the foreign students 'follow' the failure rates of the foreign students in the Italian high schools. In fact, in 2012/13, the 'irregularity' of foreign students is 67.1% against 23.9% of Italians and the rate of further education of foreign students who attended high school in Italy is 3.1%, compared to 45 – 50% of Italian students (Colombo, Ongini, 2014).

Let us now deal with foreign student mobility to Italy for university studies, providing, firstly, a general description. Then, we consider the students' distributions by the country of origin and some demographic variables and, finally, by the choice of the disciplinary area.

Table 1 shows the cohorts of enrolled students in Italy, for the academic years 2011/12 (2011), 2014/15 (2014) and 2017/18 (2017), according to citizenship, foreign (FS) or Italian (IT): the last row contains the coexistence relationship (expressed as percentage), obtained as the ratio between the number of foreigners and Italians enrolled in the Italian universities, for each cohort; the last two columns contain percentage change rates between each cohort and the previous one.

TAB. 1. *Students enrolled in cohorts 2011, 2014 and 2017, in Italy: foreigners (FS), Italians (IT).*

		Cohort			Variation rates	
	Citizenship	**2011**	**2014**	**2017**	**2014/2011**	**2017/2014**
Italy	**FS**	12496	13027	15503	*4,2*	*19,0*
	IT	265904	257730	278625	*-3,1*	*8,1*
	TOT	**278400**	**270757**	**294128**	*-2,7*	*8,6*
FS (%)		*4,5*	*4,8*	*5,3*		

Comparing the first two lines of data, it is possible to appreciate that the number of foreign students enrolled grew more slightly in the first interval (4.2%) and by a substantial share in the second (19%), while Italians of the same cohort increased by 8.1%. The coexistence ratio between foreign and Italian students shows a positive trend, going from 4.5% in 2011 to 5.3% in 2017.

Table 2 shows the joint distribution of enrolled students by the citizenship held at the time of enrolment, Italian (IT) or foreign (FS), and

the nation where they attended the high school (ISCED levels 3 – 5), in Italy or abroad. Then, this yields four groups of students:

    i.   FS-abroad (IST), students with non-Italian citizenship and diploma obtained abroad.

    ii.   FS-Italy (SGI), students with non-Italian citizenship and diploma obtained in Italy.

    iii.   IT-abroad, students with Italian citizenship and diploma obtained abroad.

    iv.   IT-Italy, students with Italian citizenship and diploma obtained in Italy.

The first group includes foreign students with foreign education who came in Italy to enrol in a university; the second group should include foreign students who have grown up and studied in Italy and decided to continue their higher education in Italy: these should (or could) be immigrants in Italy with their families, or rather they could be second generation immigrants, born in Italy from immigrant families. The third group is numerically the smallest one, and it is probably composed of Italian students who have attended high school abroad and who have returned to enrol in an Italian university: in the following analysis, the two last groups are put together in the IT group, which will be considered the reference group.

TAB. 2. *Students enrolled in Italy, according to citizenship and to the country of the high school diploma, cohorts 2011, 2014 and 2017.*

Cohort	Citizenship			Diploma	
			FS	**IT**	**TOT**
2011	**FS**	N.	6687	5809	12496
		%	*53,5*	*46,5*	*4,5*
	IT	N.	1053	264851	265904
		%	*0,4*	*99,6*	*95,5*
	TOT	N.	7740	270660	278400
		%	*2,8*	*97,2*	*100*
2014	**FS**	N.	5533	7494	13027
		%	*42,5*	*57,5*	*4,8*
	IT	N.	1131	256599	257730
		%	*0,4*	*99,6*	*95,2*
	TOT	N.	6664	264093	270757
		%	*2,5*	*97,5*	*100*
2017	**FS**	N.	6913	8590	15503
		%	*44,6*	*55,4*	*5,3*
	IT	N.	1576	277049	278625
		%	*0,6*	*99,4*	*94,7*
	TOT	N.	8489	285639	294128
		%	*2,9*	*97,1*	*100*

The distribution of Italian students according to the country where they attended high school, shows no substantial change over time. It is noted that the fourth group (IT-Italy) represents almost the totality of students,

while the third one (IT-abroad) is numerically irrelevant. The same distribution of foreign students shows a different behaviour: these with a foreign diploma (IST) prevail only in the 2011 cohort. From the second cohort onwards, a turnaround is observed: in fact, SGI students show a steady growth in the last two three-year periods. This could be firstly due to the general poor attraction exerted by Italy worldwide, and to the increase of first and/or second-generation immigrants enrolled in an Italian university.

The totals (in the last column) confirm that the number of foreign students enrolled in Italy has grown in the most recent cohorts. The IST group is numerically stable, while the SGI group increases, indicating the access to the university of both the immigrants' children and/or second-generation immigrants (not yet in possession of Italian citizenship). Therefore, it seems that the growth in the number of foreign students over time is due more to the growth of SGI students than to IST ones.

This hypothesis is supported by Strozza (2015), which highlights the strong growth in the number of foreign students who are children of immigrants who register for a second-grade secondary school, from 196141 units of the school year 2001/02 to 574133 in 2007/08 (+192%), and to 802785 units in 2013/14 (+39.8%). The percentage of Italian students who attended high school abroad and returned in Italy to enrol in a university appears to be irrelevant, and, as already said, from now on, this group will be included in the group of Italian students with an Italian diploma.

Finally, table 3 shows the distributions of the three groups of students by gender, in the three cohorts: apart from small percentage variations, it seems that no distribution varies over time.

TAB. 3. *Students enrolled in Italy, in cohorts 2011, 2014 and 2017, according to gender, citizenship and location of the high school diploma (values and column percentages).*

			Cohort		
Cit-Dip	**Gender**		**2011**	**2014**	**2017**
IST	F	N.	3633	2941	3686
		%	*54,3*	*53,2*	*53,3*
	M	N.	3054	2592	3227
		%	*45,7*	*46,8*	*46,7*
SGI	F	N.	3678	4656	5250
		%	*63,3*	*62,1*	*61,1*
	M	N.	2131	2838	3340
		%	*36,7*	*37,9*	*38,9*
IT	F	N.	149195	141967	152655
		%	*56,1*	*55,1*	*54,8*
	M	N.	116709	115763	125970
		%	*43,9*	*44,9*	*45,2*

Moreover, female students are always and everywhere more numerous than male ones, especially among the SGI group where the female presence is more marked (over 60%) and it does not vary over time.

1.1. Citizenship

The distributions of the two groups of foreign students, namely the IST (red) and the SGI (blue) students, by the first 10 citizenships, sorted by the number of IST students, over time, are shown in figure 1. On average, 47.5% of the total IST students and 43.7% of the SGI students come from these ten countries.

FIG. 1. *Distribution of IST and SGI students enrolled in Italian universities in the three cohorts (top 10 countries of origin).*
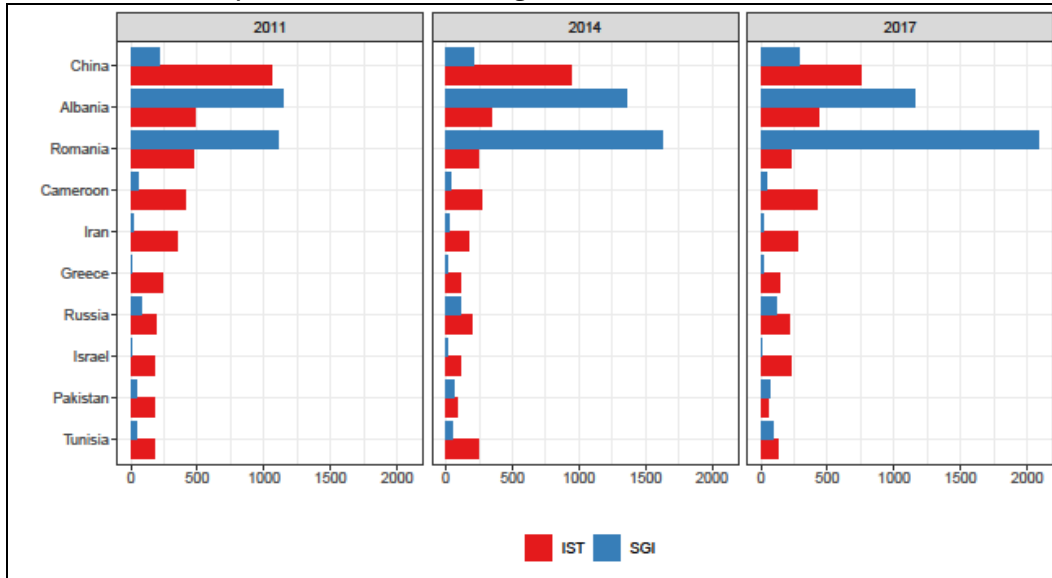
Moreover, for some countries, mainly non-European, foreign students are predominantly ISTs, but Albania and Romania; the share of SGIs from Albania, Romania, and China increases significantly, because the children of the immigrants from the 1990s have started to enrol in an Italian university.

1.2. Gender

The percentage distributions of the foreign students (FS) by gender, controlling for the citizenship, over time, are shown in figure 2. The distribution of the Italian students is also shown as a reference for making comparisons.

It is worth to note that European countries, as Italy, Albania, Romenia, Russia, and Greece, have a greater female component, that seems to be constant over time, while non-European countries, as Pakistan, Tunisia, and Israel have a greater male component, that seems to decrease over time.

FIG. 2. *Percentage distribution of foreign students enrolled in Italian universities in the three cohorts, according to citizenship and gender.*

FIG. 3. *Percentage distribution of foreign students enrolled in Italian universities in the three cohorts by citizenship and macro-region where the university is located.*
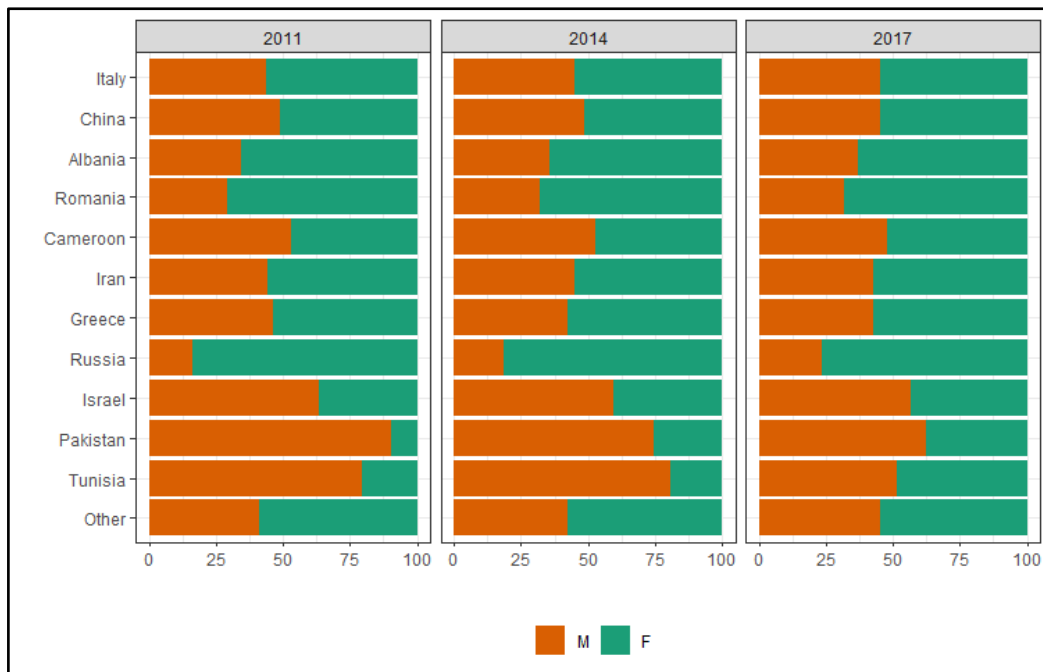
1.3. Macro-region of the Italian university of enrolment

The percentage distributions of foreign students (FS) by the macro-region of the Italian university of enrolment, controlling for the citizenship, over time, are shown in Figure 3.

From the North to the Islands, the percentages of foreign students gradually decrease; universities of the Islands have the lowest percentages (around 10%) of foreign students, mainly from Russia, Israel, and Tunisia; in the Southern universities, the foreign component is slightly stronger, and it is noted that here the Israeli students are about 15%, in 2017, due to the growth recorded in the two previous cohorts; Central universities seem to attract mainly students with Greek and Iranian citizenship: for the former, the percentage was slightly higher than 50%, in 2011, falling over time in favour of the Northern universities; conversely, for the latter there was an increase over time to the detriment of the Northern universities. It is worth noting that Chinese and Cameroonian students are almost totally distributed between Central and Northern universities, with a strong preference for the latter. Finally, it can be said that most foreign students prefer to enrol in a university in the North.

TAB. 4. *Enrolled ISTs and SGIs in Italy, in cohorts 2011, 2014 and 2017 in the first 6 universities.*

University of enrolment	Cit-Dip		2011	2014	2017
			Cohort		
University of Bologna	IST	N.	556	462	599
		%	*57,7*	*54,1*	*47,1*
	SGI	N.	408	392	674
		%	*42,3*	*45,9*	*52,9*
La Sapienza	IST	N.	395	299	388
		%	*50,5*	*35,9*	*37,6*
	SGI	N.	387	533	644
		%	*49,5*	*64,1*	*62,4*
University of Turin	IST	N.	351	264	433
		%	*46,4*	*37,4*	*40,4*
	SGI	N.	405	442	639
		%	*53,6*	*62,6*	*59,6*
Politechnic of Turin	IST	N.	744	536	491
		%	*80,3*	*77,3*	*80,8*
	SGI	N.	183	157	117
		%	*19,7*	*22,7*	*19,2*
University of Florence	IST	N.	293	320	319
		%	*49,5*	*45,6*	*46,4*
	SGI	N.	299	381	368
		%	*50,5*	*54,4*	*53,6*
University of Milan	IST	N.	461	421	313
		%	*90,6*	*55,4*	*49,8*
	SGI	N.	48	339	315
		%	*9,4*	*44,6*	*50,2*
First 6 universities	IST	N.	2800	2302	2543
		%	*41,9*	*41,6*	*36,8*
	SGI	N.	1730	2244	2757
		%	*29,8*	*29,9*	*32,1*
Other universities	IST	N.	3887	3231	4370
		%	*58,1*	*58,4*	*63,2*
	SGI	N.	4079	5250	5833
		%	*70,2*	*70,1*	*67,9*

Among the six preferred universities by foreign students, reported in table 4, Turin (considering its two universities: University of Turin and Polytechnic of Turin) hosted almost 1700 foreign students, in 2017,

despite the enrolled ISTs at the Polytechnic recorded a sharp drop over time, going from 744, in 2011, to 491 students, in 2017. Among the university of the Centre, the university of Rome 'La Sapienza' exhibits an increase in the percentage of ISTs, from 49.5% in 2011 to 62.4 % in 2017. On average, the first six larger universities are responsible for about 40% of the IST group and about 31% of the SGI group. The high share of IST students can be explained by the attraction exerted by the large cities where these universities are located, while the share of the SGI group is only slightly higher than 30% because this group is spread over the whole Italian territory.

1.4. Field of Study

The preferences of foreign students in terms of field of study, controlling for the citizenship, and over time, are shown in figure 4. It shows that preferences made by students from China, Albania and Romania seem to be confirmed over time.

The health and medicine field are chosen by most Israeli students, followed by the Greeks and the Iranians. The scientific field shows the greatest heterogeneity: in fact, the percentages exhibit a decreasing trend over time, most for students coming from Pakistan, Iran, and Israel. The two latter field of study show less variability over time, and some heterogeneity among countries.

FIG. 4. *Percentage distribution of freshmen by citizenship and by field of study.*

Moreover, Table 5 shows the distributions of the two groups of foreign students, namely the ISTs and the SGIs, according to the field of study of enrolment, in the three cohorts. The IST group mostly prefers courses in the scientific and social areas, both with percentages always greater than

30%, but with two opposite trends: the first one slightly decreasing and the second one slightly growing, over time. Courses in the healthcare and humanities areas follow. On the other hand, the SGI group mostly prefers courses in the social area, with percentages always at least around 40%, albeit with a slightly downward trend: scientific (with percentages higher than 30%), humanities (around 16-21%), and finally, healthcare (about 10%) courses follow.

TAB. 5. *IST and SGI students enrolled in Italy, in cohorts 2011, 2014 and 2017, according to the field of study of enrolment (values and column percentages).*

Area of enrolment	Cit-Dip		2011	2014	2017
			Cohort		
Health	IST	N.	925	708	1164
		%	*13,8*	*12,8*	*16,8*
	SGI	N.	533	811	828
		%	*9,2*	*10,8*	*9,6*
Scientific	IST	N.	2336	1858	2140
		%	*34,9*	*33,6*	*31,0*
	SGI	N.	1692	2183	2619
		%	*29,1*	*29,1*	*30,5*
Social	IST	N.	2196	1807	2466
		%	*32,8*	*32,7*	*35,7*
	SGI	N.	2549	3004	3423
		%	*43,9*	*40,1*	*39,9*
Humanities	IST	N.	1230	1160	1141
		%	*18,4*	*21,0*	*16,5*
	SGI	N.	1035	1496	1719
		%	*17,8*	*20,0*	*20,0*
Total	IST	N.	**6687**	**5533**	**6911**
	SGI	%	**5809**	**7494**	**8589**

2. Analysis of the Career

2.1. The Transition From 1st To 2nd Year

Before considering university 'success', it is very helpful to look at what happens between the first and second year, as it is known from the literature that this is a very important step in students' careers, and it is 'predictive' of university success. To do this, it is useful to consider two variables: the first one is the number of University Credits at the end of the first year; the second is the student's status at the beginning of the second year (which will be defined later).

First, to evaluate the performance of foreign students, in figure 5 we study their distribution with respect to the number of University Credits at the end of the first year, setting a threshold at 10 credits. This threshold allows to identify a student who did not actually attend the first year of university, because many students, despite not having passed any

exams, have accumulated a certain number of credits thanks to basic courses, such as English or Computer Science.

Generally, moving from the first cohort to the more recent ones, there is an improvement: in fact, the percentage of students who at most reach the threshold of 10 credits at the end of the first year decreases. Students from Tunisia vary between 63% in 2011 and about 33% in 2017, and those from Iran from 52% in 2011 to 30% in 2017. The best performances in terms of university credits over time, are those of students with Cameroonian citizenship, followed by the Italians: the former show consistently percentages of students not exceeding the threshold around 10%; the latter show a slight drop, going from more than 25% in 2011 to just less than 25% in 2017. Finally, it is worth noting that the Israeli students, despite having higher percentages than the Italian colleagues in 2011, show an improvement in their performance. In fact, only 13% of them do not exceed 10 credits in 2017. These are mainly students enrolled in a degree course of the health area.

FIG. 5. *Percentage distribution of freshmen by citizenship according to the number of University Credits (≤10; >10) at the end of the first year.*
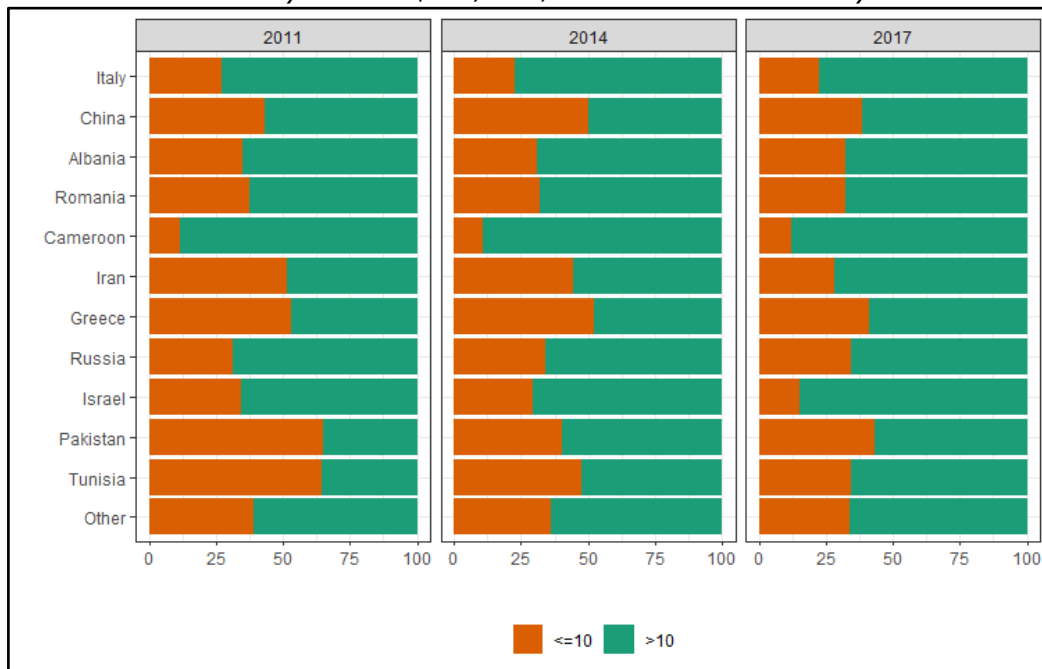
To assess student performance, it is interesting to add a detail to the analysis, splitting the foreign students into the two groups IST and SGI. Table 6 shows the distributions of the two groups according to the achievement (or not) of the credits' threshold at the end of the first year. The Italian students are also included as the reference group. Students from Greece, Iran and Israel are not reported, due to their numerical exiguity. In general, the highest percentages of foreign students with the best performance are observed among those who have had a previous study experience in Italy. The exceptions are the Cameroonians and the Russians, with the former having even better performances than the

Italians, and the latter showing increasing percentages over time of students who exceed the threshold. The students with most marked differences and/or most interesting trends are those from Pakistan and China. Among the first ones, the ISTs have the highest percentage of students who do not exceed the threshold in the 2011 (69.4% against 46.2% of the SGIs); in 2014, the performance of both groups improved, and the gap narrowed; in 2017, performance almost matched, with the percentage of ISTs crossing the threshold exceeding that of their SGI compatriots (58.6% and 54.8% respectively). On the other hand, the percentage of Chinese ISTs that exceeds the threshold goes up and down over time, while the Chinese SGIs perform as the IT group, with a trend that is always positive and a more marked gap between the first and second cohort (70.8% and 73.7%). It is also noteworthy the behaviour of Tunisian students from both groups, whose performances improve over time, as the SGIs perform better (44.7% in 2011, 46.3% in 2014 and, finally, 69% in 2017) than the ISTs (33.3% in 2011, 53.7% in 2014 and 63.1% in 2017).

TAB. 6. *ITs, ISTs and SGIs enrolled in the 2011, 2014 and 2017 cohorts, according to the number of University Credits at the end of the first year (absolute values and % of line).*

		Cohort								
		2011			**2014**			**2017**		
Citizenship	**Cit-Dip**	**<=10**	**>10**	**TOT**	**<=10**	**>10**	**TOT**	**<=10**	**>10**	**TOT**
Italy	**IT**	*27,1*	*72,9*	**265904**	*22,5*	*77,5*	**257730**	*22,7*	*77,3*	**278625**
Albania	**IST**	*37,2*	*62,8*	**478**	*35,5*	*64,5*	**344**	*36,8*	*63,2*	**429**
	SGI	*34,2*	*65,8*	**1145**	*29,6*	*70,4*	**1355**	*30,6*	*69,4*	**1161**
Cameroon	**IST**	*8,5*	*91,5*	**410**	*8,1*	*91,9*	**273**	*10,1*	*89,9*	**425**
	SGI	*32,7*	*67,3*	**55**	*36,7*	*63,3*	**30**	*31,6*	*68,4*	**38**
China	**IST**	*44,7*	*55,3*	**1057**	*54,7*	*45,3*	**945**	*43,3*	*56,7*	**751**
	SGI	*37,3*	*62,7*	**209**	*29,2*	*70,8*	**209**	*26,3*	*73,7*	**281**
Pakistan	**IST**	*69,4*	*30,6*	**173**	*45,8*	*54,2*	**83**	*41,4*	*58,6*	**58**
	SGI	*46,2*	*53,8*	**39**	*33,3*	*66,7*	**63**	*45,2*	*54,8*	**62**
Romania	**IST**	*42,5*	*57,5*	**464**	*38,8*	*61,2*	**245**	*34,1*	*65,9*	**226**
	SGI	*35,5*	*64,5*	**1101**	*31,0*	*69,0*	**1620**	*31,9*	*68,1*	**2090**
Russia	**IST**	*30,5*	*69,5*	**187**	*33,2*	*66,8*	**196**	*34,4*	*65,6*	**212**
	SGI	*33,3*	*66,7*	**84**	*36,1*	*63,9*	**108**	*33,9*	*66,1*	**118**
Tunisia	**IST**	*66,7*	*33,3*	**171**	*46,3*	*53,7*	**242**	*36,9*	*63,1*	**130**
	SGI	*55,3*	*44,7*	**47**	*53,7*	*46,3*	**54**	*31,0*	*69,0*	**87**
Others	**IST**	*40,0*	*60,0*	**3747**	*36,4*	*63,6*	**3205**	*31,1*	*68,9*	**4682**
	SGI	*40,2*	*59,8*	**3129**	*36,8*	*63,2*	**4055**	*35,5*	*64,5*	**4753**
Total Foreigners	**IST**	*40,0*	*60,0*	**6687**	*38,7*	*61,3*	**5533**	*31,9*	*68,1*	**6913**
	SGI	*38,0*	*62,0*	**5809**	*34,1*	*65,9*	**7494**	*33,7*	*66,3*	**8590**

To analyse the transition from I to II year, the second variable created is the status variable, defined as follows:
- 'Stayer': is the student who attend the same course in the second year, at the same university as in the first year.
- 'Mover': is the student who attend a different course in the second year, at the same or at a different university from that of the first year.
- 'Dropout': is the student who drops out university in the second year.

As can be seen in figure 6, in recent years there has been a general increase of the stayers. More specifically, the most marked increase is recorded for students from Iran and Israel. As already mentioned, the latter are students mainly enrolled in a course in the health area, where the drop-out rate is generally very low. Instead, students from China and Pakistan show increasing rates of both dropouts and movers (more marked for the latter).

FIG. 6. *Percentage distribution of matriculated by citizenship in the transition from I to II year.*

Table 7 shows the distributions of the two groups of foreign and Italian students according to their status in the second year. Firstly, there are some differences between the three groups, especially regarding the movers and dropouts' rates, in the three cohorts. The foreigners, rather than changing the course of studies and/or university (with percentages around 7%), they have a greater propensity to dropout (with percentages of at least 20%), compared to Italians (with percentages around 12-13%, respectively). Cameroonian ISTs have very high stayer rates (around 90%), even higher than the IT group. Then, both the ISTs and SGIs from Albania that have a similar behaviour, in the 3 cohorts, and the Russian ISTs (with percentages ranging from 79% in the 2011 to 68% in the 2014, even they increase to 76% in the 2017). Finally, the Tunisian ISTs have the lowest stayer rate (51% in the 2011).

TAB. 7. *ITs, ISTs, and SGIs enrolled in Italy in the cohorts 2011, 2014 and 2017, according to the status at the beginning of the second year (% of row and total).*

| | | Cohort | | | | | | | | | | | |
| | | 2011 | | | | 2014 | | | | 2017 | | | |
Citizenship	Cit-Dip	ST	MOV	DROP	TOT	ST	MOV	DROP	TOT	ST	MOV	DROP	TOT
Italy	IT	74,7	11,8	13,5	265904	78,2	9,8	12,1	257730	77,4	10,6	12,0	278625
Albania	IST	76,2	4,2	19,7	478	76,5	4,7	18,9	344	76,7	4,7	18,6	429
	SGI	77,2	7,3	15,5	1145	78,5	7,2	14,2	1355	75,7	8,4	15,9	1161
Cameroon	IST	88,0	9,0	2,9	410	89,7	6,6	3,7	273	86,4	7,8	5,9	425
	SGI	65,5	7,3	27,3	55	73,3	6,7	20,0	30	65,8	7,9	26,3	38
China	IST	74,2	14,0	11,8	1057	65,7	16,6	17,7	945	67,9	10,9	21,2	751
	SGI	73,2	9,6	17,2	209	78,5	6,7	14,8	209	78,3	6,8	14,9	281
Pakistan	IST	79,8	2,3	17,9	173	59,0	7,2	33,7	83	69,0	3,4	27,6	58
	SGI	64,1	2,6	33,3	39	76,2	7,9	15,9	63	58,1	16,1	25,8	62
Romania	IST	69,6	3,9	26,5	464	70,6	3,3	26,1	245	73,9	2,2	23,9	226
	SGI	73,9	8,5	17,5	1101	77,5	6,1	16,4	1620	74,4	8,9	16,7	2090
Russia	IST	79,7	4,8	15,5	187	68,9	5,1	26,0	196	76,4	3,3	20,3	212
	SGI	76,2	6,0	17,9	84	75,9	5,6	18,5	108	78,8	6,8	14,4	118
Tunisia	IST	50,9	11,7	37,4	171	55,8	6,2	38,0	242	72,3	6,9	20,8	130
	SGI	61,7	14,9	23,4	47	64,8	7,4	27,8	54	71,3	8,0	20,7	87
Others	IST	68,9	7,2	23,9	3747	67,4	5,8	26,8	3205	72,5	5,4	22,1	4697
	SGI	70,9	8,2	20,9	3129	72,1	8,1	19,9	4055	71,9	7,9	20,2	4780
Total Foreigners	IST	71,6	7,8	20,6	6687	68,3	7,5	24,2	5533	73,2	5,9	20,8	6928
	SGI	72,7	8,1	19,2	5809	74,6	7,4	18,0	7494	73,2	8,2	18,6	8617

2.2 Completion Time of the Three-year Degree

We now consider the Bachelors' degree (BA's) rates of the first two cohorts, as the observation period of the third one is not enough to observe the Bachelors completion within four years.

TAB. 8. *Bachelors' degree rates within 4 years from enrolment for ITs, ISTs and SGIs in Italy.*

| | | Cohort | | | |
| | | 2011 | | 2014 | |
Country	Cit-Dip	% BA's	Total	% BA's	Total
Italy	IT	44.9	220456	51.3	212024
Albania	ES-ES	24.8	395	26.3	278
	ES-IT	32.2	993	35.8	1195
Cameroon	ES-ES	48.8	371	44.1	227
	ES-IT	36.4	44	30.8	26
China	ES-ES	18.7	1052	16.0	931
	ES-IT	35.8	204	42.0	200
Pakistan	ES-ES	6.9	173	14.6	82
	ES-IT	30.6	36	32.7	55
Romania	ES-ES	30.9	408	31.9	210
	ES-IT	32.5	988	38.0	1449
Russia	ES-ES	31.0	174	30.6	170
	ES-IT	35.9	78	34.4	96
Tunisia	ES-ES	5.4	167	5.9	236
	ES-IT	22.0	41	21.3	47
Others	ES-ES	30.4	2675	28.8	2390
	ES-IT	28.5	2834	31.9	3628
Total	ES-ES	26.7	5923	25.4	4797
	ES-IT	30.3	5247	34.1	6721

Table 8 shows the Bachelors' degree rates of ISTs, SGIs, and Its, according to the citizenship. SGIs and ITs show increasing BA's rates: from 30.3% of the 2011 cohort to 34.1% of the 2014 cohort, for the former,

and from 44.9% of the 2011 cohort to 51.3% of the 2014 cohort, for the latter; while the ISTs show decreasing rates, from 26.7% of the 2011 cohort to 25.4% of the 2014 cohort.

For the 2011 cohort, the highest rate is for Cameroonians (also higher than for Italians); while for the 2014 cohort the highest rate is for the Italians. It is important to note the difference between the BA rates of ISTs and SGIs: as expected, attending a high school in Italy is a significant advantage, as the differences in favour of the second group range from 32 percentage points for Chinese, to 4 for Russians. Probably, the knowledge of a European language and of the school organization plays an important role; in fact, students from European countries seem to have better performances.

In Table 9 BA's rates for male and female students, of the three groups are reported, according to the citizenship. It appears clear that females perform better than males. The countries with the greatest difference in favour of women (ranging from 17% to 20%), are Pakistan, Romenia, and Greece. In contrast, males with slightly better performance are among students from Iran and Israel. Further analysis is needed to understand these differences, which may also be attributable to the small number of students for some nationalities.

TAB. 9. *Degree rates within 4 years by citizenship and gender, cohorts 2011, 2014 and 2017.*

| | 2011 | | | | 2014 | | | |
| | F | | M | | F | | M | |
Country	% BA's	Total	% BA's	Total	% BA's	Total	% BA's	Total
Italy	*50.3*	**120679**	*38.3*	**99777**	*57.0*	**114239**	*44.6*	**97785**
Albanya	*34.7*	**896**	*21.7*	**492**	*38.8*	**925**	*25.9*	**548**
Cameroon	*57.9*	**195**	*38.2*	**220**	*50.8*	**118**	*35.6*	**135**
Chna	*27.2*	**637**	*15.7*	**619**	*25.7*	**580**	*15.2*	**551**
Greece	*17.6*	**51**	*18.0*	**61**	*36.0*	**50**	*17.2*	**29**
Iran	*14.2*	**183**	*15.0*	**147**	*16.1*	**87**	*19.5*	**77**
Israel	*24.3*	**37**	*27.6*	**58**	*26.9*	**26**	*27.6*	**29**
Pakistan	*38.9*	**18**	*8.4*	**191**	*36.4*	**33**	*17.3*	**104**
Romania	*36.0*	**963**	*23.1*	**433**	*42.7*	**1114**	*26.1*	**545**
Russia	*32.9*	**210**	*31.0*	**42**	*34.6*	**214**	*21.2*	**52**
Tunisia	*24.4*	**41**	*4.8*	**167**	*20.8*	**48**	*6.0*	**235**
Others	*33.2*	**3219**	*24.1*	**2290**	*35.9*	**3415**	*23.8*	**2603**
Total	*33.2*	**6450**	*21.8*	**4720**	*36.4*	**6610**	*22.5*	**4908**

Conclusions

In conclusion, this work has showed – for the first time, given the availability of the ANS database that covers all Italian universities – the importance of some characteristics of the foreign presence in the Italian universities.

Here we have analysed three points in the university career: enrolment, the end of the first year and graduation, comparing the performance of Italian and foreign students, distinguishing the latter according to the country in which they attended high school, in Italy or abroad.

The difficulties of foreign students enrolled at a three-year degree course, are shown below (figure 7): 2412 students out of 11518 enrolled in 2014 drop out after the first year and only 3344 achieved the Bachelors' degree within 4 years.

The analyses clearly showed, as already mentioned, the existence of two different profiles that struggle differently at university: the first is the group of foreign students who have attended a high school in Italy (SGI), the second is that of foreign students who have attended a high school abroad (IST). In particular, the IST group has extremely low success rates (the three-year degree rate within 4 years for students enrolled in 2014 is 30.4%). Finally, it is important to underline the great difference in terms of success between the IT and SGIs (Strozza *et al.,* 2018): it is somehow an indirect measure of how much the integration between foreigners and Italians is far away.

This statement should be further investigated because many other confounding factors should be considered, such as the type of high school attended, the geographical area, the socio-economic level of the family of origin, the level of education of the parents and many other elements. Our university results are in line, unfortunately, with what happens in high school.

FIG. **7**. *Transition from I to IV year of students with foreign citizenship in Italy, from enrolment to master enrolment, cohort 2014.*
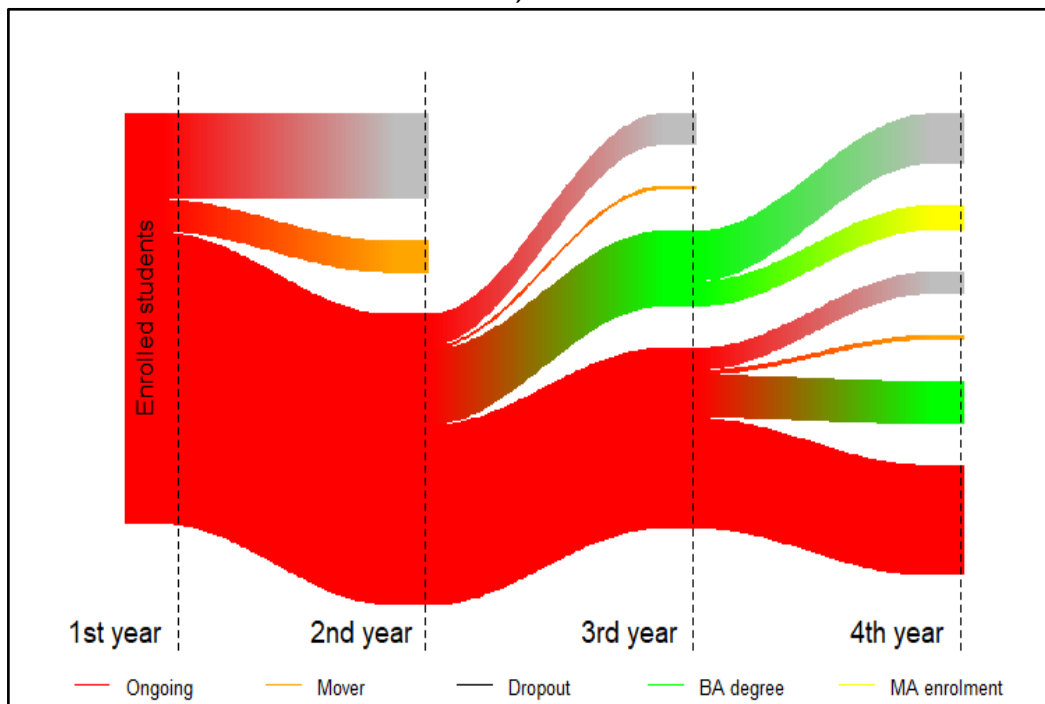
In fact, evidence from a MIUR research (Colombo, Ongini, 2014) shows «that the percentage of failures among the foreigners is greater than

among their Italian classmates and the disadvantage of the first ones grows with the increase of the school level up to the first year of the high school».

In conclusion, the dropout problem that emerged in primary and secondary school continues at university, affecting the degree courses with low success rates, to which foreign students frequently belong. The results of this work therefore highlighted the difficulties of foreign students in their university path: the results obtained represent a basis for further research, both quantitative and qualitative, useful for generating discussions on immigration in Italy and on integration policies, considering that school and university education represent two fundamental elements of the integration process and of the foreigners' life in Italy.

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Faculty Development, Scholarship and Professionalism in Teaching: Challenges and Perspectives for Higher Education

Designing Technology to Support Online Faculty Development Through Teaching Observation, Peer Feedback, and Collaborative Reflection: A Brief Literature Review

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ABSTRACT: *This paper presents a brief literature review on technologies and web-based tools for faculty development. It investigates what resources are available to higher education (HE) teachers to support online professional development (OPD) activities based on feedback, collegial discussion, collaborative reflection or teaching observation. From recent studies we note that collective reflection is effective when technologies are acted and used as a medium for collaborative professional learning, appropriately choosing and aligning technology with education purposes and teachers' developmental needs, acknowledging the interrelations among technology, content and pedagogy. The paper provides a better understanding of the limits and potential of different technologies and how programmes of online faculty development can be designed to promote dialogical collaborative thinking.*

KEYWORDS: *Online professional development, Feedback, Video-based feedback, Teaching observation, Intercultural reflection.*

Introduction

Feedback and reflection are frequently considered an essential dimension of learning from experience, and a wealth of literature on teaching, teacher education, and faculty development focuses on them. The origins of reflection and reflective practitioner can be found in the works of Dewey (1910) and Schön (1983), with the latter distinguishing between reflection-on-action undertaken retrospectively, and reflection-in-action, which implies a reflective conversation with the situation. The concept of reflection has been further elaborated by scholars such as Mezirow (1991) and Brookfield (1995) among others. The first, distinguished between content, process, and premise reflection, representing different types and levels of depth in reflective practice. These are understood respectively as using beliefs and knowledge to make interpretations on action, reviewing the effectiveness of chosen strategies, and questioning the

validity of core beliefs, coinciding with instrumental, communicative, and emancipatory forms of learning (Kreber, Cranton, 2000). While reflection may be primarily an individual task, Brookfield pointed out that even if «critical reflection often begins alone, it is, ultimately, a collective endeavor» (1995, 35-36), namely a dialogical inquiry effort informed by four complementary lenses (of our students, peers/colleagues, the literature and our autobiography).

In this regard, some authors (e.g., Pickering, 2006) emphasized the benefits of dialogue for reflection, highlighting the perceived usefulness of collaborative reflection for novice academics and how higher education (HE) teachers can use reflective dialogue and feedback to develop their practice.

However, the literature on feedback in HE has drawn attention to the importance of challenging prevailing notions of feedback. Learning from feedback involves 'complex appraisal' and depends on the development of evaluative expertise (Sadler, 2010). As Shortland (2010) stressed, feedback can be inherently dangerous. Critical feedback may be damaging to the relationships, and sensed as evaluative, judgmental, competitive, and painful, hindering teachers' motivation and opportunities of exchange and support from colleagues. Nevertheless, it can be useless for the teachers' development if the critical/problematic is avoided. To be beneficial and provide learning and development opportunities, feedback needs to be critical but at the same time constructive, non-judgmental and supportive (Hogston, 1995). Good formative feedback should concern positive aspects of teaching and those that can be enhanced, motivating the identification of alternative ways of interpreting and doing things while being simultaneously specific, context-related and realistic, appreciating working constraints and offering options fitting with the context (Fletcher, 2018).

In the HE context, recent research has stressed the value of peer review and observation for community building (Harper, Nicolson, 2013) and to enable the examination of teaching from multiple perspectives (Huxham *et al.,* 2017).

In this regard, OPD technologies and opportunities have the potential to support collaborative, dialogic, and evidence-based approaches of mutual professional learning that would complement individual reflection on practice (Mann, Walsh, 2017).

1. Online faculty development: what technologies for supporting feedback and reflective practice with peers?

Digital technologies constitute a unique opportunity for professional development (PD) activities that are not just faculty-based. They provide teaching staff with the possibility of sharing and building knowledge with peers located at distance (Ravenscroft *et al.,* 2012). In this context, teachers may be conceived as «Self-directed, informal, and collaborative

learners – as OPD can be adapted to the needs and expectations of the teacher, conducing to full autonomy and self-realisation of learning» (Macià, Garcià, 2016).

Action-researchers that engage in a self-reflective spiral of investigation, reflection and constructive dialogue, looking for an external source of information to innovate classroom experience and produce new insights facilitating their professional development (Prestridge, Tondeur, 2015).

Nevertheless, limits and factors influencing the experience of technology-mediated collaborative reflection should be carefully considered. First, the social/psychological factors that affect collegiality and meaningful participation in online spaces, such as perceived trust and sense of community, or the perception of being in a safe and supportive virtual environment.

Second, the barriers to online participation that concern technology adoption and use (perceived ease of use and usefulness, digital habits). In this regard, technology acceptance is fundamental for boosting social interactions and increasing the satisfaction and sense of community (Tsai, 2012).

Finally, the role of educational experts in guiding the analytical process, sustaining knowledge sharing, nurturing debates, and encouraging and connecting teachers in the virtual environment. Research demonstrates that more complex, dialogical, and critical levels require guidance and support by mentors or instructors (Prestridge, Tondeur, 2015).

2. The literature review: rationale, procedure and materials

This paper has been developed in the context of the Erasmus+ funded project IntRef (Intercultural Reflection on Teaching, 2018-2021)[1], which aims at stimulating reflective dialogue and collaborative problem-solving between academics across different countries, institutions, departments and disciplines, facilitated by technology. Academics are linked across institutional and national boundaries through technology such as video recordings and videoconferencing to facilitate communication and exchange about learning, teaching and assessment.

In this context, we were interested in improving our understanding about the use of digital technologies to support faculty development activities based on observation, feedback and collaborative reflection.

For this reason, we revised the most recent scientific literature focusing on technologies and web-based tools that allow for collaborative reflection and feedback[2]. The rationale and purpose of the paper is

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[1] https://sites.durham.ac.uk/intref/

[2] Therefore, we did not consider self-reflective tools such as reflective journals or e-portfolios.

twofold: on one hand, the paper aims at mapping and exploring what kinds of resources are available to HE teachers to support transnational professional development opportunities based on feedback and collaborative reflection; on the other hand, it tries to understand how faculty development programmes of feedback-based reflective practice be designed to promote dialogical collaborative thinking in the virtual sphere.

The literature review was conducted by applying the following three-step procedure (i.e., search, qualitative synthesis, discussion), inspired by the Search, AppraisaL, Synthesis and Analysis (SALSA) analytic framework. The first step regarded the search procedure, which was carried out using the following search query adopted within title, abstract and keywords:

> "reflection on teaching" OR ("Reflective Practice" AND teaching) OR (feedback AND reflection AND teaching) AND ("higher education" OR college OR university) AND (online OR web OR technolog* OR video*)

The search was performed on the 25th of June 2020 with the Scopus database and was limited to peer-reviewed journal articles (research and review articles) published in the English language in the last decade (2010-2020). The first search produced 189 results.

After checking for duplicates, we assessed the eligibility of articles as the second step. The articles were assessed according to their relevance regarding the technological dimension and collaborative potential. We considered only articles that discuss in-depth the technological component supporting collaboration in professional development or teacher education.

During this process, we identified further literature to include in the final dataset. Articles were categorized into 'highly relevant articles' (i.e. articles where the technological dimension is at the core of the paper and strongly problematized), 'medium relevance articles' (i.e. the research article adopts or focuses on technology and gives information about its use), and 'low relevance articles' (i.e. the article only uses technology without sufficiently problematize its adoption).

From high relevance and medium relevance articles, we selected a sample of 46 articles representative of different digital technologies. These articles were included in the third step of the procedure, the qualitative synthesis and discussion, aimed at identifying and commenting on the main potential and limits of these technologies for faculty development.

3. Results

The review shows that the majority of studies focuses on teacher education/initial training, partially neglecting collaborative reflection for

continuous professional development (Hamel, Viau-Guay, 2019). Moreover, very few studies refer to the HE sector, and there is an almost complete lack of research in an international development context (Baecher *et al.,* 2018; Major, Watson, 2018), neglecting the increasing internationalization of HE teaching and related mobility of teachers.

Our review found that the most used digital technologies for online professional development of teachers fall in the following areas: online communities such as blogs or discussion forums, video-viewing and vide-based feedback (synchronous and asynchronous), and video-annotation tools integrated with virtual environments. Our findings are discussed focusing on these technologies.

3.1. Technologies for online asynchronous discussion: Blogging, discussion Forums and vlogs

Blogs and discussion forums are characterized by asynchronous nature, knowledge sharing and immediacy of responses, which make them suitable spaces for OPD characterized by sharing resources and reflections on teaching. Blogs have been increasingly used in HE. Nevertheless, two literature reviews highlight how they have primarily focused on student learning and experience rather than teacher reflection and feedback to enhance teaching (Kirkwood, Price, 2014; Sim, Hew, 2010).

Current literature argues that teachers use blogs mainly to share knowledge and materials (Booth, 2012). Despite this, they can be recognized as reflective devices that enable externalisation of reasoning, justifications of beliefs and considerations across time, while fostering collaboration and social interactions among fellow teachers (Deng, Yuen, 2011). However, blog posts are often descriptive – like diary entries – and involve reactions and emotional responses to classroom or curricula situations, with reflection often not taking place (Killeavy, Moloney, 2010; Smidt et al. 2018).

For this reason, blogging can be acknowledged as not the most effective tool for sharing personal reflections or reflecting collaboratively, with HE teachers. According to Powell (2017), the success of reflection through blogs greatly depends on the presence of clear learning goals, detailed instructions and safe virtual environments. Indeed, research demonstrates that structured prompts seem necessary for online-focused, guided and supported conversations fostering professional development (Booth, 2012).

On the other hand, within discussion forums, in-depth critical reflection seems promoted through the nature and wording of forum topics. When centred on pedagogical practices, discussion forums can question and scaffold teachers' understanding of the underlying assumptions and underpinning premises about the reason why particular pedagogical approaches are appropriate and effective, or not, and how to replicate and adapt them to the educational context (Dymoke, Harrison, 2008; Jones, 2014).

Thus, forums may overcome isolation and provide critical social support by developing a community of reflective practice that can enable professional learning through reading and inquiring into peer reflections and feedback (Boulton, Hramiak, 2012).

In these spaces, knowledge construction can happen with careful planning and facilitation, with scholars suggesting using synchronous discussion for analysing and debating controversial topics – such as new theories, ideas, or counterposing pedagogical alternatives – to improve the professional learning outcomes. In this regard, facilitators must guarantee the social, cognitive and teachers' presence by making the digital environment a supportive space, providing social support and encouragement, allowing interactions among members and promoting the analysis and discussion through instructions and suggestions (Chen *et al.,* 2009).

One further technology considered in the literature falls between blogging and video-viewing: the vlog. Vlogs or video blogs are recorded videos of the teacher speaking while thinking back across their practice, on understanding or misunderstanding of their actions during practice (Parkers, Kajder, 2010, 219).

In the same extent of blogs, vlogs are believed as excellent platforms for sharing ideas, thoughts, observations and knowledge within a learning community and could be adopted respectively as community-building tools, collaborative tools, and reflective tools (Taylor, 2013). The recent study by Ong, Swanto, and Alsaqqaf (2020) highlights how using vlogs teachers benefitted from reflecting deeply on their practice, but more importantly, by watching their peers they learnt new ideas and techniques they can borrow in their practice.

3.2. Video-viewing and video-based reflection and feedback

In the last 15 years, videos have been increasingly used both for teacher education and professional development, coinciding with an increasing research interest.

Indeed, the majority of articles we examined focuses on video technology, with recent reviews highlighting their possibilities and limits for teacher education and professional development. Compared to classic observation or reflective writing, videos give access to classroom events without sacrificing authenticity and complexity (Rosaen *et al.,* 2008), revealing missed events and making students thinking more visible (Barnhart, van Es, 2015), enhancing teachers' noticing when a particular lens/focus is provided (Gaudin, Chaliès, 2015). Research has demonstrated that using videos can be particularly useful for testing the effectiveness of teaching methods and identifying alternatives, enhancing classroom interaction and questioning, increasing the role of students and their speaking in class, challenging assumptions about students and their learning, and inquiring into their thinking processes to support them (e.g. Brown, Kennedy, 2011; Cho, Huang, 2014; McCullagh, 2012; Harlin, 2014). In this regard, videos can be used with two main

objectives: the developmental and the normative (see Gaudin, Chaliès, 2015). The first one aims to develop the teacher knowledge about how to interpret and reflect on classroom events of personal practice while the second aims to develop teacher knowledge on what to do in class by exposing teachers to exemplar or not exemplar videos of other teachers.

Seeing personal and peer videos can provide teachers with a double mirror – by being faced with an inner and outer perspective. By watching personal videos, teachers can recognize and learn what strategies worked or failed with students and what constitute a good performance and the rules of good functioning (Garcia *et al.,* 2017). On the other hand, viewing a peer video can help to clarify and question personal assumptions on teaching and learning, and develop new related understandings. It has the advantage of increasing knowledge of teaching by exposing teachers to different strategies through developing knowledge-based reasoning skills to analyse personal teaching (Prilop *et al.,* 2020; Kleinknecht, Schneider, 2013). In this way, teachers can improve their professional vision and engage in different sense-making strategies, which may counterbalance self-criticism (Zhang *et al.,* 2011) and contribute to the active self-development of the observer, leading to greater reflection and change in practice (Tenenberg, 2016). On the other side, videos can promote a shift from descriptive analysis to more focused and interpretative ones, and from the teacher to the students and their learning (Tripp, Rich, 2012a). Moreover, scholars found video-based feedback more specific, better grounded on and supported by evidence, and therefore more accepted by the observed teachers who can compare interpretations with evidence and identify strengths and limits of their practice and approach. To fully exploit the potential of video recordings, the intrinsic limits of the artefact and how to organise the analysis and collaboration should be considered. First, it appears crucial to realise appropriate videos, with choice and recording guided by classroom situation and teacher learning goals (Santagata, Guarino, 2011). Empirical evidence suggests that when teachers' agency and ownership of their learning is promoted, they show deeper reflective practice, are more autonomous, interact more freely, and benefit from formative evaluation (Rosaen *et al.,* 2010; Tripp, Rich, 2012b).

However, the use of videos can bring a high cognitive and emotional load, presenting multiple pieces of information that may overwhelm the teacher (Derry *et al.,* 2014). Therefore video-viewing and analysis should be scaffolded, guided and supported, anticipating elements that may be identified and possible interpretations, avoiding evaluation and providing appropriate frames to structure the inquiry process. Without adequate training and focus, teachers experience multiple difficulties in identifying relevant events in classroom videos, and without a particular filter they tend to focus on elements of little significance, producing a descriptive and superficial reflection (Gaudin, Chaliès, 2015).

Different studies demonstrated the necessity of prompting participants (e.g., Danielowich, McCarthy, 2013), or providing scaffolding for

supporting teachers' reflective practice (Blomberg *et al.,* 2013), though warning about using predetermined checklists constraining the gaze and perception of the situation by the observer (Shortland, 2010).

Altogether, this literature supports the idea that higher levels of reflection cannot be reached just by watching videos, but that a structured learning process has the potential to support reflection. Despite this large body of research, very little is known about how video-based protocols pragmatically support reflection (Danielowich, 2014), especially in the higher education sector. The use of video is often described in general terms and few studies document the trainer/facilitator contribution in the protocols (Arya *et al.,* 2013a), or describe in detail the instructions and how the video is integrated into instruction (Baecher *et al.,* 2018).

3.3. Video-annotation collaborative tools and digital-based feedback and reflection environments

To avoid cognitive load, some scholars suggest focusing on short clips, which focuses the attention on a particular issue seem to be more useful than longer videos raising a host of issues (Bates *et al.,* 2016; Sherin *et al.,* 2009).

In this regard, video-annotation collaborative tools integrated into digital environments can be more suitable. These are characterised by a simple graphic-based interface integrating a viewing area and space where users can add and edit comments on specific segments/clips.

Our review highlights that research on video-annotation is recent, limited, and mostly with pre-service teachers (e.g. Colasante, 2010) or focusing on personal reflection. For example, the study by McFadden et al. (2014) used video annotation technologies to provide teachers with the ability to add time-marked text annotations to their classroom video and reflect on their practice. They found that teachers' annotations revealed a predominance of the lower-level reflective stances and that the technology usability and accessibility must be complemented by structured assignment and facilitation within the tool.

However, when used in a collaborative way, research demonstrates that video-annotation can augment and extend the reflective experience by facilitating and collaboratively structuring the analysis process, receiving feedback from multiple participants/perspectives. The study by Picci, Calvani, and Bonaiuti (2012) argues that some aspects are fundamental to increase the usefulness, appeal and ease of use of collaborative video-annotation technologies: the sharing and negotiation of observation criteria among participants and specific training on feedback.

Other scholars put it that the permanency of comments provides teachers with a written record for later reflection, and enough time to consider the feedback thoroughly and compare their viewpoint with other peers (Straková, Cimermanová, 2018; Kassner, Cassada, 2017). The advantage is to expose teachers to diverse peer coaching, questioning,

observations that may elevate the quality of analysis and feedback, allowing the integration of positive, critical and counterbalanced perspectives into reflection on self and other teaching events (Kleinknecht, Gröschner, 2016).

Despite this, synchronous discussion can be more effective in supporting higher-order thinking and ensuring cognitive presence in the online environment.

Conclusions

The affordance of technologies to promote the social construction of knowledge is effective when technologies are acted and used as a medium or stimulus for collaborative learning, appropriately choosing and using them aligned with education purposes, recognizing the connection between technology, content and pedagogy (see Jones, 2014).

The literature examined suggests exploring and using technologies giving priority to those who result as user-friendly, familiar or that can be easily integrated into everyday life and habits to increase the perceived ease of use and usefulness for boosting social interactions and increasing satisfaction.

The review shows that the success of technology-mediated collaborative reflection depends on how instructors/facilitators assist with the process, guaranteeing social, cognitive and teacher presence, how collaboration is socially organized, and what instruments/lenses are provided for inquiry, reflection and feedback about teaching and learning. While teachers should be the owners of their learning path and have adequate agency in the process, they need to be trained and guided in reflecting writing, video-viewing (noticing and interpreting events) as well as on feedback and strategies for scaffolding critical reflection of colleagues (e.g. framing, oppositional voice, counterposing alternatives, see e.g. Clara *et al.,* 2019) to foster effective use of technologies for professional learning purposes.

Regarding future areas of research, we found limited evidence on the use of video-conferencing technology to support synchronous discussion (see e.g., Lenkaitis, 2020), and collaborative inquiry (such as in video-viewing); technologies that may enable the development of reflective experiences and communities across countries and institutions.

Moreover, while the technologies discussed in this review may allow the integration of students' perspective and voice into personal and collaborative reflection on teaching (e.g., Huxham *et al.,* 2017), therefore taking full advantage of Brookfield stance on the dialogical inquiry into teaching (1995), this represents a field of research almost unexplored that deserves further attention.

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Faculty Feedback on Active Learning during the Elene4life Pilot Projects

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ABSTRACT: *This article illustrates the results of the Pilots carried out between September 2019 and 2020 within the EU funded Erasmus+ international project eLene4Life – Learning and Interacting to Foster Employability, designed to support curriculum innovation in Higher Education (HE) through the development of active learning approaches for soft skills, with the ultimate aim of improving students' employability. Basing on a Transnational Analysis on Innovative Higher Education Learning Models on Soft Skills and a Transnational Analysis of the Transferability to Higher Education of Corporate Active Learning on Soft Skills, the eLene4Life partners have selected 30 active learning methods for soft skills development, described in practical terms in the eLene4Life Dynamic Toolkit. These methods have been piloted in five countries (France, Germany, Italy, Poland and the United Kingdom). Due to the pandemic, some of the pilots which were initially planned face to face had to be adapted rapidly to an online modality. In fact, over half of the methods described in the Dynamic Toolkit had been tagged as being relevant for, and possible in, an online learning context. Consequently, it was not difficult to adapt them for online classes. Teachers taking part in the project were interviewed and some qualitative data collecting during the interview are reported and commented.*

KEYWORDS: *Citizenship, Civic education, Active citizenship, Service-learning, Prosocial activities.*

1. Definitions and Dynamic Toolkit Structure

1.1. The eLene4Life soft/transversal skills proposed definition

The definition of what is meant by 'soft skills' or 'transversal' or 'essential' skills has been heavily debated not only within this specific project, but also in the research field in general. eLene4work, the predecessor of the actual project, chose the ModEs Project's Taxonomy (2012):

> Soft Skills represent a dynamic combination of cognitive and meta-cognitive skills, interpersonal, intellectual and practical skills. Soft skills help people to adapt and behave positively so that they can deal effectively with the challenges of their professional and everyday life (Haselberg *et al.,* 2012, 67).

eLene4work also developed a framework of soft skills mostly addressed at exploring the transition between university and the labour market. In this framework soft skills are grouped in four main clusters:

- Social Skills: communication, teamwork, conflict management, negotiation;
- Personal Skills: leadership, self-evaluation, adaptability and flexibility;
- Methodological Skills: learning to learn, analytical skills, creativity and innovation, problem solving;
- Digital Skills: information and data processing, (digital) communication, (digital) content creation, (digital) problem solving.

1.2. The eLene4Life Active Learning proposed definition

> Active learning is generally defined as any instructional method that engages students in the learning process. In short, active learning requires students to do meaningful learning activities and think about what they are doing…[in] the classroom (Prince, 2004, 223).

Active learning refers to a broad range of teaching strategies which engage students as active participants in their learning. Typically, these strategies involve students working together during class, but may also involve individual work and/or reflection, as well as group work outside the classroom. The focus is on how to learn rather than what to learn, placing the learner at the heart of the process. Active learning can be on a spectrum of learner and teacher control of the learning process and learning environment (Bonwelle, Eison, 1991; Raynal, Rieunier, 2010).

The main characteristic of active learning is that students are engaged in activities which involve more than just listening and note-taking (e.g. reading, discussing, writing).

One or more of the following features should be present to fully exploit the potential of active learning:

- less emphasis is placed on transmitting information and more on developing students' skills.
- students are engaged in the (co)creation of new knowledge based on their previous knowledge and socio-cultural context.
- students are involved in higher-order thinking (analysis, synthesis, evaluation, critical thinking, problem-solving, metacognition and reflexivity).
- greater emphasis is placed on students' exploration of their own attitudes and values.

Teaching approaches to support active learning range from short, simple activities like journal writing, problem solving and paired discussions, to more complex activities such as case studies, debating, role playing, team-based problem solving, collaborative game-based learning and project-based learning (Bonwell, Eison, 1991; Prince, 2004; Raynal,

Rieunier, 2010; University of Minnesota – Center for Educational Innovation, 2014; University of Michigan – Center for Research on Learning, Teaching, 2014).

1.3. Dynamic Toolkit

The Dynamic Toolkit collects a wide range of teaching and training activities and methods, which develop soft skills needed on the labour market co-designed with companies and universities professionals. It is organised as an open online tool with downloadable and searchable items.

2. Objectives

In the second stage of the project (September 2019 to July 2020), lecturers from different countries were invited to experiment the methods available in the Dynamic toolkit, with the support of the eLene4Life partners.

The main objective was to perform a preliminary study in order to evaluate feasibility, time, costs, obstacles, adverse events, etc., and improve upon the study design.

The pilots were supposed to involve two different courses for each university (i.e., two lecturers or two teaching teams, depending on the type of course) but some universities carried out more than two pilots, testing different methodologies.

Courses were selected among different kinds of disciplines. We recommended that pilot projects should not be confused with specifically organised teaching and learning activities as they are experimentations embedded in the actual day-to-day pedagogical activities of the participating universities. Lecturers received training and coaching on different active learning methods they wanted to use. Lecturers were also informed about the main benefits of participating in the pilots in terms of:
  – improvement of the quality of teaching and of the quality of their students' results;
  – fostering the development of students' soft skills;
  – reflecting on their own practice;
  – networking with other lecturers in Europe;
  – participating in an international Community of Practice, discussing the results with colleagues from different countries;
  – contributing to the forthcoming MOOC.

3. Methodology

3.1. Period and geographic coverage

The pilots were carried out between November 2019 and June 2020 in four different countries by five partners: France (Aunege), Germany

(University of Bremen), Italy (LUMSA and Politecnico di Milano) and Poland (Warsaw University of Technology).

3.2. Stages of implementation

The partners selected and contacted lecturers from their own university or from other institutions. In some cases, the partners were actively involved as lecturers in the pilots.

The partners illustrated to the lecturers the goal of the project and the aims and advantages of this output. Lecturers, with the support of each country partners' researchers, selected one of the different methodologies described in the Toolkit and tested it in their courses. Before starting the pilot, they filled in a template, in order to describe the methodology implementation in their own course (i.e., how they would use the methodology).

During the pilots, lecturers were asked to fill in a logbook, i.e., a monitoring tool of the activity (shared among the partners), which might be filled in more times for the same pilot, depending on the length and structure of it.

At the end of the experience students were asked to fill in a satisfaction questionnaire, in order to gather their feedback; lecturers were interviewed focusing on the activities performed. The interviews were recorded as part of the forthcoming MOOC but from them we gathered some qualitative data, that we present in the following paragraphs.

4. Faculty Feedback from the Pilots

4.1. Active learning might help the development of different skills

During the Pilots at the university of Montpellier the teacher of Design Thinking introduced active learning in her courses since she believed it is the most appropriate way to foster the development of skills like creativity, communication, leadership, dealing with failure and team-work. She explains that these skills are required by the job market, particularly in the management field.

Active learning might help reduce the gap between university teaching and job market requirements that different studies and reports have highlighted. For example, in 2014 a research by McKinsey concluded that Universities and Companies seem to live in parallel worlds since educational providers do not understand the needs of the labour market.

In the last years different Universities started offering soft skills courses in order to fill this gap.

During the first phase of the eLene4Life project, we carried out a Transnational Analysis on Innovative Higher Education Learning Models on Soft Skills. We found that the soft skills most commonly taught at university are: communication, team work and critical thinking. These skills are developed through different active learning methods like collaborative learning, project-based learning, experiential learning. The

assessment is carried out with evaluation grids, self and peer assessment tools and portfolios.

4.2. Which differences in terms of soft skills development can be observed among the different fields?

Different jobs might need different skills, although some of them are 'transversal' and 'transferable' from one economic sector to another. The European Union carried out a research on this subject. Basing on existing experience and available information coming from sector studies and Job offers, this research has identified generic and specific transferable skills by sectors and by occupations. Some of them, like communication, teamwork and creativity, are transversal to different fields.

At Campus Bio-Medico University, soft skills courses have been embedded in the curriculum since the beginning, in order to foster the employability of students graduating in Food Sciences and Technologies. A research carried out by Flynn and colleagues in 2012 has identified the ideal skills of Food scientists and technologists in Europe. Of the over 3300 skill ideas provided, the most desired skill overall was Communication, followed by Problem Solving and Demonstrating Positive Attitudes, Behaviour.

4.3. Active learning for different kind of subjects

Some teachers think that active learning might be used only in some courses, like those connected with Humanities, Social studies, Education. However different studies have highlighted the importance of active learning for STEM education. A review of research, produced by Prince in 2004, found considerable support for active learning in engineering education. A meta-analysis of 225 studies carried out in 2014 by Freeman and colleagues indicated that average examination scores improved by about 6% in active learning classes, and that students in classes with traditional lecturing were 1.5 times more likely to fail than were students in classes with active learning. More recently, a further metanalysis published by Theobald and colleagues in 2020 demonstrated that active learning narrows achievement gaps for underrepresented students in science, technology, engineering, and math courses. In one of the pilots, a professor from Politecnico di Milano, teaching a technical course at the intersection of computer science and economics, explains how he used active learning offering students different scientific challenges, asking them to face simplified open scientific problems. In this process, team working was crucial. In this specific context skills like the ability to identify tasks, assign them to the different members of the group, collaboration, leadership, conflict resolutions are of paramount importance.

4.4. How to design active learning activities

Designing an active learning activity is limited only by your imagination and active learning activities can be easily modified to a range of class contexts: small classes, large classes, online classes.

For example, the method called 'Think, Pair and Share' can be used differently in the three different contexts. This technique requires students to think individually about a topic or answer a question, share ideas with a classmate and then share them with the whole class. Discussing an answer with a partner is useful to maximize participation, focus attention and engage students.

In a small class, you have more flexibility with space and logistics. Take advantage of this and get students moving. Since students are likely to be friends with the colleagues who sit closest to them, ask students to work with someone new—perhaps on the other side of the room.

Depending on how many pairs you have, you can ask every pair to share their responses with the whole class. In large classes, rather than ask a few selected groups to share their responses, ask students to join with at least one other pair and repeat the exercise one or more times.

Afterwards, ask students to submit their answers. This could be done electronically using clickers or telephones and apps like Mentimeter, Kahoot, Padlet, or in paper format using post-its. This ensures that students feel validated by their participation in the exercise. Online, if the learning management system you are using enables the use of private sub-forums, you can sort students into smaller groups and ask them to discuss the question over a specific period of time. Once students have synthesized their responses, they can post them to a larger forum in which all students can read and comment on the answers.

Active learning can also be used in online courses. One of the pilots, in Germany, was carried out in an e-learning course, designed at the chair for sustainable management. The course is open to students from all over Germany and is aimed at giving them the possibility to adopt a research-oriented attitude in the wide-ranging field of sustainability. One of the challenges of this course is guiding students along the way, thus using a purely digital format. Therefore, active learning, specifically learning videos, have been used in order to give students the possibility for a summarizing reflection on their own learning process, starting with the development of an interest in certain topics and ending with the formulation of a scientific research question.

Many of the pilots, during the COVID-19 pandemic crises, were forced to move online and this, instead of being an obstacle, was a further enrichment for our research. As one of the teachers in Milan pointed out this situation 'has been scary and challenging too at the beginning, but we think that the use of the active learning methodology was even more important in an online setting to reinforce the engagement of students.

4.5. How to make active learning more effective
To make active learning effective we need to carefully plan it and to avoid some common mistakes like making exercises too long or too short. For example, if you give students ten minutes to make a simple exercise, some groups will finish in two and waste eight minutes of valuable class

time, and others will struggle for the full ten minutes, which is extremely frustrating and also a waste of class time.

Another common mistake consists in calling for volunteers to answer questions after every activity. If you always call for volunteers, the students quickly learn that they don't have to think about what you asked them to do—they can just relax and talk about the football game, and eventually someone else will supply the answer. On the other hand, if they know that any of them could be called on for a response after a minute or two, most or all of them will do their best to be ready.

As highlighted in one of the Pilots, a session of brainstorming must not be too short, in order to allow students to go beyond the first ideas, but not too long: it is impossible to keep the productive energy necessary for a brainstorming session for more than an hour. Sometimes it can be useful to break a long session into many segments, in which different stimuli and techniques are used.

Furthermore, in each activity, it is very important to give the necessary time both for the actual exchange and for reflection.

The environment has also its own importance: for example, the setting where the brainstorming takes place must be specially prepared, so as to allow, if possible, people to move and walk. According to a study by two Stanford professors, Oppezzo, Schwartz, walking helps divergent thinking and the production of creative ideas.

The ideas can be posted along the walls, setting up special special spaces like flipcharts, posters and blackboards.

4.6. Active learning and time constraints

One of the most recurrent concerns of teachers is the idea that active learning might prevent them from finishing the programme since so much time is wasted in activities rather than in delivering information and explaining technical notions and concepts related to their subject.

You can spend as much or as little time as you want. Just a few minutes of activity in each class period will make a substantial difference in the learning that occurs in the class with a minor impact on the syllabus. To avoid losing any syllabus content at all, take most of the material you now spend a lot of time on—long prose passages, complex derivations and diagrams, etc.—and put it in handouts sprinkled with questions and gaps. Have the students read through the material in class and either lecture on the gaps or (better) use them as bases for activities.

You'll cover more material than you ever did when you said every word and did every calculation yourself, and the quality of learning will be much greater.

You might have observed that some students don't like being asked to work in class, especially when you first start doing it. Many students want their instructors to tell them everything they need to know for the exam—not one word more or less—and if they are asked to work in class, they resent it. The key is to let them know that you are doing active learning

not for your own selfish purposes but because there is research showing that students taught this way do better on exams.

On the other hand, as some teachers during the pilots reported, active learning can be appreciated by students, because by testing their understanding of the subject by means of the exercise development, they were able to better formulate their answers and doubts. This is something missing during 'traditional' lessons.

Furthermore, during this experience students have many opportunities to receive feedback. As one of the teachers of the pilots highlighted, feedback needs to be clear and understandable for students. At the end of the course, he sent each student an assessment form that included not only the numeric rating of their performance but also a small statement, either highlighting positive aspects or giving them advice for the future.

4.7. Involving students

Active learning does not only require an extra effort to the teachers but also to the students.

From the Pilots we learned that one of the most important things in this kind of experiences is to 'engage' students. This is why it is opportune, first of all, to explain them 'why' we are doing these activities. Even if they can't see the 'value' of them, they have to know that doing these activities is important for the development of their soft skills and that training soft skills will be useful for their future and is directly linked to their employability. The first time you do an active exercise in a class unaccustomed to active learning, many students might just stare straight ahead, and you will have to personally encourage some of them to work with each other. By the second or third time you do it, there should be few if any holdouts. At that point, stop worrying about it. It is important to dedicate time to explain to students the active learning activities the course includes, teachers' expectations, course learning outcomes, and the evaluation criteria students will be faced with. For example, in the pilots at the beginning of some courses, teachers shared the grids they would use for students' evaluations.

Last but not least, we recommend carrying out a debriefing after every activity in order to help students 'learn' from what they have experienced and have the possibility to 'transfer' what they have learned, i.e., the competence they have acquired, in another field or in another situation.

Depending on the course design, giving students the task to reflect producing a video, has shown to be perceived as innovative and somewhat different from usual tasks. This, however, leads to the necessity of guiding students through this process. We would therefore encourage teaching staff to regularly check back with students and the work they are producing. In case this proves to be impossible—as one of the teachers highlighted —great attention needs to be put on formulating the necessary instructions.

The instructions are even more necessary when the course is carried out online. The novel situation related to the COVID pandemic has

nevertheless revealed that active learning can be performed effectively even in online classes, without modifying the Intended Learning Outcomes. When the pandemic emergency will be finished, hopefully, we plan to reproduce some active lessons with our students by adding also the discussion among them in the classroom.

Conclusion

People often think of active learning as something you do in the classroom, or even outdoors, but with a bit of thought and preparation, active learning can be done online, and online learning should be as active as possible (Khan *et al.,* 2017; Salmon, 2013).

With the emergency switch to remote teaching due to the COVID-19 pandemic, we've seen a lot of Zoom lectures, which are tiring for both teachers and students, and certainly not the most effective way of engaging learners, in particular when it comes to developing soft skills.

The eLene4Life project has put together a collection of 30 active learning methods for soft skills development, described in practical terms in the eLene4Life Dynamic Toolkit. In fact over half of these methods are tagged as being relevant for, and possible in, an online learning context.

These methods have been piloted in five countries (France, Germany, Italy, Poland and the United Kingdom). Again, due to the pandemic, some of the pilots which were initially planned face to face had to be adapted rapidly to an online modality.

Well-planned online learning experiences are meaningfully different from courses offered online in response to a crisis or disaster, and specific terms for the type of instruction being delivered in these pressing circumstances has been proposed as 'emergency remote teaching' (Hodges *et al.,* 2020). In contrast to experiences that are planned from the beginning and designed to be online, emergency remote teaching is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated. The primary objective in these circumstances is not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional support in a manner that is quick to set up and is reliably available during an emergency or crisis (Hodges *et al.,* 2020). Considering that universities promote research, progress and development, the COVID-19 pandemic can motivate the renewal and development of teaching and learning (Karalis, Raikou, 2020), not just in this emergency mode but also towards a better future.

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Faculty Development for Research Capacity Building in Higher Education

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ABSTRACT: *Research and Teaching often do not have equal dignity in the university world, research often being considered more important than teaching. Recruitment policies take into greater consideration the scientific profile of future professors, even though they must subsequently offer quality teaching to their students. Many Faculty Development initiatives are spreading in Italian universities and many faculty are learning new ways to plan their teaching, innovative active teaching/learning methodologies and innovative methods for valid and formative evaluation. Lecturers who are introducing these new methodologies would like to communicate their innovative teaching experiences in a scientific way but often do not know how to write a scientific paper in higher education. Teachers who are exceptional researchers in hard disciplines, find themselves unprepared to write papers in pedagogical and didactic areas that use research paradigms typical of education. The University of Genoa has considered important to propose a training course for its teachers on planning and writing a scientific paper in higher education. 10 teachers have enrolled and are involved in a longitudinal scholars program lasting half a day, monthly, for 6 months, led by an expert in higher education and adult education. Course topics are: Rationale, research question, methods, results, discussion of results, conclusions, journal selection, referee evaluation. The 10 participants write their paper, step by step, receive feedback from the instructor and peers. This paper reports the participants' satisfaction rating and quality analysis of the 10 papers produced. We believe that publishing scientific papers dedicated to university teaching experiences can contribute to enhance and value the importance of Faculty teaching skills in the future. A model of the virtuous circle that is established between innovative teaching, research about university teaching and enhancement of teaching skills is proposed.*

KEYWORDS: *Faculty Development, Educational development, Scholarship, Research, Professionalism*

Introduction

An academic teacher is not only a technician with the skills necessary to deliver a lecture, facilitate a small group or plan an exam. The academic teacher is also a scholar. Scholarship is often associated with research,

with this demonstrated in terms of papers published in peer review journals or communicate during panels and conferences.

Canadian Association for Medical Education affirms that

> Education Scholarship is an umbrella term which can encompass both research and innovation in health professions education. Quality in education scholarship is attained through work that is peer-reviewed, publicly disseminated and provides a platform that others can build on (Van Melle *et al.,* 2012)

The existence of a scholarship of teaching was highlighted thirty years ago by Boyer in 1990 (Boyer, 1990). He said that there are four types of scholarship:

- The scholarship of discovery – the advancement of knowledge through research, including educational research;
- The scholarship of integration – making connections across disciplines and bringing new insight to bear on original research;
- The scholarship of application – the application of knowledge to problems and practice, with new intellectual understandings arising out the very art of application;
- The scholarship of teaching – a dynamic activity, building bridges between the teacher's understanding ant the student's learning.

Referring to the scholarship of teaching, Azikewe notes that each teacher can become a teacher-scholar when he reflects on his own teaching, makes evidences-informed decisions with regard to curriculum and teaching-learning-assessment methods, innovates and introduces new approaches based on educational principles aimed at making learning more effective and efficient, undertakes research perhaps in form of action research related to his own teaching, communicates about his experience and lessons learned to other teachers and made it public, evaluates his teaching through student and peer review and other methods, confronts broader issues in higher education such as the impact of a program on a community (Azikiwe, 2018).

A teacher-scholar is a teacher who give a scientific contribution in the field of teaching and learning.

High Level Group on the Modernisation of Higher Education, a report to the European Commission on Improving the quality of Teaching and Learning in Europe's higher education institutions, in 2013, mentioned in recommendation n. 6 that head of institutions and institutional leaders should recognise and rewards higher education teachers who make a significant contributions to improving the quality of teaching and learning, whether through their practice, or through their research into teaching and learning(European Commission, 2013).

FIG. 1. *Seven features of the scholarly teacher (Azikewe, 2018, 229)*
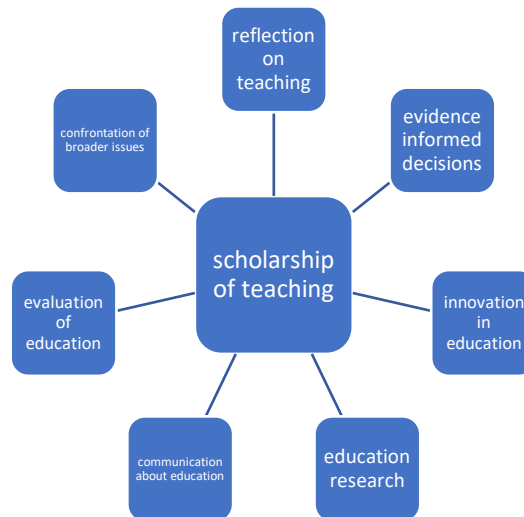
The traditional way for communicate research is publishing into scientific journals and, at general levels and at the disciplinary level, there are many journals dedicated to research in innovative teaching in specific fields where education articles can be disseminated.

Despite many opportunities for publishing into international educational journals and a flourishing amount of initiatives dedicated to Faculty Development., in Italy there are only few scholars who publish in Journals dedicated to Teaching and Learning in Higher Education. Why do scholars not publish about their research in teaching and learning? One potential reason is that scholars in many disciplines don't feel prepared to write a scientific paper in the field of education.

The challenge of being a disciplinary scholar has been argued in the literature. For example, Miller-Young, Yeo, and Manarin (2018) argue that

> coming to Scholarship in Teaching and Learning causes a type of epistemological dissonance that is problematic and troublesome for faculty/academics from a range of discipline who «experiences a disruption in their sense of identity, causing them to question themselves as a teacher, researcher and colleague» (Miller-Young et al., 2018).

Many scholars of teaching and learning do not have a formal training in writing *in* or *for* the field. Many are published writers in their disciplines, but when they enter in Scholarship of Teaching and Learning they feel uncomfortable because they don't know, in the educational field, the different approaches to research which could be qualitative, quantitative and mixed-method. Scholars often don't know qualitative approaches such as ethnography, grounded theory, narrative methods, design based research.

They feel dual citizens, part of two discourse communities, each with distinct customs and cultural norms, although both privilege writing as a form of esteem and communication (Healey *et al.,* 2019).

Although there are at least four genres of articles in Scholarship in Teaching and Learning (SoTL), according to Healey *et al.,* some scholars find difficult to write a paper about their experience on teaching.

These four genres are:

- Empirical research articles, which usually offer evidence for a particular aim or response to a research question, and are articulated with an introduction, a literature review, sections dedicated to methods, findings, discussion, implications, and conclusions.
- Conceptual articles which typically don't involve the collection of data, but explore theories or approaches or methods for the conceptual analysis.
- Reflective essays which are dedicated to unfinished and personal work of SoTL. These papers are usually written in the first person and present learnings rather than empirical findings.
- Opinion pieces which offer the opportunity to write a personal point of view regarding a value judgement about teaching and learning.

Scholars sometimes find writing about teaching and learning in higher education a hard task, and this could diminish their personal identity as researchers in higher education. Some authors argue that writing is an integral part of, not separate from, developing an identity as a scholar of teaching and learning (Healey *et al.,* 2019).

So the University of Genoa proposed a course dedicated to scientific writing to build research capacity of its Faculty Members. The purpose of this paper is to describe the development and implementation of scholarship of teaching and learning program, and to verify if it could be a useful method to help scholars to communicate their innovative practices and research to others.

1. Course description

Description of a longitudinal course about scientific writing (How to write a paper dedicated to research into teaching and learning), held at Genoa University, A.Y. 2021/22

At December 2020 University of Genoa proposed a 4-hours introductory workshop about getting published in higher education. This workshop was open to 20 participants just to explain them how to write a scientific paper in education. It was led by two international experts with experience as peer reviewers and editor in chief of well-known journals

At the end of this workshop it was proposed a longitudinal course open only to 10 participants who could engage in learning and writing their scientific paper under the supervision of one international expert. This course was entitled Anatomy of a scientific paper, run between January and June 2021, scheduled as 2 hours monthly meeting online synchronously, led by one of Scholarship in Teaching and Learning.

The Overall Program objectives were:
- Gain an understanding of the main sections that constitute an educational research paper
- Recognize critical elements of each section of an education paper
- Develop an initial outline of an education paper on a topic of choice
- Identify the main sections of the results and discussion of a research paper
- Recognize key elements and challenges of the results and discussion sections

The program's content was :
1. Introduction of a paper (state of art, gap, hook, research question);
2. Methods (Study population and setting, study design, data collection, data measurement, outcomes, data analysis)
3. Results
4. Discussion of results.

Each month meeting was dedicated to a topic, which constituted a sequential phase of their work. Each participant had the opportunity of writing step by step his/her own paper under the expert's and peer's supervision.

TAB. 1. *Overall Program Schedule*

Date	Topic	Instruction	Self work
January	Introduction	Didactic/application Q&A	X
February	Methods	Group Review of Introduction Didactic/application Q&A	X
March	Results	Group Review of Introduction/Methods Didactic/application Q&A	X
April	Discussion	Group Review of Introduction/Methods/Results Didactic/application Q&A	X
May	Overall outline	Group Review of outline Presentation of outline Q&A Closing remarks/next steps	

The teaching methods were very active and participatory: the teacher sent to each participant a paper or chapter to read before each meeting, for independent study as in flipped classroom, and during the meeting gave a very short presentation. Then participants worked in small groups discussing their papers, sharing ideas with their colleagues. At the end of the session, they presented their work to the whole group. In the period of time between the monthly meetings, participants wrote their new section of paper and sent it to the teacher who would read and provided written comments and then additional feedback to each of them in the following meeting. In five meetings it was possible to know each other,

to start writing a paper identifying the state of art, gap, hook, research question, methods, results, discussion of results and conclusion and submit to a journal.

2. Method

A quantitative approach was chosen and a questionnaire was created to investigate the research questions. A questionnaire was sent to the ten participants attending the University of Genoa workshop at the end of the longitudinal course dedicated to scientific writing in teaching and learning via email.

Since it was the first time that in Italy a Faculty Development initiative was dedicated to scientific writing in teaching and learning in higher education, it was considered useful to ask some research questions.

1. Which are the motivations of teachers attending a longitudinal course in research on academic teaching?
2. Do participants feel dual citizens?
3. Are there major differences between research papers in hard disciplines and in educational sciences?
4. Which are the main topics investigated by participants?
5. Could it be possible to introduce scientific writing groups on academic teaching ?

The questionnaire was composed by twenty-eight questions (twenty-four closed questions and four open questions) and explored five areas:

A. Participants' motivations and expectations
B. Previous experiences of Faculty Development
C. Previous experiences of academic writing on teaching and learning in HE
D. Difficulties linked to different epistemologies
E. Future perspectives

A content analysis of participants 'papers was done to identify topics, research approach and methods.

Participants

Participants were ten academic teachers enrolled to a long course on writing a paper on university teaching and learning.

They were heterogenous for academic role and position: n. 1 full of professor, n. 3 associate professors, n. 2 assistant professors or senior lecturers, n. 4 non-tenure track.

They came from different Schools: n. 5 from School of Natural, Mathematical, Physical and Chemical Sciences, n. 3 from School of Engineering and Architecture, n. 2 from School of Humanities.

TAB. 2. *Academic role of participants*

Role	N. of participants

Full Professor	1
Associate Professor	3
Researcher, assistant professor, senior lecturer	2
Non-tenure track	4

TAB. 3. *Schools or Department of affiliation*

Schools	N. of participants
School of Natural, Physical, Chemical and Mathematical Sciences	5
School of Engineering and Architecture	3
School of Humanities	2

3. Results

All ten participants filled the questionnaire.

3.1. Experiences and expectations before the course

Before enrolling to the course dedicated to scientific writing in teaching and learning in higher education, all participants had already attended a Faculty Development formal initiative about teaching and learning in higher education.

TAB. 4. *Participation to a Faculty Development formal group initiative organized at Genoa University*

Faculty Development approach	N. participants
Seminars	6
Workshops	8
Longitudinal course	5
Community of Practice	7
Other	3
None	0

9 participants had introduced innovative teaching methods in their course and programs, and 5 participants had introduced innovative assessment methods. Half participants had already written a paper concerning their teaching and assessment in higher education, but only 2 published a paper. All participants had the clear expectation to learn structuring and writing a scientific paper about teaching and learning in HE and 6 persons wanted to identify which international journals were dedicated to scholarship in HE. Half of participants didn't know at all the international journals dedicated to HE.

3.2. During the course

There is the idea that some scholars do not write about their teaching experiences because they feel not prepared for writing in the educational domain. They feel like dual citizens: they are excellent scholars in their own disciplinary field and are able to write scientific papers accepted by the most important journals, but they feel unprepared for writing in pedagogical field. They consider themselves dual citizens.

  3 participants found main differences in writing a scientific paper in teaching and learning in HE, 6 participants found some differences and one said there are no difference. At the direct question if they felt dual citizen, 6 replied that they didn't feel dual citizens, 2 replied that yes they felt a difference and 2 partially. Participants appreciated to work in a small group of ten participants.

3.3. Participants' papers

Nine participants decided to write a collective paper. Six papers were research papers, three were case studies, and only one a reflective essay. Six papers are dedicated to innovative teaching methods such as Team Based Learning, Project-based learning, collaborative learning and online learning. Only one paper is dedicated to assessment method, and specifically to formative evaluation: peer review. And another one is a theoretical paper on students 'misconceptions in sciences as a barrier to learning.

3.4. Participants satisfaction

Participants considered that the length of the course was correct, and they say that they would like to continue to work as a university writing group, meeting on their own regularly, during the year just to write together. All participants believe that Genoa University should propose the same course each year for new participants. Some participants defined a course with the metaphor of a diamond and of an ugly duckling who will become a swan.

3.5. Course's output

Seven participants said that their identity as scholars and as teachers has been reinforced during this course: writing a scientific paper helped the reflection on one's teaching practice. The majority of participants consider writing a scientific paper in this field a very engaging experience, also emotionally, and they are worried that their papers could be refused by an international or national journal.

4. Discussion

All participants had attended previous workshop, seminars or longitudinal course on Teaching/Learning/Assessment in Higher Education and had introduced teaching and learning innovations in their teaching activities. Only few participants had introduced assessment innovations.

  Writing a scientific paper is linked to scholars' knowledge and competence in teaching and learning in Higher Education. We could find a linkage between learning new teaching and assessment methods, and introducing some innovative methods in own's course. We could say that teachers who try to introduce new teaching methods usually have been

trained in a formal or informal way about didactics in academia. Once that they experimented some approaches or methods, perceived as innovative, they reflect and write on their experiences, transforming this experience in research to be communicated.

It seems that there is a link between learning, teaching and research.

Faculty Development and Scholarship of teaching and learning are linked, and directors of Teaching and Learning Centers should be aware that, if they plan initiatives about innovative teaching, learning and assessment methods, they have to plan also a course about academic writing because their faculty members could need it to be encouraged and supported in their research activity in education.

The cycle of scholar in Teaching and learning seems to be an iterative path:

1. a faculty member participates to Faculty Development initiatives, proposed by his/her University or other institutions and learns new principles, new teaching methods, new ways for facilitating learning or for evaluating learners;
2. he/she decides to introduce a new teaching or assessment method in his program during his/her teaching activity;
3. he/she reflects on his own or with others colleagues about his/her innovative teaching experience and could decide to write his/her experience according to principles of writing an academic paper in higher education;
4. he/she sends his/her paper to a journal or communicates it during a panel or a conference;
5. his/her publication or scientific communication could reinforce his/her identity as scholar.

This cycle could be beneficial for the teacher's formation of identity, but on the other side, could be useful to produce a product which could be counted for awards or academic career progression.

In the Paris Communiqué in 2018 ministers of education of recognized that academic career progression should be built on successful research and quality teaching.

Some participants had already written a paper on Teaching/Learning/Assessment in Higher Education but they didn't published it because, in some case, journals had rejected their papers, and this refuse was the motivation for participating to a dedicated course on scientific writing.

Participants feel dual citizens and consider that there are some differences among a paper devoted to hard sciences research and educational sciences research.

Research in educational sciences could use different approaches to educational research, such as qualitative research, mixed-methods and design-based research.

It seems enriching to equip faculty members with skills in qualitative approaches.

Participants appreciate their writing group and propose to institutionalize this kind of activity, as it happens in some university abroad, where scholars meet regularly for some hours just to write and share with colleagues their research papers dedicated to Teaching/Learning/Assessment in Higher Education.

FIG. **2**. *The cycle of scholar in Teaching and Learning in Higher Education*
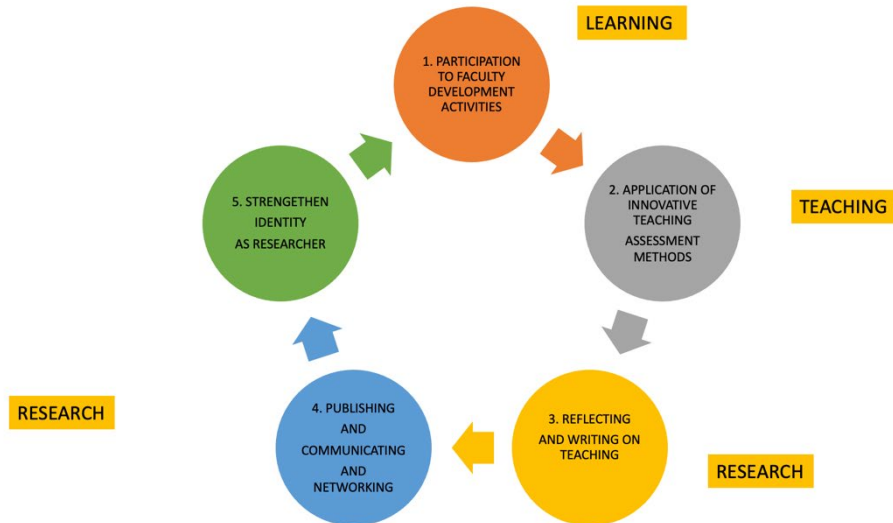
There are many ways of planning and delivering faculty development activities for research capacity building: short workshops, modular programs, longitudinal fellowships and scholars programs, full -time research fellowship programs, master degrees, doctoral degrees, and also mentors and facilitators. Faculty development for research capacity building is a complex undertaking activity (Hodges, 2014) but it is essential to develop teachers 'competences and transform them from simple teachers to scholars in teaching and learning in higher education.

Conclusion

A longitudinal course on academic writing on Teaching and Learning in Higher Education could be a good way to build research capacity in higher education. We propose the cycle of scholar in teaching and learning in higher education. This cycle links together learning, teaching and research.

Aware that such small-scale investigation could not be generalized, this paper highlight some points about the importance that the publication of a paper in a recognized journal is a key activity for the teacher-scholar.

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QUALITI Project: Didactic Quality Assessment For Innovation of Teaching and Learning Improvement

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ABSTRACT: *The contribution describes the activities of the ERASMUS+ Project – Cooperation for innovation and the exchange of good practices KA203 – Strategic Partnerships for higher education entitled QUALITI – Didactic Quality Assessment for Innovation of Teaching and Learning Improvement, which aims to improve the quality of teaching in higher education through a systemic action in the logic of integration between evaluation of teaching, didactic-pedagogical training to the professionalism of teachers, didactic innovation. The project, coordinated by the University of L'Aquila (IT), includes among its partners the University of Barcelona (SP), the Universisty of Vilnius (LT), the Valahia University (RO) SSW the Collegium Balticum (PL), ilmiolavoro (IT) and the Siuolaikiniu Didaktiku Centras. The aim is to consolidate and improve evidence building on higher education by measuring the performance of higher education policies, systems, and individual institutions; build evidence on the skills needs of the economy and society through skills anticipation, graduate monitoring, and forecasting studies, including supporting the further development of graduate monitoring systems in program countries in line with the Council Recommendation on graduate monitoring; and improve the availability of comparable data on graduate outcomes in Europe. The project also aims to promote and reward quality in teaching and skills development, including through promoting effective incentive structures and human resource policies at national and institutional levels, encouraging the training of academics and the exchange of best practices (e.g., through collaborative platforms) in new and innovative pedagogies, including multidisciplinary approaches, new methods of curriculum design, delivery, and evaluation, enabling institutions to provide a wider variety of courses to full-time, part-time, or lifelong learning students. It's about connecting education with research and innovation by fostering an entrepreneurial, open, and innovative higher education sector; and foster learning and teaching partnerships with commercial and non-commercial partners in the private sector. The project adopts a methodology that plays on the following strategic assets. Specifically, it aims to develop reliable and valid indicators for the assessment of teaching quality in higher education in order to: (1) measure the performance of higher education institutions focusing on teaching quality; (2) acquire data-driven evidence aimed at initiating a process of innovation in teaching strategies; and (3) support the ongoing professional development (training/upgrading) of higher education teachers on new pedagogical approaches/strategies.*

KEYWORDS: *Higher education; Quality of teaching; University teachers; Teachers pedagogical training.*

Introduction

EU documents underline that for the development of effective policies and strategies for the modernisation of Higher Education, both at the level of policy makers and at the level of individual Higher Education institutions (henceforth HEI), it is essential to develop a wide range of data analyses covering all aspects of performance (COM(2011)567, 12) and that, even in well-funded systems, the search for appropriate indicators to measure performance has been proved difficult (SWD(2017)164).

Specifically, it is highlighted that there has been a growing focus on the quality of research results while

> governments and institutions have typically paid less attention to measures of the quality of education [...] Although learning and teaching have always been at the core of university activities, the emergence of more competitive research funding and international university rankings based on research performance accentuated a widespread perception that teaching was (and is) a comparatively neglected activity in higher education (SWD(2017)164, 35-9).

Numerous international surveys underline the difficulty of assessing teaching and that the two most famous international rankings rely heavily on research as a parameter of the value of universities and neglect the quality of teaching (Henard, Leprince-Ringuet, 2008, 5). Both past and more recent studies have continuously pointed out that the relationship between the quality measures of teachers' research and the measures of the quality of their teaching are often lacking or rather deficient (Gibbs, 2010; Bauer, Bennett, 2003; Hattie, Marsh, 1996).

The idea that the quality of education is at risk when excessive attention in an academic institution is placed on research and only marginally on didactic design and pedagogical functions (Arum, Roksa, 2011) is an important factor to be considered when focusing of the quality of teaching in higher education. Furthermore, the need to put more emphasis on supporting teaching staff by recognising those teaching activities that allow for high-level and rewarding study experiences for students is also a central issue (Cashmore, Cane, Cane, 2013). It is beyond doubt that the analyses on the state of implementation of the Bologna process (EC/EACEA/Eurydice, 2018) and the European Documents (Paris Communiqué, 2018; Yerevan Communiqué, 2015) reaffirm the priority to encourage the acquisition of evidence on the quality of teaching and to ensure that teaching has the same 'status' as research (EUA, Trends, 2018).

A study by the European Parliament underlines that, in order to strengthen the role and weight of teaching and learning in international rankings, more in-depth research on suitable and internationally comparable indicators for teaching quality (RAC. 13 (Policy Department B Structural and Cohesion Policies, University quality Indicators: a critical assessment, 2015) seems desirable. The High Level Group on the Modernisation of Higher Education (2014) also strongly emphasises that the preference for teaching research means that little attention is paid to the pedagogical and didactic preparation of academic teachers over primary and secondary teachers.

However, the quality of university teaching has come under focus in recent years, and the need to improve teaching skills is now acknowledged to be essential. Nevertheless, many higher education institutions (HEIs) pay inadequate attention to teaching in comparison to research (European Commission, 2013). The importance of the pedagogical component in the professional development of university teaching staff is highlighted by different authors. The continuous diversification of the characteristics of those entering higher education and the aim of improving the quality of the learning experience to adequately correspond to the educational demand of those entering higher education, becomes the central issue of all this. While it is essential to expand and improve access to educational opportunities across the EU, it is equally crucial that European students have access to the best possible higher education learning environment, driven by high quality teaching. Indeed, the ambition to significantly increase the number of those entering and completing higher education only makes sense if it is accompanied by action capable of ensuring that teaching and learning in higher education are the best possible.

The absence of the pedagogical development of university teachers often results in maintenance of the old modalities of teaching, which often not focus on the needs of students (Lueddeke, 2003).

The QUALITI Project, starting from the perspective of European documents and research, aims to contribute to improving the quality assessment system of university teaching and to enhancing the pedagogical training of university teachers. The effectiveness of teaching is necessarily related to the improvement of knowledge, skills, preparation for work and personal development made by students during their time spent in higher education. QUALITI is fully in line with the priorities for the development of concrete data and the promotion of teaching excellence. In line with the Recommendations of the European Documents, it adopts a project intervention methodology that acts on:
1. the development of indicators to monitor, evaluate and improve teaching and learning practices, in order to develop and implement a strategy of continuous quality improvement (Recommendation No. 13; Policy Department B Structural and Cohesion Policies-2015);
2. the systematic and regular collection of data on issues affecting the quality of teaching and learning; professionalisation and

development of teachers, trainers and staff; innovative teaching and learning methodologies and pedagogical approaches (Recommendation No. 13. High Level Group on the modernisation of Higher education, 2014).

The QUALITI project concretizes the recommendations of the Renewed Agenda for Higher Education (COM(2017)247) which highlights how actions within individual HEIs – which place greater emphasis on measuring and demonstrating the results of quality in education – have a major impact in the direction of «fostering the effectiveness and efficiency of higher education systems», one of the four strategic priorities for the future of Higher Education. the project reflects the quality assurance approach of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (2015) where the development of quality assurance indicators and processes for implementation is referred to individual HEIs as

> The ESG are not standards for quality, nor do they prescribe how the quality assurance processes are implemented, but they provide guidance, covering the areas which are vital for successful quality provision and learning environments in higher education [...] (ESG purposes) provide a framework within which the ESG may be used and implemented in different ways by different institutions, agencies and countries (6-7).

1. Project

QUALITI Project aims to improve quality of teaching in higher education through a systemic action in the logic of integration among evaluation of didactics, didactic-pedagogical training to teacher professionalism, didactic innovation.

Partners: University of L'Aquila (IT) Applicant University of Barcelona (SP) Univeristy of Vilnius (LT) Valahia University (RO) SSW Collegium Balticum (PL) ilmiolavoro (IT), Siuolaikiniu Didaktiku Centras.

Considering the institutional goals of the project partner Universities regarding the quality of teaching, a self-evaluation activity carried out on specific dimensions referred to the following standards for internal quality assurance (ESG, 2015): 1.3 – Student-Centred Learning, teaching and assessment; 1.5 – Teaching staff; 1.7 – Information Management, specially, about key performance indicators.

The monitored dimensions are type and appropriateness of indicators used for measurement quality teaching and promotion of the professional development of teaching staff on both methodological-didactic competences and pedagogical competences in order to apply student-centered practices.

The analysis showed two macro-areas of needs

The need to make the quality of teaching more transparent and to acquire data through evaluation indicators focused on teaching, which also make the performances comparable among Higher Education Institutes.

The need to strengthen and enhance Higher Education teaching through the definition of benchmarks, linked to specific indicators able of measuring the quality levels of teaching in Higher Education Institutes.

The problems that emerged were:

1. a persistent use of standards centred on the research activities of teachers (rankings) as a proxy for the evaluation of teaching;
2. insufficient or poorly valid and reliable contextual indicators for the evaluation of teaching activities, in light of new teaching/learning methods that require specific design methods (e-learning environments, MOOCs, etc.), different learners' characteristics; distinct education provided by specialized or general Universities;
3. the predominance, in the national systems of evaluation of the project partners HEIs, of indirect input or output indicators (ratio of regular students /professors; % of permanent professors in each Degree course; credits earned of the total annual credits, etc..) that:
   – do not allow for the acquisition of data focused on teaching;
   – make it difficult to compare HEIs based on the evaluation of teaching as they are affected by other factors (eg. incoming characteristics of the student population in terms of sending school; background, etc.);
   – do not allow for measuring the impact of the University on the different categories of students (consistency of progress in the light of different starting conditions), an aspect that also affects the level of inclusiveness of HEIs compared to students belonging to underrepresented and/or disadvantaged groups (educational special needs students; students with disabilities; refugees, etc.). Indeed, since the quality of teaching is evaluated only on the outputs, and certain characteristics of ex-ante students (e.g. sending school) constitute a good predictor of outputs (e.g. low dropout rate, higher degree score), less emphasis will be placed on teaching and programming practices that favour the access and success of disadvantaged students;
4. insufficient process indicators, connected to the teaching and pedagogical skills of professors;
5. limited knowledge of the teaching quality level and, consequently, insufficient implementation of structured actions to enhance the teaching and pedagogical skills of professors.

The project adopts a holistic approach (Henard, Roseveare, 2012) which works on three interdependent levels:

– an institutional level: by creating a system for measuring and for assessing the quality of teaching;
– a planning level: by development of quality levels to measure and improve the didactics;

    – an individual level: by increasing methodological and pedagogical competences of teachers for designing and implementing teaching practices oriented to student-centered learning.

The objectives pursued by the project are:

1. increasing ability to provide evidence of teaching quality through the acquisition of integrated data;
2. improving ability to compare teaching performance among Higher Education institutions;
3. raising capacity of HEI to pursue the institutional objectives of continuous improvement of teaching, also through a system of 'proven' recognition of the quality of the teachings within each HEI;
4. enhancing pedagogical training of teachers in order to increase the quality of teaching.

Intellectual outputs will be:

– Direct indicators System for quality evaluation of teaching in higher education (IO1);
– Profile of 'Learning/teaching-focused' teacher (IO2);
– OER- Methodological guidelines for learning-teaching-focused teacher (IO3).

These outputs will be tested on a group of universities in order to be validated in terms of effectiveness and impact with regard to the transparency of quality higher education teaching and to the support for the continuous improvement of higher education teaching.

3. Innovation

The project's innovation is attributable to at least two of its features. First of all, the scope of intervention where it acts on the measurement and recognition of the quality of academic teaching, far by being defined at European level, through valid and relevant metrics. Secondly, three are components that define it:

A. the definition of a system of direct, procedural and referential indicators for the evaluation of innovative quality of academic teaching compared to those commonly used, indirect – either input or output – and which, therefore, strengthen the possibility of making comparisons between HEIs. This is a substantial innovation since it allows construction of indicators for monitoring, evaluating and improving teaching and learning practices (REC. 13; Policy Department B-2015) and the systematic and regular collection of data on issues affecting the quality of teaching and learning (REC. 13; High Level Group on the Modernization of HE-2014);

B. the creation of a 'learning-teaching-focused' teacher profile with benchmarks and quality levels of performance; a tool that develops an innovative pathway in the direction of encouraging the

acquisition of evidence on the quality of teaching and guaranteeing the teaching the same 'status' as research;

C. the development of Methodological Guidelines with an operational framework in order to provide a guidance to the action of the learning/teaching-focused teacher. This is an important innovation that it helps to overcome the situation in which the preference for research ouputs entails a limited attention to the pedagogical and didactic training of the academic professors compared to primary and secondary education teachers.

4. Direct indicators System for quality evaluation of teaching in higher education (IO1)

The first intellectual output of the project consists of two results: 1) multidimensional theoretical model on the interconnections between university teaching and quality; 2) system of direct indicators for evaluating teaching quality.

Through this output you want to achieve three objectives: enhancing the measurement system for evaluating teaching quality in order to encourage the improvement of teaching practice; – providing a tool to get empirical data on the teaching quality in a shared and prospective framework (in the short-medium-long term); increasing the ability to compare data about teaching quality among European HEIs.

The system is based, and will be developed, on the following questions: How can the quality of teaching be evaluated more reliably and consistently? Which descriptors, indicators and metrics allow us to examine and evaluate the performance of teaching quality? How can evaluation tools be used more effectively?

A system will be developed for evaluating the quality of teaching (disciplinary skills, pedagogical skills and curricular skills) and the organization and management of teaching through the following descriptors and indicators:

- direct, i.e. connected to teaching practices (didactic planning; curriculum development and assessment);
- contextual, or related to the teaching activity (didactic organization and the learning environment; communication and didactic relationship, management of teaching and learning processes);
- procedural, relating to the processes that are activated in carrying out the teaching action (reflection, action regulation, formative assessment; teaching experience of teachers; learning experience of students in progress, not just final feedback);
- referential and documentary, i.e. reference for implementing and evaluating the quality of teaching and didactic action in context.

Indicators will help to:
1. build a shared language of the teaching action system and a multilevel approach to teaching quality;
2. increase transparency to recognize teaching quality in the project partner universities;
3. identify concrete opportunities for the renewal of subject and university teaching and in order to define qualitatively appreciable teaching processes.

It allows the use of indicators capable of measuring, in addition to excellence, the so-called 'tails', that is the most problematic areas and dimensions that negatively affect the 'average quality' of teaching of a course degree, and which are never taken into consideration despite representing the critical issues to be addressed through improvement actions.

5. Profile of 'learning/teaching-focused' teacher

It will be structured in teaching quality levels, identified in the system of indicators, and a profile of the 'learning/teaching-focused' teacher. It is intended to introduce in the HEIs involved in the project the figure of the teacher 'focused on teaching and learning', intending to give it its own relevance with respect to the teacher focused only on research. For each indicator of teaching quality, specific quality levels/references will be defined expressed in quantitative and qualitative values and in evidence attributable to different quality thresholds of the teaching action. The levels will constitute reference points for teachers to guide action in compliance with the indicators. The quality levels are not intended as standards but devices to support HEIs to make quality teaching transparent; they are significant rather than typical elements to concretely help teachers to improve the didactic action in context. At the institutional level, they will constitute references that can be integrated with those defined by national evaluation systems and European guidelines (ESG, 2015), characterized by their focus on teaching. In designing the profile of the learning/teaching-focused teacher, all those intervening variables will also be taken into account that will help to accurately specify the profile: for example, the different roles that affect the performance of the teaching function (President of Degree Course; Department Director, etc.) and on the implementation of quality teaching.
This output aims to answer the following questions:
– What are the levels/references, for each indicator, that help to identify and evaluate the different levels of quality teaching?
– What are the characteristics of the profile of a learning/teaching-focused teacher compared to the teacher focused only on research?
– What are the references and evidence of quality teaching based on skills/roles, institutional functions/responsibilities, years of work, etc.?

- How we ensure that the references identified to define the profile and performance are consistent with our peers at local and European level and that a regular review process takes place elements?
- How do the different professors differ according to the different roles or roles assumed? What evidence?

The Profile is structured in the following macro-items: 1) quality references of direct quality teaching indicators: quality indicator/thresholds (e.g., minimum threshold/excellence/range of variability); and 2) Profile of the learning/teaching-focused teacher: skills/roles/functions; requirements; evidence; descriptive and methodological documentation.

6. Methodological guidelines for learning-teaching-focused teacher

The methodological-didactic guide for university teachers is aimed at allowing the elaboration of qualitatively appreciable proposals, activities and didactic interventions on a planning level and to support and implement quality teaching over time:

- in line with the system of indicators for measuring teaching quality (IO1);
- adequate with respect to the references/quality levels of the profile of the learning/teaching focused (IO2) teacher.

The objectives of the methodological guide are: support and improve didactic functions and actions in university training contexts; contribute to strengthening the systemic action to improve teaching quality by integrating with measures at the institutional level (IO1) and programmatic-managerial (IO2); support the continuous training of university teachers in the pedagogical and didactic fields. It is functional to translate the dimensions that define the quality of teaching into concrete contexts and to propose an operational reference framework (methods, techniques, strategies and tools) that guides the action of teaching and the development of design and evaluation tools capable of implementing the quality of the teaching function.

It can be used by teachers belonging to the same course of study, helping them to develop and activate a quality didactic action system and a didactic-organizational model (also in terms of programming, planning and proceduralization) such as to ensure the implementation of flexible teaching in terms of design, evaluation and documentation of the proposal cultural and educational intervention, while adopting a strategic approach capable of supporting decision-making processes.

The guide will be structured in the following three sections: i) self-assessment of incoming resources (skills, attitudes, perceptions, teaching practices) with respect to the profile of the learning/teaching-focused teacher; ii) action structures (didactic actions in relation to a context/problem): methods and tools of the learning/teaching-focused

teacher; iii) self-regulation structures (reflection and change of teaching strategies by virtue of the inputs of the learning context): methods and tools of the teacher learning/teaching-focused.

For each section the quality levels will concern: 1) analysis of the requirements of the prerequisites and of the starting levels; 2) teaching-learning processes; 3) multidimensional design and lesson models linked to the most accredited instructional design models; 4) communication and relationship; 5) assessment; 6) results, evidence and documentation. Two transversal dimensions: 7) didactic writing; 8) teaching practices. The guide goes in the direction of responding to one of the benchmarks of the Europe2020 strategy (40% of young people with a higher education qualification by 2020), for the achievement of which the documents recommend training higher education teachers 'as teachers' (EUA, Trend, 2018; High Level Group 2014 et al.), i.e., from a methodological-didactic and pedagogical point of view.

Conclusion

The concept of teaching quality in relation to pedagogical competencies of teachers in higher education institutions established itself in all its fullness. The fact that university professors still require no qualification regarding educational pedagogy reflects directly into the learning environment of the students. As such, the main aim in this study is to explore the quality teaching-learning processes and practices and the pedagogical and methodological competencies necessary to carry out adequate training (communication, instructional design, assessment, etc.).

The increasing demand for universities and the variety of their responsibilities forces some universities to choose to focus on the central role of higher education (HE) that combines research and educational responsibilities.

However, the situation in higher education institutions regarding the place of pedagogical expertise is more complicated than at the lower levels of the education system. As such, the learning environment suffers from a lack of quality pedagogical practices capable of favourably influencing learning environments. To account for quality in education, some countries have taken serious steps to train university staff in a pedagogical sense.

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Faculty Development Design: A Curricular Training Model for Academic Professional Development

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ABSTRACT: *The need to support the quality of academic teaching is clearly recognised at international level. In particular, assessing and promoting the pedagogic competences of the university teachers appears a priority task, albeit complex, aimed to improve teaching and to increase learning outcomes. The recent COVID-19 pandemic, which suddenly forced teachers to introduce hybrid models and practices in their teaching, accelerated the process of raising awareness about the need for high quality professional development and for an advancement in the field of Digital Scholarship. The University of Bari has started, on the basis of the needs analysis emerging from the PRODID research project, the structuring of pilot training paths for the professional development of university teachers in UNIBA Teaching Learning Laboratory (TLL). The curricular model is based on adult learning and methodologies for professional learning, in particular the so-called 'artefacts'. The training model for the university teacher requires a research posture of co-construction and ample space dedicated to the epistemological dialectic between disciplinary teacher and didactic.*

KEYWORDS: *Faculty Development, Teaching Learning Center, Higher Education, Curricular model, Digital Scholarship.*

1. International policies in Higher Education for Faculty Development

The issue of Faculty Development (FD) gained a renewed attention both at institutional and theoretical level (Felisatti, Serbati, 2017; Felisatti, Clerici, 2020; Lotti, Lampugnani, 2020; Perla, Vinci, 2021a, 2021b). As argued by O'Sullivan and Irby (2011) FD «is one mechanism for improving the instructional competencies of teachers and the institutional policies required to promote academic excellence» (421):

> The traditional, linear model of faculty development research assumes a causal chain of events, starting with a faculty development program, continuing through changes in actions of individual faculty participants to changes in the actions of learners, and culminating in changes to patient care. [...] The new model for faculty development research suggests that faculty development is embedded in two communities of

practice (the faculty development community and the workplace community) and, to bring about desired change, requires the interaction of four primary components (facilitator, participants, context, and program) with their associated processes (mentoring and coaching; relationships and networks; organizations, systems, and cultures; and tasks and activities) – all in the workplace (O'Sullivan, Irby, 2011, 422, 424).

Sorcinelli (2007) identified a constellation of issues that coalesced around three primary challenges and forces of change: the changing professoriate (facing a growing array of changing roles and responsibilities that will require them to engage in ongoing professional growth: expanding faculty roles, finding balance, needs of new faculty), the changing nature of the student body (increasing multiculturalism and diversity, the challenges of the underprepared student), the changing nature of teaching, learning, and scholarship (emphasizing learner-centered teaching, integrating technology into teaching and learning, emphasizing assessment of student learning outcomes, expanding definitions of scholarship, building interdisciplinary collaborations).

FD activities can move along two dimensions: from individual (independent) experiences to group (collective) learning, and from informal approaches to more formal ones (Steinert, 2010).

FIG. 1. *Faculty Development Approach*

Source: Steinert, 2010 (adapted)
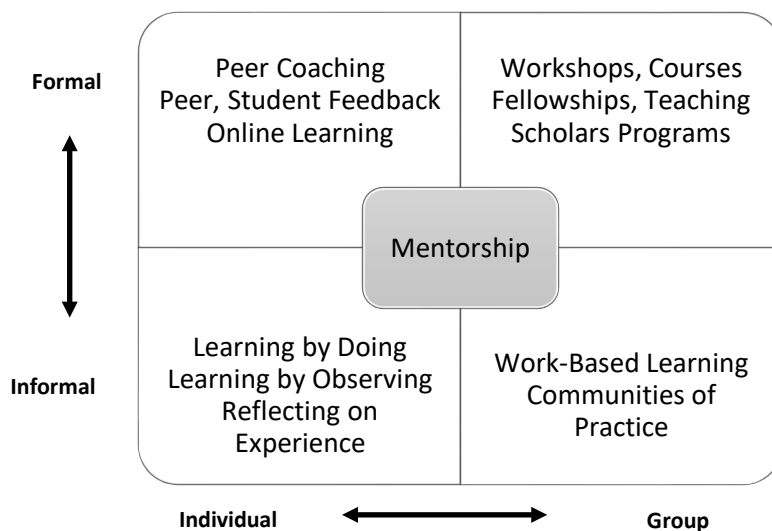
As Steinert (2014) pointed out, includes both formal and informal activities that address the multiple roles and responsibilities of faculty members in a variety of settings; has a role in sustaining professionals as teachers, educators, leaders and managers, researchers and scholars; it can help to enhance academic and career development; it can promote change at the individual and organizational level; can help to support curricular change; it can also support the accreditation and certification of teachers and educators.

faculty members can develop expertise through experience, observation, and reflection; they can also improve their skills as teachers and educators through peer coaching, learner feedback, online learning, and workplace learning, often by being a member of a community of practice. Thus, faculty development programs can differ in format (e.g. from one-time workshops to longitudinal programs) and purpose (e.g. from focusing on teaching beliefs and skills to educational leader- ship and scholarship), in both individual and group settings, using a variety of educational strategies. Mentors can also help faculty members enhance their teaching effectiveness (Steinert 2016, 770).

Each higher education institution should develop adequate strategies to enhance teaching and to improve the quality of learning promoting pedagogical innovation, including the use of digital technologies.

The professional development of university teachers has long been a policy priority of Higher Education on a global scale, and a strategic driver for the improvement of student learning (Felisatti, 2016; Saroyan, Amundsen, 2004). Indeed, Universities are called to respond to new challenges, including: the heterogeneity of students and the need to promote their 'hard' as well as 'soft' skills; the reorganization of courses to ensure greater coherence with the emerging professions; the rethinking of teaching.

The reform inspired by the Bologna process has led to institutional changes in the way of organizing teaching:

- to harmonise higher education systems in the European area in order to achieve a common understanding not so much of curricula as of course structures;
- to promote the development of teaching skills and develop monitoring and evaluation strategies (ENQA, 2015) to ensure that adequate levels of teaching quality and student service are achieved.

As early as 2013, the European Commission recommended that European universities 'care for' the pedagogical training of teachers along the lines determined by ENQA (2007). The intent is to recognize and certify the pedagogical competences of academics in designing, delivering and assessing learning (Biggs, Tang 2007; Felisatti, Serbati, 2017; Perla, Vinci 2018, 2018b, 2021b; Perla, 2018; Vinci, 2020). Two issues are highlighted in the report *Modernisation of Higher Education in Europe: Academic Staff* (EC 2017). The first concerns the lack of initiatives aimed at the lifelong professional development of professors (which, if present, remain isolated and episodic). The second regards the lack of activities targeted at PhDs and young researchers.

In recent decades, Teaching and Learning Centers have been built at international level and they provide validation and valorization of academics' competences developed through training (Felisatti, Serbati, 2017).

The need for research processes and innovation in teaching methods has become even more pressing with the 2020 pandemic emergency. In that circumstance, all universities were forced to improvise and hybridize teaching with digital tools. The traditional scholarship of teaching and learning of the Italian university has thus been transformed into a field of experimentation of practices (Perla et al. 2021).

As Perla, Scarinci and Amati (2020) point out, the pandemic has placed teachers in front of the need to redesign their teaching action, considering technologies no longer simple tools for the transmission of knowledge: teaching is redefined as a mediated action with a high potential for hybridization.

University teaching occurs across a range of complex competences and tailored strategies to be accomplished throughout the experience. It can only be promoted and enhanced (rather than evaluated) through reflective and transformative training practices that engage professors by means of participatory, multi-level, multi-stakeholder survey methods – such as questionnaires, focus groups, interviews, site-visits, syllabi analysis, analysis of trainer and/or supervisor notes, students evaluation of teaching, monitoring of learning outcomes achievement, logbooks – as well as qualitative-quantitative and mixed-methods research approaches (Stes *et al.*, 2010).

These tools can account for the plurality and complexity of the effects of education.

2. Italian experiences for innovation in Higher Education

The Italian higher education system has appeared, for many years, reluctant and unable to develop effective policies for change, within a highly centralised system, in which the opportunities for training and professional development of staff have been for decades nil or, mostly, characterised by 'fragmented' approaches: disconnected from the organisation's objectives, perceived as a 'luxury' or as an unnecessary cost (also because, as already mentioned, not subject to evaluation), localised at departmental level and not at system level, based on content-based, strictly disciplinary training paths. These approaches should leave place, instead, to 'formalised' ones – systemic, integral parts of career development, linked to human resources needs and individual self-assessment needs, more focused on skills, carried out by trainers with a specific expertise – and 'focused', in which training and professional development are considered permanent, adaptive processes, essential for the survival of the organisation, linked to organisational strategies and individual goals, based on on-the-job training and entrusted to managerial responsibility (Brown, Sommerlad, 1992; Harrison, 2009). Recalling McCaffery's (2019) reflections, university vocational training should respond to the acronym 'Career Learning' (pp. 265-266), i.e. be, literally, Comprehensive, Anticipatory, Research-based, Exemplary,

Embedded, Reflective and have curricular design criteria such as Linked and interconnected, Empowering and transformative, Adaptable and dynamic, Reflective and improvement-oriented, Non-hierarchical, Interactive, Network and group-based, Generative and knowledge-creating.

Several delays are confirmed on this regard for the Italian case (Luzzatto, Turri, 2016): the rate of graduates remains the lowest in Europe; the number of dropouts is among the highest; unemployment among graduates reaches 25%, thus showing a mismatch between market offer and demand.

After the phase of reorganization of the educational paths and the one related to the introduction of evaluation strategies for quality assurance (ANVUR), the Italian path to the Bologna process now requires promoting teaching and learning practice.

In the absence of a national university policy, many Italian universities – also driven by Faculty Development actions carried out at the international level (Sorcinelli et al. 2006; Viteritti *et al.,* 2020) – have been experimenting for less than a decade from-below training programs (for new faculty or those already in service) aimed at improving the quality of university teaching. These experiences are emerging in individual universities (Lotti, Lampugnani, 2020; Perla, Vinci, 2021b) and they still lack visibility, recognition and national coordination. Moreover, there is a lack of models for assessing the outcomes of training – as intended from the perspective of assessment and feedback for learning (Grion *et al.,* 2017) – capable of monitoring the impacts of faculty development initiatives and enhancing the plurality of training experiences, which run the risk of fragmentation and compartmentalization.

Only very recently, also in Italy, has the importance of supporting teaching professionalism and the development of innovative teaching methodologies assumed a central role at a regulatory level – see AVA Guidelines 2017, *Guida alla scrittura degli ordinamenti didattici a.a. 2018/19*; CUN, Ministerial Decree no. 06 of 07/01/2019 *Autovalutazione, valutazione, accreditamento iniziale and periodico delle sedi and dei corsi di studio*; the Guidelines drawn up by the QUARC_docente group[1], which emphasise the valorisation of the relationship between teaching and research and identify a path that starts from the identification of criteria for 'good teaching'[2] – and in research: pioneering, in this direction, is the PRODID project, born on the initiative of Ettore Felisatti at the University

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[1] Established in 2015, the ANVUR Working Group on the qualification and recognition of teaching skills in the university system, called QUARC_docente (Qualification and Recognition of the Teaching Skills of Teachers in the University System), has drawn up a number of strategic guidelines for enhancing teaching professionalism and improving the quality of teaching and learning processes.

[2] The characteristics of didactics enunciated by the QUARC_doctor guidelines are: the centrality of the student; didactic innovation and learning methodologies; ICT; monitoring and evaluation of learning; internationalisation; lifelong/lifewide learning and employability.

of Padua (Felisatti, Serbati, 2015) and subsequently implemented by the network of Italian universities (Bari, Camerino, Catania, Florence, Foggia, Genoa, Turin) constituting the Italian Association for the promotion and development of didactics, learning and teaching in universities (initiatives shared on the occasion of the conference held in Bari on 28 June 2017 – ASDUNI Network, 2017 – and of the conference Faculty development and enhancement of the teaching skills of university teachers held in Genoa on 23-24 May 2019).

3. Uniba case-study: a curriculum model in higher education

The University of Bari has started, on the basis of the needs analysis emerging from the PRODID research project (Perla, Vinci, 2018a, 2018b), the structuring of pilot training paths – personalized according to different target groups (see Tab. 1) – for the professional development of university teachers in UNIBA Teaching Learning Laboratory (TLL)[3], located at the Department of Education Sciences, Psychology, Communication.

TAB. 1. *Structure of the training activities of the first edition of F*

Target group				
New recruits, CSD coordinators, heads of teaching units, accreditation group, department directors, first-year teachers. 167 people, of which 47 Researchers; 108 1st or 2nd level teachers newly recruited through transfer or qualification; 12 Coordinators of the Schools undergoing an ANVUR accreditation visit.				
Training modules				
Disciplinary syllabi and constructive alignment (teaching methods and evaluation practices with the learning objectives and learning outcomes as expected)	*Didactic mediation* (Knowledge bases, skills and tools for the implementation of learner-centred teaching interventions for small and large groups)	*Effective communication and public speaking* (basic knowledge and skills for effective content communication aimed at student participation/involvement)	*Design and assessment* (knowledge bases, skills and tools for a 'competence-based' approach to the discipline)	*Interdisciplinary knowledge* (shared reflection on the pedagogical and technological components of disciplinary knowledge content. Inter/transdisciplinary connection)

TLL is a multidisciplinary center primarily utilizes pedagogical knowledge but it also integrates different disciplines to create a broad understanding of teaching-learning processes and their dimensions: the content pedagogical knowledge, the sources that generate it, the methods of its transmission (Shulman, 1987).

The first broader course in university pedagogy was developed in 2018; this was a one-year course targeted for university teachers, which concentrated on Syllabus design, university teaching and on assessing students' learning outcomes.

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[3] UNIBA TLL is member of ASDUNI (https://asduni.it).

The main practices of this TLL Centre are:

1. to coordinate and organize courses on university pedagogy for teachers, researchers and doctoral students within all discipline at the University of Bari,
2. to carry out research on faculty development programs for the quality enhancement of teaching and learning and University's strategic development, above all, disciplinary didactic research in which devices, toolkits and joint co-designs with the area of pedagogical disciplines can be tried out;
3. to coordinate the research and the use of digital tools for enhancing teaching and learning at the university
4. to improve teachers' skills and understand the factors of high-quality teaching through assessing the outcomes and impacts of academic development.

The curricular model of TLL is based on the recursiveness between theory and practice and on the representation of the teacher's knowledge as 'professional', practical (Damiano, 2013): it is necessary to understand how this 'sophisticated' knowledge (Perla *et al.,* 2019) is actually carried out in concrete reality, analyzing the variables, the processes that take place, the procedures, the techniques used.

The model underlying these activities – already tested by the Faculty of Engineering (LTH) of Lund University in Sweden – considers pedagogical competence in teaching (Tågerud, 2010, 61) as a spiral process (according to the model inspired by Kolb's Learning Cycle: Kolb, 1984) in which theoretical knowledge (Theory: knowledge of teaching and learning), pedagogical practice (Student learning-Teaching) and teaching skills (Teaching skills: planning of teaching; observation of teaching and learning) interact. TLL includes interdisciplinary teams (Newell, 1994) composed of teachers from different epistemological perspectives who can cooperate in course design and peer learning practices (Perla, Vinci 2021b).

The Uniba curricular model has several cascading target levels:

- at an institutional level (*macro*), the University Quality Presidium;
- at the level of training for trainers (*meso*), the departmental managers;
- at the level of groups of teachers (*micro*), the communities of practice constituted from below.

The three main axes of the model concern:

- active learning and alignment between design and evaluation;
- hybrid mediation;
- co-costruction and epistemological dialectics.

FIG. 2. *UNIBA curricular model*
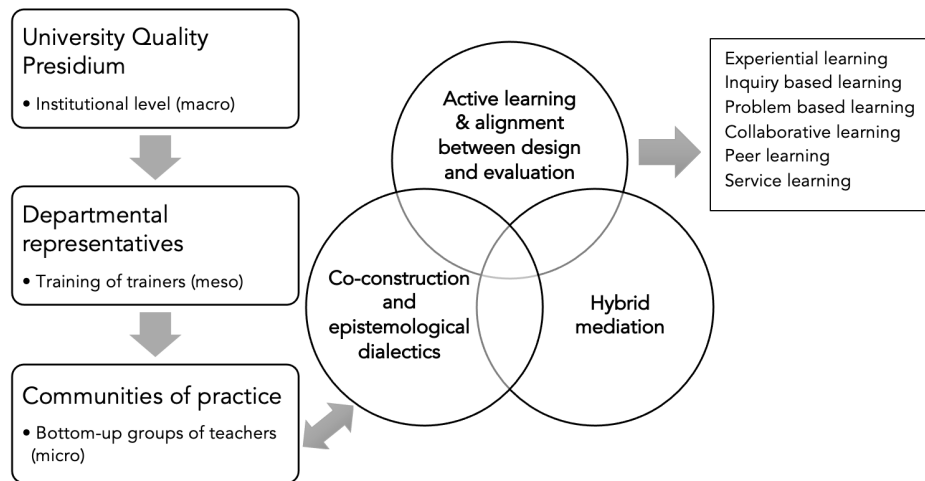
The model also provides:
- evaluation actions, such as monitoring the path and customer satisfaction actions;
- documentation actions, such as the drafting of an annual training report to be returned to the departmental communities;
- communication actions, such as short video spots and podcasts to be advertised on the University website.

FIG. 3. *UNIBA curricular model: evaluation, communication, documentation*
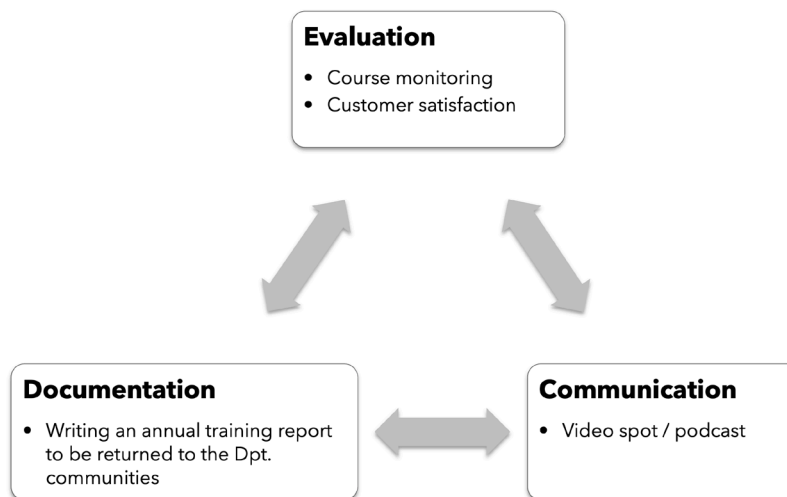
The training model underlying this knowledge requires knowledge of all the tools – mediators (active, iconic, symbolic), didactic formats, devices for assessing disciplinary and transversal learning – which do not directly produce learning, but create the conditions for learning to take place through processes of translation, transposition, metaphorisation, substitution of experience (Damiano, 2013; Agrati, 2020). This wealth of knowledge is not easily transferable into the competences of a 'pure' disciplinary researcher also because the disciplinary communities do not encourage research in disciplinary didactics. For this reason, a serious co-

research work is needed, to be started in all possible places, because only by scientifically nourishing the epistemological dialectic between knowledge will it be possible to overcome the obstacle of curricular compartmentalization.

The curricular model is based on adult learning (Knowles, 1980) and methodologies for professional learning, in particular the so-called 'artefacts', which Orland-Barak and Maskit (2017) classify at three levels:

− communication artefacts such as stories, images, cases, videos, simulations, portfolios, lesson-studies, action-research;
− devices that facilitate the generation of practices, for example storytelling or video-recording, analysis of practice, observation or documentation of experience or, again, such as mediatised communication devices (educational technologies);
− artefacts and devices that deal with how to facilitate the dynamics of relationships in order to operate negotiations of experience).

The training model for the university teacher requires a research posture of co-construction and ample space dedicated to the epistemological dialectic between disciplinary teacher and didactic. The training modules designed in the TLL have therefore been constructed on the basis of a constant dialectic (and subject of video research) between the group of researchers of general didactics and the disciplinary target groups.

Conclusion and next step

The experience of the TLL Uniba represents an example of modelling a training pathway – personalised, certified, learner-centered and functional to promote active learning (Coryell, 2017) – for Faculty Development.

The training design in Uniba, which is in the full experimental phase, is showing the need for a connection with other experiences at national level and for a framework for the Italian context including professional standards useful for the development of teaching competences and strategical for appraisal, recognition and enhancement systems.

In the Italian system, unlike other national contexts, there is no shared definition of a didactic profile of teaching on which to direct promotion, development and monitoring actions. The adoption of a professional framework, to be developed in a negotiated and shared form, would allow not only to have a model of analysis of teaching practice, but also to develop scientific devices and projects in support of professional quality, also facilitating the academic organizations in the choices for the provision of rewards currently too dependent on organizational aspects and the opinions of students.

In order to meet this need, ANVUR has recently proposed the setting up of a specific working group[4], with the task of drawing up a framework document to clarify, stimulate, guide and propose on the issues of competence and assessment in the teaching field. The aim of the document is to encourage the strengthening of quality assurance actions, with specific attention to the development of systems for the professional quality of teaching and the implementation of strategies for training, experimentation, evaluation and recognition in which the universities, with their own bodies (Quality Chairs, Evaluation Boards, Joint Committees, Commissions, etc.) are the main protagonists. The document, to be drawn up in terms of 'guidelines for a system for recognising and enhancing the teaching skills of university lecturers', is to be seen as a proposal to be presented to a broader debate between all the players in the field and aimed at promoting a joint reflection on the subject of university lecturing, capable of permanently encouraging and supporting innovation in teaching, while respecting the responsible autonomy of the universities.

A roadmap is envisaged which envisages the following steps:

1. exploration and mapping of the Faculty Development training experiences that are being experimented locally, in a situated manner, in many Italian universities: in order to carry out this reconnaissance, the involvement of the governance bodies responsible for the improvement of university teaching is envisaged (first and foremost the University Quality Control) and the combined use of mixed research methods, of a qualitative-quantitative type (questionnaires and interviews with privileged witnesses);

2. definition of competence standards and profiles of university teachers, which are functional both for the enhancement of the quality of university teaching and for the professional recognition of teachers: in order to formalise the competence framework, the group will make use of the results of the exploratory research on Faculty Development experiences, the literature review and the consultation of experts;

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[4] This is the working group entitled 'Recognition and enhancement of the teaching skills of university teachers' (Resolution No. 40 of 25/02/2021) consisting of the following national and international experts: Javiera Atenas (University of Suffolk), Giovanni Betta (University of Cassino and Lazio Meridionale), Filomena Corbo (University of Bari Aldo Moro), Elisabetta Corsi (University of Roma La Sapienza), Ettore Felisatti (University of Padova), Anna Catherine Isaacs (University of Pisa), Pierpaolo Limone (University of Foggia), Bianca Maria Lombardo (University of Catania), Mercedes Lopez Aguado (University of Leon), Carlo Mariconda (University of Padova), Marisa Michelini (University of Udine), Loredana Perla (University of Bari Aldo Moro), Anna Serbati (University of Padova), Alfred Tenore (California University of Science and Medicine), Viviana Vinci (Mediterranea University of Reggio Calabria); see: https://www.anvur.it/gruppo-di-lavoro-ric/gruppo-di-lavoro-riconoscimento-e-valorizzazione-delle-competenze-didattiche-della-docenza-universitaria/.

3. identification of incentives and rewarding actions for the enhancement of the teaching skills of teachers participating in Faculty Development training courses;
4. formulation of 'Guidelines for a system of recognition and enhancement of the teaching skills of university teachers'.

FIG. **4.** *Objectives of the ANVUR group*
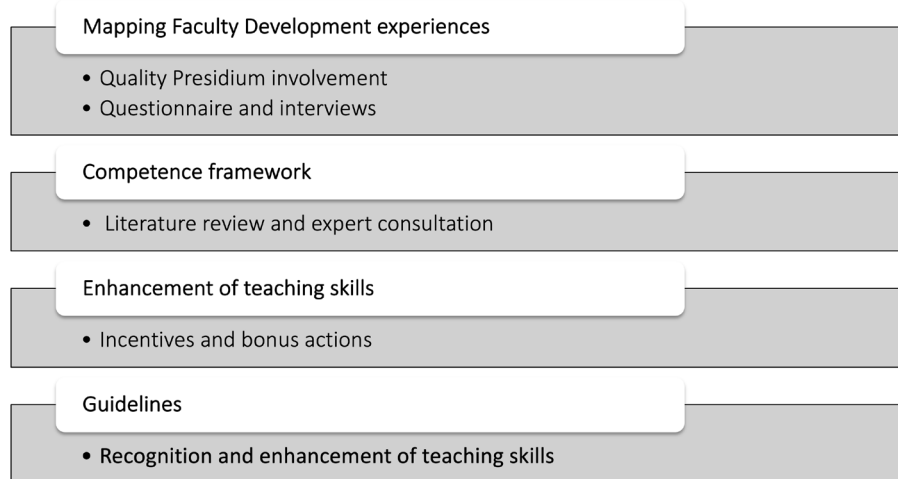
The Group, made up of experts from the Italian academic world, will operate for one year within ANVUR and will benefit from scientific coordination by an external expert and technical and organisational coordination by the Agency's staff.

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The New Challenges of the Post-Pandemic University Formative Processes, Third Mission and Active Citizenship

Helices Overlapping in the Italian Mega-Universities. The Influence of Innovative Didactics in Promoting the Third Mission

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ABSTRACT: *The university system is increasingly committed to developing a continuous and interdependent interaction with the labor market and civil society. This implies the diversification of its missions which is recognized by different studies and models, as the helixes models. Many studies and activities are carried out to promote the link between teaching and research on the one hand and research and the third mission, on the other, to favor the dissemination of knowledge outside. On the contrary, few studies – and therefore few actions – have been undertaken to link teaching and the third mission, until now mainly limited to placement initiatives. The paper presents a study on the role of didactic innovation to provide added value to foster the relationships with the external actors. It aims to understand how the adoption of teaching innovation encourages the third mission and the involvement of the stakeholders. The attention is focused on the role of the professors in promoting relations with external actors. Some results of a survey that involved about 300 teachers in 5 Italian mega-universities are discussed. The survey shows that the analyzed Italian mega-universities are engaged in both didactic innovation and third mission, but they can better systematize their activities by activating the 5 helices and implementing the effectiveness of the models. In any case, the commitment of Italian universities is on the right track.*

KEYWORDS: *Innovative didactics, Third mission, Triple Quadruple, Quintuple Helix models*

Introduction

The pandemic has accelerated the transformation of teaching practices. The related debate has been developing at the international level and in Italy, where some virtuous experiences have been consolidating, even before the health emergency. Several universities have already launched projects for innovative teaching which, in some cases, have promoted – intentionally or not – the third mission. Before the lockdown was imposed in Italy, we started a research project to explore the forms and the processes through which didactics contributes to redefining the relationship between the university and the external context, and therefore to interact with the third mission. This paper presents a focus

on the role of professors to promote relations with the external actors when they teach. In fact, over the last decades not only learning processes and teaching models but also organizational models of the university have been changing and have been transforming the academic profession.

To study these interactions, the helices models (Etzkovitz, Leydesdorff, 2000; Carayannis, Campbell, 2009; 2010; Carayannis *et al.,* 2012) have been considered: in fact, they have identified the actors involved in the creation of knowledge within universities, so promoting the third mission more efficiently. Furthermore, they have studied the interactions between the university and the external stakeholders from a theoretical point of view.

In the literature review, we have focused our attention on two main themes related to the helices models: the evolution of the concept of the third mission through phases characterized by a progressive formalization of practices that have already been part of the research and teaching activities in the past (Perulli, 2018; Semenza, 2018); the studies on didactics or third mission or digital education that explore the connection between the two missions, despite not having systematically investigated the relationship (Anzivino, Rostan, 2017; Braga, 2017; Corbo *et. al.*, 2019; Parola, 2019; Rostan, 2019). In the theoretical framework, we have analyzed the themes focusing the attention on the implications for the academic profession. The change in training and organizational models related to the third mission redefines it regarding activities, roles, and practices. The changes in learning processes and innovative teaching models make the academic profession more open to the external context and transform it. Consequently, training courses about 'teaching to teach' are needed (Felisatti, Serbati, 2017).

In the second part, we present some results of a web survey that involved about 300 teachers in 5 Italian mega-universities on the role of didactic innovation to provide added value to promote the relationships with the external actors. We focus our attention on the section dedicated to the third mission, which aims to explore the interactions between the missions and the actors. We are interested in discussing the results on the role of professors in fostering the relations with the other actors, particularly on the following aspects: third mission activities carried out by respondents, the involvement of stakeholders in I and II level didactic activities, and the relationship between teaching, research and the third mission in the activity of the respondents.

1. Theoretical framework: the interactions between (innovative) didactics and third mission

The university system is increasingly committed to developing a continuous and interdependent interaction with the labor market and civil society (Boffo, Moscati, 2015; Lazzeroni, Piccaluga, 2008; Laredo, 2007;

Moretti, 2012). This implies the diversification of its missions which is recognized by different studies and models. The triple helix model (Etzkovitz, Leydesdorff, 2000) underlines the institutionalized cooperation between universities, business, and the state: it is a «spiral model of innovation that implies multiple and reciprocal relationships in the process of knowledge capitalization» (Gherardini, 2015, 37, our translation). The fourth and the quintuple helix models (Carayannis, Campbell, 2009; 2010; Carayannis *et al.,* 2012) introduce other actors, the public (defined as the media-based and culture-based public and civil society, implying media, creative industries, culture, values, lifestyles, art, and the so-called creative class) and the natural social environment, respectively. Fig. 1 shows the actors in the subsystems of the Quintuple Helix model.

FIG. 1. *The subsystems of the Quintuple Helix model*
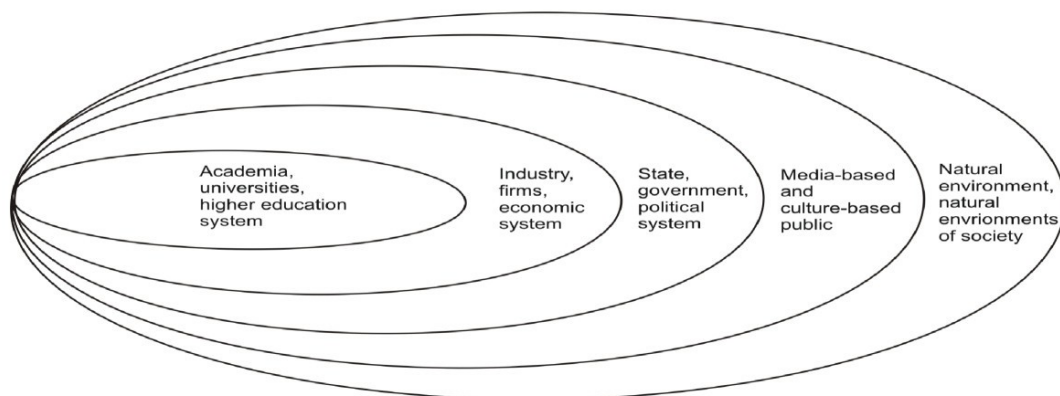
Source: Carayannis *et al.,* 2012 (modified from Etzkowitz, Leydesdorff, 2000, and Carayannis and Campbell 2009; 2010).

Also in the past, some academic practices already incorporated into research and teaching activities had social and economic consequences, but today the difference is related to the direct involvement of external actors and the contribution that they give to the third mission (Boffo, Moscati, 2015). The terminological and conceptual evolution of the expression 'third mission' helps to clarify this difference.

Perulli (2018) identifies three main phases through which a progressive formalization of practices that already in the past have been part of research and teaching activities has been developed.

The first phase is based on the recognition of the university's contribution to economic development through research activities «aimed at commercialization and exploitation of scientific knowledge in economic terms» (Perulli, 2018, 24, our translation). Regarding the implications for the academic profession, this implies, especially in some areas (the STEM sectors), an enhancement of the entrepreneurial capacity of the professor, both in the raising of funds and in the promotion of useful research and expendable knowledge.

In the second phase, the concept expands as a plural third mission, including other activities carried out by academics. Under the influence of New Public Management, the first forms of the link between third mission and didactic activities are identified, both in the neoliberal formulas (for example, about the effectiveness of the course and training performance indexes), and in the inclusion among third mission activities of those forms of knowledge transmission aimed at cultural, social, and political development, as well as economic, such as continuing education (ibidem).

In the second phase, a plural third mission concept also includes other activities carried out by academics. Due to the influence of New Public Management, the earliest forms of the relations between the third mission and didactic activities are identified, both in the neoliberal formulas (for example, about course effectiveness and training performance indexes), and including other forms of knowledge transmission, such as continuing education.

The third is a hybrid third mission phase, which includes the widest possible range of all forms of connection between universities and the territory, with economic, social, political, and cultural consequences. Regarding the academic profession, this involves a

> transformation of the functions and contents of the academic profession in the direction of the acquisition of competencies and skills oriented towards the development – in a general sense – of society and the further distancing of the idea of research as an end in itself, as still existed in the traditional distinction between basic and applied research» (ivi, 32, our translation).

As a result of these processes, today the professor is characterized by «converging and mixing skills and attitudes previously belonging to different and separate professional and functional figures» (ivi: 20, our translation). We are faced with a «new professional configuration starting from a different and unprecedented combination of pre-existing activities and roles, potentially also conflicting with each other» (Ibidem). This is not only a consequence of the evolution of the third mission, as the literature on the redefinition of the academic profession shows (Brennan *et al.,* 2017; Cummings, Teichler, 2015; Kehm, Teichler, 2012; Marini *et al.,* 2019).

The concept of the third mission has been much explored by scholars in relations to the research, perhaps due to the initial phase in conceptualizing the third mission as an extension of the research activities mentioned above. Many studies and activities are also carried out to promote the link between teaching and research. On the contrary, fewer studies – and therefore fewer actions – have been undertaken to link teaching and the third mission, whereas the concept of the third mission has been evolved including didactics activities.

Some scholars have studied the third mission, didactics, or digital education, identifying some relationships between the two missions, but without exploring empirically their interaction. They have focused on the following topics: the evolution of the third mission, mentioned above, identifying the formalization of practices already incorporated into teaching (other than research) activities (Perulli *et al.,* 2018); the classification systems and evaluation of the third mission whereby third mission activities are closely linked to already existing didactic factors (Semenza, 2018); changes of the academic practices, roles, and identity; the link between didactics and the labor market, particularly regarding employability, including the role of career services and placement activities (Boffo, Fedeli, 2018; Garis, 2014) and service-learning (Colazzo, Ellerani, 2018).

Moreover, there are the relevant contributes by Parola (2019), Braga (2017), and Rostan (2019) concerning didactics and digital education.

As Parola notes (2019, 132, our translation):

> The new scenarios concerning digital issues in the training and research activities […] will come true thanks to a solid internal organization of the universities and the establishment of links within collaborative systems between educational institutions, the productive world, and the territory.

In this way, «innovative didactics practices could allow the universities to be placed more effectively in the social reality so that higher education truly become a lever to create a link with the labor market» (Braga, 2017, 430, our translation). In this regard, also Rostan stresses the propulsive value of innovative didactics for the third mission. He argues that

> if we want to innovate didactics we cannot just look at what happens 'in the classroom'. We must also look at what happens 'outside the classroom' (Anzivino, Rostan, 2017). This implies also focusing the attention on the context or environment in which students live. […] The relations that the university weaves […] with the city play a crucial role. Presiding over these relationships is important because there is no didactic innovation without the understanding of student life 'outside the classroom' and because other actors outside the universities can greatly contribute to the creation of an environment conducive to formative success. (Rostan, 2019, 498, our translation)

There is no progress without a close relationship between the university, the labor market, and the other stakeholders while respecting the specific and different roles and missions. This process of interaction can satisfy the needs of the different actors of the helices models and helps to reduce the distances.

2. Method

The paper presents some results of a web survey that involved about 300 teachers in 5 Italian mega-universities on the role of didactic innovation to promote the relationship with external actors. The general purposes of the research project are to verify the state of the art of the third mission and to understand how the adoption of teaching innovation encourages the third mission and the involvement of the stakeholders.

After identifying and analyzing innovation didactics projects in 8 of 10 mega-universities, in February 2020 we carried out the survey through a semi-structured questionnaire in 5 mega-universities: Turin, Bologna, Pisa, Rome Sapienza, Naples Federico II. In this paper, we present some results of the section dedicated to the third mission, which aims 'to provide the framework of the interaction between missions and actors, and the activities involving teachers the most, and above all, to understand which of these actions affect teaching activities' (Mazza Valentini, 2020). Particularly, the focus presented in this paper aims to analyze: *i*) the forms of interaction between didactics and the third mission promoted by the respondents; *ii*) the potential offered by innovative didactics to improve the relations with the labor market; *iii*) the forms of collaboration between professors and the different actors of the external context in the creation of knowledge; *iv*) the role of the professor as a facilitator is to promote the interaction between the helices.

We carried out a descriptive data analysis, based on mono and bivariate analysis, and an interpretative analysis based on regressive multivariate techniques. The answer rate was at 26% (314 responses), and in some universities, even a third of the population. The respondents were mainly associate professors (41,4%) and RTDB (22,9%)[1].

3. Results

The survey shows that lecturers are quite active in the third mission, even if they carry out these activities in a non-systematic and very diversified way, especially in the scientific area. New recruits seem to make an active contribution to the third mission of the academy, even if, in general, all teachers make more use of personal relationships than an 'institutionalized' approach. Considering the academic role, the RTDBs are involved in many third mission activities: they participate in events with non-university organizations (17.2%), produce scientific publications together with non-university authors (14.5%), carry out research with non-university organizations (14.3%), participate in bodies of non-university organizations (12.4%) and make the results of their research

[1] See Mazza and Valentini (2020) to deepen the methodology of the research project and the characteristics of the sample in detail.

available (5.4%). RTDAs mainly participate in events with non-university organizations (22.7%), produce scientific publications together with non-university authors (13.1%), and provide advice for non-university organizations (9.1%). On the other hand, associate professors are mainly engaged in commissioned research (11.3%), while full professors are mainly dedicated to scientific dissemination (9.3%) and making their research results available (7%). It seems that the presence of temporary researchers allows a greater commitment and a greater diversification of third mission activities. These activities are carried out mainly at an individual level because of already established personal relationships (68%) – of which, only in a few cases, were built ad hoc to pursue teaching objectives (13%). Less than a third of respondents (32%) carry out these activities based on an agreement between the university and the external organization. The most widespread activities are probably more related to research than to teaching (see Tab. 1).

TAB. 1. *Third mission activities carried out by respondents (2020) (%)*

	Yes, as a priority	*Yes, occasionally*	*No, but I would be willing*	*No, and I am not willing*
Organization of concerts, theatrical performances, film reviews, sporting events, exhibitions, exhibitions	30,0	1,9	22,9	**74,9**
Contribution to the formulation or evaluation of public policies	1,3	13,4	19,7	**65,6**
Production of radio and/or television programs	4,1	17,5	23,9	**54,5**
School-Work Alternation Activities	2,9	10,2	33,4	**53,5**
Planning of study courses in collaboration with non-university organizations	0,6	14,6	31,8	**52,9**
Assignments as a trainer at institutions and/or companies	1,9	25,8	22,0	**50,4**
Engagement and interaction activities with the world of school (e.g., simulations, hands-on experiments, other laboratory activities, innovative teaching, children university)	3,2	15,0	31,8	**50,0**
Continuing education activities, distance learning courses	6,1	18,8	26,1	**49,1**
Reports to students of job opportunities and/or to bodies/companies reports of students (job placement)	2,5	12,1	36,9	**48,4**
Publication and management of websites and/or other digital communication and scientific dissemination channels (excluding institutional websites of the University, Faculty, Department, CDS, etc.)	3,8	22,9	34,4	**38,9**
Organization of events with teachers and audiences (debates, scientific festivals and coffees, online consultations)	5,4	23,6	37,3	**33,8**
Participation in urban development projects or enhancement of the territory	8,9	28,7	32,2	**30,3**
Supervision of undergraduates, PhD students or postdoc with non-university organizations	8,3	**41,4**	20,4	30,0
TOT MR% (3.614 answers)	**4,3**	**21,4**	**32,4**	**41,9**

Source: data n.s. processing (2020)

Nonetheless, two important results show a promising openness to the external context and the actual role of the teachers in promoting relations with stakeholders identified in the quintuple helix model. Firstly, the index on the third mission activities more directly connected to the didactic activities shows that the intensity of the commitment is high, in line with the other third mission activities (Mazza, Valentini, 2020)[2]. Secondly, many university teachers involve stakeholders in their teaching, as Tab. 2 shows.

TAB. 2. *The involvement of stakeholders in I and II level didactic activities (2020) (%)*

	non-university research centers	*non-profit organizations*	*companies*	*public and governmental bodies*	*educational institutions*	*other professionals, studies, associations*	*health institutions*	*TOT. MR%*
Classroom testimonials	23,4	18,0	16,0	14,3	14,3	7,8	6,1	**32,1**
Visits to institutions, bodies, organizations	24,1	14,5	15,7	15,7	18,1	7,2	4,6	**21,8**
Design of curricular apprenticeships	23,3	19,2	17,1	13,7	11,6	7,5	7,5	**19,2**
Realization of project work agreed with the partners	23,4	19,5	16,9	19,5	11,7	5,2	3,9	**10,1**
Realization of classroom jobs/exercises defined with stakeholders	27,7	20,0	12,3	12,3	13,8	9,2	4,6	**8,5**
Involvement in the planning of the teaching	31,7	14,6	14,6	14,6	14,6	4,9	4,3	**5,4**
Presentation and evaluation of students' work together with partners	27,3	22,7	9,1	13,6	9,1	13,6	4,5	**2,9**
TOT. MR	**24,4**	**17,7**	**15,6**	**14,8**	**14,2**	**7,5**	**5,7**	*761*

Source: data n.s. processing (2020)

The stakeholders most involved are mainly non-university research institutes or centers (24.4%), non-profit and profit organizations (respectively 17,7% and 15.6%), governmental or public sector organizations (14.8%), educational institutions (14.2), other professionals, associated firms, professional and trade associations, etc. (7.5%) and health institutions (5.7%) (See Tab. 2).

The disciplinary area has a significant impact on the type of relationships established (See Tab. 3).

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[2] We have estimated the Intensity of the Academics' Commitment (IAC) index on the third mission activities. Moreover, regarding the third mission, two sub-indices were built: the first (IACTMR) included activities not typically related to teaching, being more closely related to research; the second (IACTMD) included activities more typically related to didactics (Mazza, Valentini, 2020).

TAB. 3. *The involvement of stakeholders by respondents by macro disciplinary area (2020) (%)*

	Healthcare Area	Scientific Area	Socio-political Area	Humanistic Area	TOT. MR
non-university research centers	**30,4**	34,4	25,5	24,4	**29,5**
non-profit organizations	15,7	7,0	18,4	**20,3**	**14,9**
companies	11,1	**14,6**	9,2	6,5	**10,8**
public and governmental organizations	11,4	14,6	**18,4**	13,8	**13,6**
educational institutions	12,4	16,5	14,3	**24,4**	**15,8**
other professionals, studies, associations	6,9	6,9	**12,3**	7,3	**7,8**
health institutions	12,1	6,3	2,0	3,3	**7,7**
TOT. MR	**44,7**	**23,1**	**14,3**	**18,0**	*685*

Source: data n.s. processing (2020)

To deepen the role of professors in promoting the third mission activities through teaching activities we have examined the relationship between the three missions that characterize academic activity in the last five years. The relationship index is calculated on the basis of the weighted average on a scale from 0 (not at all) to 10 (totally) by dividing the sum of the products of the weighted votes ($x_i w_i$) by the sum of the weights (w_i).

TAB. 4. *The relationship between teaching, research, and third mission in the activity of the respondents (2020)*

connection between:	*Healthcare Area*	*Scientific Area*	*Socio-political Area*	*Humanistic Area*	*Average*
teaching and research	6.56	5.49	6.53	7.19	**6.40**
research and third mission	5.93	5.85	5.0	6.06	**6.03**
teaching and third mission	5.48	5.46	5.38	6.30	**5.60**

Source: data n.s. processing (2020). Note: The relationship index is calculated on the basis of the weighted average on a scale from 0 (not at all) to 10 (totally).

They favor above all the relationship between research and didactics (38% enough), and between research, and the third mission (35%) and less the relationship between didactics and third mission (31%). Anyway, these relationships do not seem significant, but only sufficient since the responses are around an average score of 6.5.

Observing data referred to disciplinary sectors, the relationship between research and didactics is considered quite significant especially by the teachers of the humanistic (45%) and medical (41%) areas, while

is below the average of the macro-areas in the political-social area (36%) and the scientific one (35%).

The relationship between research and the third mission assumes a quite greater significance in the social and political area (41%), perhaps also in relation to the greater orientation towards social improvement, followed by the humanistic area (37%).

Finally, the relationship between didactics and the third mission is considered quite significant especially in the humanistic area (40%) and in the scientific one (35%). The values of this relationship are lower in the medical area (30%) and the social and political one (27%), although in both is relevant the openness to the external context. In the first case, it is mainly oriented to the technology transfer, in the second case toward the social improvement. We suppose that the humanistic and scientific areas – which consider a priority the relationship between research and didactics – have a greater awareness of the importance of integrating this relationship, extending it to the third mission also in the didactic activities.

In Mazza and Valentini (2020) we have also calculated and discussed the correlation coefficient of the intensity of the commitment in the relationship between the missions to understand whether commitment to one mission incites commitment to the other two. The results show:
- a high coefficient between didactics and TM (IR: 0,95).
  On the other hand, there is
- little correlation between ID and TM (IR: 0,06). The commitment to ID is still not related to TM activities, indicating there is a lack of awareness of the possible connection, perhaps due to the underdevelopment of ID (Ivi: 532).

Conclusions

The survey shows that the analyzed Italian mega-universities are engaged in both didactic innovation and the third mission, but they can better systematize their activities by activating the 5 helices and implementing the effectiveness of the models. In any case, the commitment of Italian universities is on the right track.

This study aims to offer a starting framework that can be monitored over time to verify the progress of a more organic and systemic process of change in the university system concerning the relations between the actors.

Considering the results discussed in this paper focused on the role of professors and the estimate of the commitment rates in innovative didactics and the third mission presented in another article (Mazza, Valentini, 2020), we intend to create some indexes aimed at measuring the intensity rate of the 5 helices in the analyzed mega-universities, as indicated by the helices models introduced in the literature.

Moreover, stakeholders of the external context need to be involved in future research. We are going to interview them to find out about their satisfaction and methods of interaction with universities, considering all the actors identified in the quintuple helix model.

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Rethinking Internship Experiences Following the COVID-19

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ABSTRACT: *The third mission of the university corresponds to a varied set of activities and initiatives that characterize the academic life of the institutions. In fact, the pursuit of third mission initiatives has become of crucial importance for university structures, also due to the decrease in resources available to institutions. It also includes a series of other initiatives of a socio-cultural and educational nature. We can refer to a wide range of initiatives that range from continuing education to job accompaniment, from the production and management of cultural heritage and archaeological excavations, from clinical trials to public engagement. With the third mission is therefore also defined the social role of the University and its civic engagement, which is realized in a series of activities that concern consultation and dissemination of content, collaborations and partnerships. The third mission therefore can also be understood as a form of social responsibility of the universities, or a form of social engagement or social dimension, precisely because it is believed that universities can actively contribute to the social, cultural and institutional development of a territory. However, the third mission activities related to this field have taken on very particular connotations due to the sudden changes that have occurred as a result of the pandemic that has profoundly transformed educational contexts, territorial contexts, the labor market and the traditional routines of carrying out professional activities. The present contribution, in line with other research experiences conducted both nationally and internationally, aims to present an analysis of the ways in which internship relationships have been redefined as a result of the pandemic, taking into account both students' perspectives (perceptions of change due to the pandemic, evaluation of the ways in which work is carried out remotely, supervisor support) and the opinions of some stakeholders (host institutions that have had to redefine the ways in which traditional internships are carried out). All this because it is believed that the idea that the university can play an important social function, provided it is able to initiate actions of stakeholder engagement, can be established. The analysis follows a qualitative methodological framework and refers to the criteria adopted for the evaluation of the third mission (effectiveness of the actions implemented by universities within the local area of reference, comparison with national and international experiences, consultation with stakeholders involved in various ways).*

KEYWORDS: *Internship, Stakeholder engagement, Higher education, COVID-19
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Introduction

The third mission, however, does not only correspond to opening up to the socio-economic context through the exploitation and transfer of knowledge, but also includes, in addition to the economic exploitation of research, a series of other socio-cultural and educational initiatives.

With the third mission is therefore also defined the social role of the University and its civic engagement, which is realized in a series of activities that concern consultation and dissemination of content, collaborations and partnerships (Vargiu, 2012).

In practice, the third mission corresponds to a varied set of activities and services, which aim to integrate the institutional missions of teaching and research through the economic, social and cultural valorisation of knowledge (Martino, 2018). Among these, we can refer, in addition to patenting, technology transfer, contract research, clinical trials, and various initiatives ranging from continuing education to job accompaniment, production and management of cultural heritage and archaeological excavations, as well as public engagement.

The third mission therefore can also be understood as a form of social responsibility of the universities, or a form of social engagement or social dimension, precisely because it is believed that universities can actively contribute to the social, cultural and institutional development of a territories (Palumbo, 2019).

However, the third mission activities related to this field have taken on very particular connotations due to the sudden changes that have occurred as a result of the pandemic that has profoundly transformed educational contexts, territorial contexts, the labor market and the traditional routines of carrying out professional activities (Sofia, 2020).

As also confirmed by results of the OECD-EC study on the innovative potential of HEIs, universities in recent years have developed a good awareness that third mission is more than tech transfer, stressing their cultural and social role and their contribution for Sustainable and Development Goals (OECD, 2020).

The notion of third mission in the social sciences and humanities is still problematic, as is the concept of research impact. Several scholars have raised concerns that these activities may limit the academic freedom of researchers and, due to labour market pressures, reduce their ability to devélop critical thinking and unorthodox views. However, countries that have also experienced selective cuts in research funding in these disciplines have benefited from efforts to multiply connections with society and make existing ones more visible. In the Italian case, these public engagement efforts have also increased, as highlighted by the periodic evaluation programme of the third mission.

The changes that have taken place have affected the life of the universities and also the whole of the third mission activities (Pitrone, 2016). This pandemic crisis has redefined the life of institutions and has had a profound effect on relations with the outside world.

In this paper we will present some results of a survey on university internships which, in addition to being training opportunities for students, represent very important opportunities for contact between the academic world and the working world.

1. Internships and Stakeholder Engagement in Higher Education

The study makes reference to the concept of employability which refers to the enhancement of the student, the involvement of companies and the responsibility of universities which must involve social actors, especially with regard to evaluation processes, taking a 'multi-stakeholder' point of view.

In practice:
− it is not possible to conceive of a training action that is unidirectional and not open to comparison and sharing;
− it is not possible to neglect the needs of the stakeholders because otherwise there is a risk of implementing training actions which are not in line with the needs of the labour market.

The university risks failing in its intrinsic function of acting as a bridge for young graduates to help them enter the working world.

According to the definition provided by the European Union:

> employability is the combination of factors that enable people to prepare for and enter employment, remain in employment or progress in their careers, […] determined by personal aptitudes (including appropriate knowledge and skills); the way in which these aptitudes are presented in the labour market; the environmental and social context; and finally, the economic context (CEDEFOP, 2014).

The present contribution, in line with other research experiences conducted both nationally (Rella *et al.,* 2017; Albanese, 2021) and internationally (Briant, *et al.,* 2020; Hora *et al.,* 2020), aims to present an analysis of the ways in which internship relationships have been redefined as a result of the pandemic, taking into account both students' perspectives (perceptions of change due to the pandemic, evaluation of the ways in which work is carried out remotely, supervisor support) and the opinions of some stakeholders (host institutions that have had to redefine the ways in which traditional internships are carried out).

All this because it is believed that the idea that the university can play an important social function, provided it is able to initiate actions of stakeholder engagement, can be established.

2. The Case Study

The case study we are going to present concerns the internship experiences carried out by the students of the Department of Communication and Social Research of the Sapienza University. The Department is one of the first structures of Sapienza University for number of students. However, the survey does not allow to make generalisations with respect to the University, but it is a privileged opportunity to observe the phenomenon undergoing transformation.

The survey is following two paths: a survey on the students who have carried out internship activities in 2020 to study how they have experienced the forced interruptions of the experiences and how they have redefined the relationships of collaboration with the host institutions; a qualitative research on the tutors of the host institutions.

These two research paths complement the contents of the periodic monitoring of internships that the Department of Communication and Social Research has been carrying out since July 2016. This activity of monitoring experiences takes place through the administration of two questionnaires: one to assess the experiences made by the students and the other to detect the opinions expressed by the company tutors.

Other universities have conducted case studies similar to the one we are presenting.

Although these studies are not comparable because they refer to specific institutional contexts and involve few cases, they are nevertheless interesting material for developing a reflection on the ways in which internships are redefined, on the capacity of companies to initiate new ways of carrying out activities (blended or remote internships) and, more generally, on the employability of students.

A study conducted on 68 students in the degree course in Education and Training Sciences at the Università Cattolica del Sacro Cuore (Milan Campus), with the aim of investigate the acquisition of skills through an online internship. The research design was participatory, included an online accompaniment process, through mentoring and coaching proposals, both individual and group, and the analysis of the work produced by the students. The aim of the research was to bring out the experiences of the trainees in relation to the experimentation and acquisition of educational competences. The research aimed to bring out the trainees' experiences of experimenting with and acquiring educational skills in a process of 'experiential learning' in the field (where field also includes the digital and virtual dimension).

According to this research the trainees were not able to experience themselves within the educational and training relationship. However, they were able to exercise relational competences within the peer group and in limited interactions with managers and educators of the Milan municipality in charge of them.

Another study conducted in Australia, by the Queensland University of Technology, on a set of students in the Faculty of Creative Industries made use of the Community of Inquiry framework (COI) (Briant, *et al.,* 2020). The researchers, using this conceptual reference, followed

students who undertook distance learning placements, working with companies.

They found that although work placements are high impact and authentic experiences, they are often difficult for many students who are unable to attend companies due to work, study and life circumstances. In this case, the distance learning placement helped to overcome these barriers. The research referred to the concept of virtual internships and work-integrated learning. This is because workplace-based WIL «virtual internships can serve as a bridge between the academic world and the world of work, an increasingly virtual world» (Briant *et al.,* 2020).

Recent research into remote WIL offers the following recommendations: careful planning and preparation, regular on-line contact/communication, clearly outline expectations, compensate interns appropriately, connect the internship scheme with institutional diversity initiatives, employers must provide meaningful experiences for skills development.

The advantages of remote WIL have been identified as: mobility, flexibility, access, autonomy, empowerment, and professional networking. Students appreciate the capacity of the on-line environment, much the same as the physical one, to enhance the practicality of learning and the ability to then contextualise theory in practice.


3. Results

Every calendar year, just under 400 internships are activated by the Department of Communication and Social Research and about 200 host organisations are registered.

The fact that there is such a high number of host companies is partly determined by the nature of the Italian working world, which is mostly made up of medium-sized, small and micro enterprises. Some larger companies even host more than 20 trainees per year, such as Rai or large companies in the information sector.

In 2020, 376 internships were carried out, 23.7% fewer than in the previous year. From 2016 to 2019, on the other hand, internships had gradually increased due to the increase in the number of students enrolled in Master's degrees.

According to the data from the companies that filled in the evaluation questionnaires, in one third of the cases, registered as interruptions or extensions of the traineeship, the declared cause was the coronavirus (20 in all). The number of cases will be higher because many tutors will not have declared this explicitly in the questionnaire. A positive finding concerns the number of placements carried out on time. These amounted to 81% of the total. This is due to the fact that many placements are taken remotely, in blended mode and, in the summer period, also in presence.

FIG. 1. *Internships by time period*

INTERNSHIPS 2020

24

32

241

CARRIED OUT ON SCHEDULE   EXTENDED   INTERRUPTED
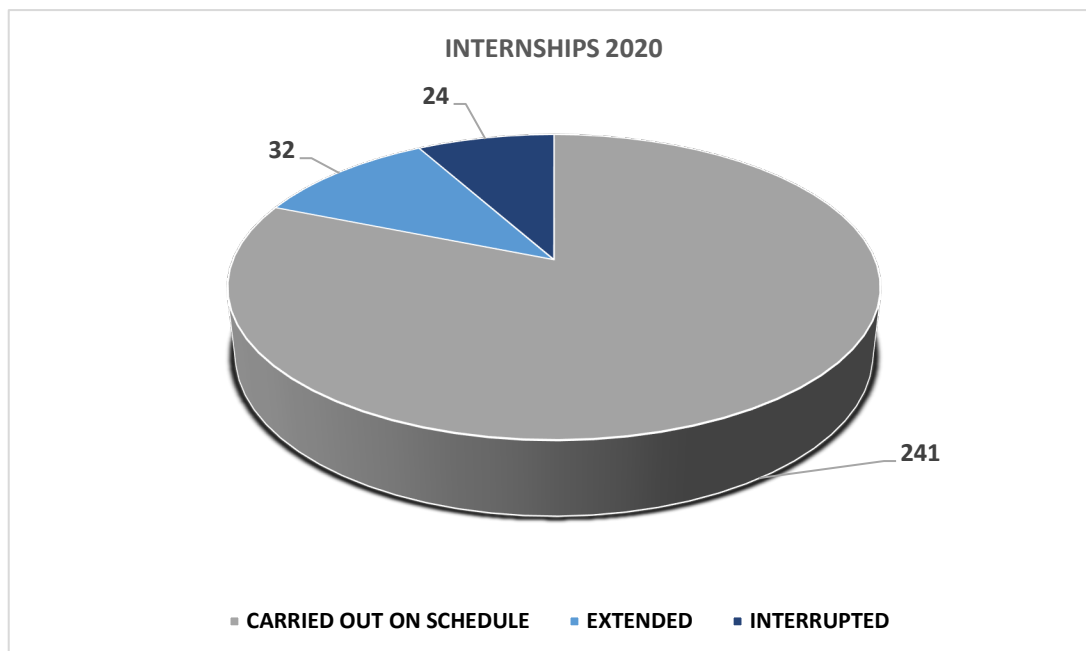
Source: Department of Communication and Social Research of the Sapienza University. N = 297

FIG. 2. *Internships 2020 by COVID-19*

INTERNSHIPS 2020 by Covid

9

11

EXTENDED FOR COVID   INTERRUPTED FOR COVID
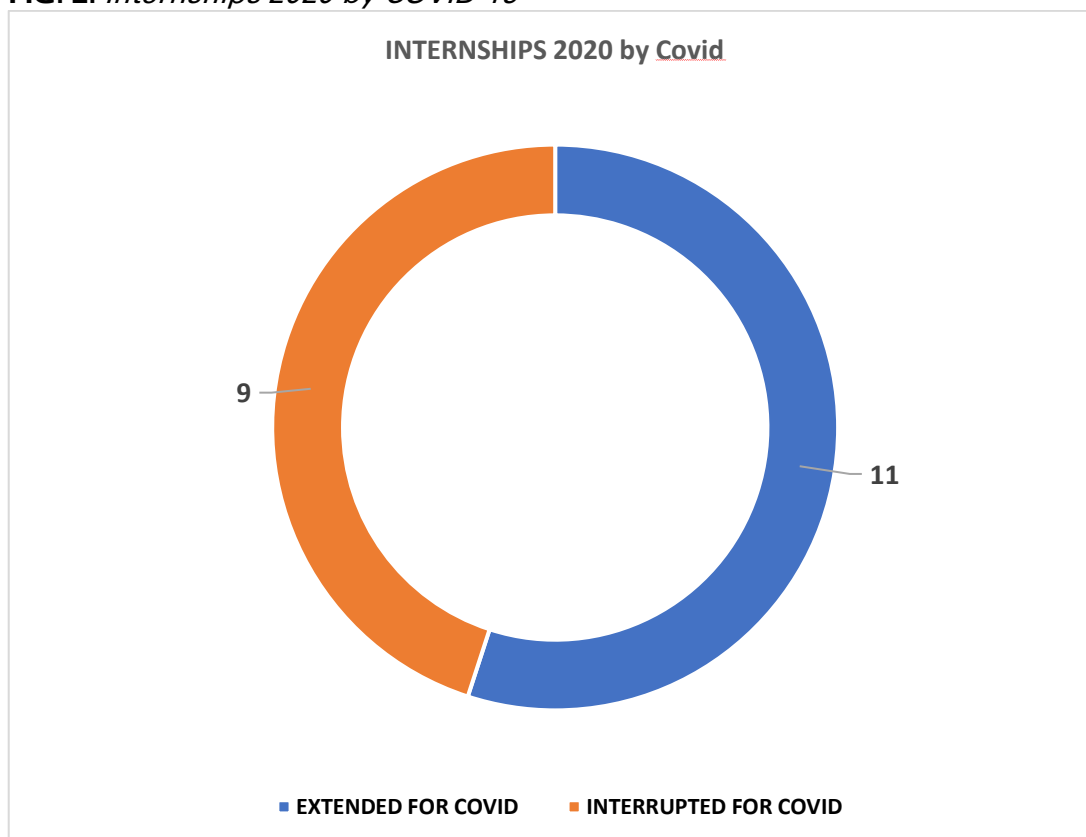
Source: Department of Communication and Social Research of the Sapienza University. N = 56

Comparing the number of companies that took on trainees in 2019, we note some reversals in the trend: the March-June period, in 2019, had recorded the highest number of traineeships, the same period in 2020, due to the lock down, we instead record the lowest number of traineeships (Tab. 1).

TAB. 1. *Internships during 2020, 2019*

Period	Internships 2020	Internships 2019
January – February	50	55
March – June	63	128
July – August	116	87
September – December	68	86
Tot.	297	356

Source: Department of Communication and Social Research of the Sapienza University.

The summer period, when there is usually a decrease in the number of placements, shows an increase in the number of agreements, in 2020 due to the resumption of activities after the lock-down.

In order to further analyse this data and understand how the interruption of placements and the possible redefinition of agreements made with students came about, a survey was launched involving students who finished their experiences in 2020 and the companies that hosted them.

The student survey has begun and will be carried out with the support of a graduate student who is working on the administration of the questionnaire and data analysis.

In this case, all students who completed the questionnaire at the end of their internship in the calendar year 2020 will be contacted.

The qualitative study has been launched and, at the moment, 12 interviews have been carried out. These interviews involved companies that had discontinued the internship relationship initiated due to the pandemic. They were selected using the database referring to companies, where the reasons for the discontinuation of internships are reported. This first set of interviews will later be expanded by drawing on the database of companies that hosted students of the Department, in the calendar year 2020 and completed the questionnaire at the end of the relationship.

The analysis follows a qualitative methodological framework and refers to the criteria adopted for the evaluation of the third mission:
- effectiveness of the actions implemented by universities within the local area of reference,
- comparison with national and international experiences,
- consultation with stakeholders involved in various ways.

Respondents were given a telephone focused interview covering the following topics:
1. how the host institutions redefined their placement relationships following the pandemic;
2. how did the students react to the change (were they ready or did they find it difficult and did they fail to redefine with their own skills the demands of redefining the experience made by the company);

3. how did companies redefine their ways of welcoming trainees (if they did);

4. and, finally, how in this new scenario, in the aftermath of the pandemic, what could the university do to better support students and companies in carrying out internships.

The focused interview was used because the aim of the study was to find out specific aspects of the general situation in which a certain event occurred (Merton, Kendal, 1946).

Conclusion

The first results of our survey allow us to make some considerations on the traineeships carried out during the pandemic crisis starting from the testimonies of the company managers.

According to the interviewees, despite the difficulties caused by the crisis, trainees continued to show interest in work, flexibility and good adaptive skills. All of them, however, stressed that direct contact with the student carrying out an educational work experience is preferable to any other alternative. In more than one case, irrespective of the size of the company, the need to activate this direct contact was underlined in order to let the students know the organisational culture in which they work. On the whole, a positive evaluation of the students' employability emerges, as well as a general appreciation for the knowledge acquired in the university courses.

Indeed, the contact person of Rai, the Department's long-standing partner for the activation of internships, stressed the value of communication students in terms of their ability to adapt to working remotely, also thanks to their good knowledge of digital technologies. However, from the overall analysis of the interviews, with reference also to the studies developed in other university contexts, one could derive the indication of further developing the collaboration activities with the host companies, planning together the use of remote internships. These actions could include the development of activities to be carried out by students individually or in groups, based on the needs of the companies, with the support of tutors from outside and within the university.

Remote Work-Integrated Learning experiments could be launched, as happened in the Australian case described above, and the results of the project could be evaluated. This would also contribute to increasing the number of internships offers and presumably improve their quality, since they would be planned with the contribution of external professionals and university lecturers.

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Understanding Society
Using Digital Spaces and Resources:
Teaching and Learning Paths
in Higher Education

Training for Training: Moodle as a Teaching Tool by and for Teachers

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ABSTRACT: *The COVID-19 outbreak has accelerated the digitization process in all the areas of daily life, including education. Remote learning has become an indispensable tool from primary school to university. If remote education still does not always prove to be a fruitful experiment, there is no doubt that in the near future e-teaching, both with synchro and asynchronous methodologies, will become a component of the educational program. This research starts from this assumption and aims at creating a training tool for teachers which may enable them to face the challenges of digitization adequately. The ever growing changes brought about by technological innovations can be a great resource for individuals who have the skills to master them rather than be subjected to them. According to a research carried out by Ipsos Institute on over 3,500 high school students and about 2,000 primary and secondary school teachers, during remote learning, 96% of students chat with their friends, 88% eat and 25% cook. These results show that students tend to engage in other activities during remote learning, since they do not feel at the centre of the educational program as active subjects of the lessons. If teachers become skilled in using digital tools, it can be an opportunity to fully develop the principle of learning by doing. For this reason, teachers should fully know the potentialities of the tools at their disposal. This research, therefore, aims at creating an educational workshop for teaching staff (from primary school to university), which, in view of lifelong learning, may help teachers to improve their approach to remote education. Teachers will take on the role of students and will personally experience remote learning through the Moodle platform: being students will enable them to fully understand both the platform tools and the innovative dynamics triggered by this platform in the field of education. At the end of their training program, teachers will have an in-depth knowledge of the platform and will become experts of Moodle. Consequently, they will be able to create interactive educational programs and to make students active subjects.*

KEYWORDS: *E-learning, Moodle, Remote learning, Teachers, Training*

Introduction

The use of digital technology has had a long stretch of rapid growth in recent years, becoming a fundamental part of training and education.

The pandemic has clearly accelerated the process towards the digital transformation. Over the last eighteen months we have seen an almost exclusive use of digital systems, ensuring educational continuity at a time when the school no longer existed as a set place. Google Classroom, Zoom and Microsoft Teams have become the places where knowledge is to be found, renewing and revolutionizing teaching methods. On the one hand the online mode offers major challenges, such as time management and lack of proximity, but on the other hand is full of opportunities arising from a new wealth of tools and functionalities that may help to overcome standardized training modes, supply flexible time management, and implement innovative functions. It is clear that at the basis of the success of e-learning forms of teaching there is the teachers' knowledge and competence on the contents to be transferred and a precise awareness of the technological choices to be used in order to fully exploit the potential that such systems offer. Unlike in the past, today's online learning system focuses on active and collaborative, which means putting the individual learner and his or her relationships at the center. A system capable of exploiting what Pierre Lévy calls 'collective intelligence', i.e. «an intelligence universally distributed, constantly enhanced, coordinated in real-time, leading to an effective mobilization of skills» (Lévy, 1996). In fact, the French philosopher believed that the best use of cyberspace consists in «pooling knowledge and imagination». Virtual space is therefore a place of reciprocity: «The basis and goal of collective intelligence is mutual recognition and enrichment of individuals», pointing out that 'the real-time coordination of intelligences implies communication devices that necessarily depend on digital information technologies».

Contrary to what was said a research (Lévy, 1996) carried out by IPSOS Institute on over 3,500 high school students and about 2,000 primary and secondary school teachers, during remote learning, found that 96% of students chatted with their friends, 88% ate and 25% cooked. These results show that students tend to engage in other activities during remote learning, since they do not feel at the centre of the educational program as active subjects of the lessons. Putting students at the centre of the learning process is a priority, while training teachers to become digitally proficient can be an opportunity to fully develop the principle of learning by doing. For this reason, teachers should master the tools. This research, therefore, aims at creating an educational workshop for teachers (from primary school to university), which, in view of lifelong learning, helps teachers to improve their approach to remote education. Teachers will take on the role of students and will personally experience remote learning through the Moodle platform: being students will enable them to fully understand both the platform tools and the innovative dynamics.

The aim of the introduction is to place the present research in its social context and to describe its development.

The analysis conducted in this paper is organised as follows: Section 1 illustrates the objectives of the research and the methodologies implemented to carry out this study; Section 2 starting from the current state of research on the topic, shows the choices made by the researchers in this analysis; Section 3 focuses on the analysis of the teaching tools made available by the Moodle platform and the teaching strategies to be adopted for online lessons in the asynchronous mode; finally, in the Conclusions, a general framework is drawn up on the basis of the research conducted.

1. Objectives and methodologies

The aim of this study is to provide empirical evidence on the effectiveness of Moodle, in order to determine whether this type of platform is an adequate solution to remedy the existing lack of training of teaching staff in this area and if it can represent a valid replacement for traditional methods. Despite the many proclamations and efforts made, there is still an alarming gap between the digital competence that teachers actually possess and that which they should have in order to be able to transfer a certain amount of digital competence to their students. The lack of teacher training in the use of Moodle and its countless opportunities is of particular concern. One of the aims of this work has been to highlight the most interesting innovative features of the platform in order to offer a possible solution to the pressing need to bridge the gap in terms of digital training. This study, of course, has also taken into account the disastrous condition that sees our country at the bottom of several rankings relating to the development and digital training of the population. From this the awareness, therefore, that the stages of conversion to technology will be a long and tortuous process, in particular the transition in private consumption and educational learning will be extremely challenging. Going beyond device management, therefore, and demonstrating within the limits of our work, Moodle's ability to reconnect and redefine the relationship between school and the outside world, brings about a process of appropriation, reconversion and reconfiguration of cultural practices.

2. State of the art and context analysis

There are different platforms, and identifying which one is the best for content delivery and operation is a central issue.

From their very beginnings in the 1960s, closely linked to the advent of television and then videotapes and video recorders, Fad learning systems, designed to overcome large geographical distances, have evolved from analogue electronic systems to e-learning ones through the use of the Web 1.0 telematic networks. In contrast to the past,

contemporary e-learning systems focus on an active and collaborative type of networked learning that puts learners and their relationships at the centre.

As to the factors to take into account when choosing the e-learning system, Guglielmo Trentin (Trentin, 2003) indicates the following:

- type of learning theory
- didactic strategy
- target
- Context in which the training action is inserted
- number of users
- economic resources to give life to the training process.

The classification of e-learning systems, which are mainly divided into non-free platforms and open source platforms are another issue that has been taken into account.

Non-free (proprietary) platforms have higher costs and limitations related to licensing, as well as a speed of innovation related to ownership resources.

Open source platforms have limited costs if any and ensure rapid and diverse innovation, for these reasons the research has turned to the latter.

According to the study on the integrated use of training resources in e-learning processes carried out by the Department of the University of Bari 'Aldo Moro', among the open source platforms able to guarantee a wider collaborative action through forums, wikis, podcasting and blogs, guaranteeing in fact a greater freedom of action are the following.

For each platform, the available tools have been reported:

- ADA: Blog, Chat, Feedback, Forum, Podcasting, Wiki.
- Atutor: Blog, Chat, Feedback, Forum, Podcasting, Wiki.
- Claroline: Blog, Chat, Feedback, Forum, Podcasting, Wiki.
- Docebo: Blog, Chat, Facebook, Feedback, Forum, Podcasting, Wiki.
- EifFel: Blog, Chat, Feedback, Forum, Podcasting, Wiki.
- Freelearn: Blog, Chat, Feedback, Forum, Podcasting, Wiki
- Ilias: Blog, Chat, Feedback, Forum, Podcasting, Wiki
- Moodle: Blog, Chat, Feedback, Forum, Podcasting, Skype, Wiki
- LNR: Blog, Facebook, Feedback, Forum, Podcasting, Wiki.
- Sakay: Blog, Chat, Feedback, Forum, Podcasting, Wiki

Overall after comparing the resources present in the listed platforms and considering the factors examined in the first instance, Moodle emerged as the most suitable didactic tool for teachers because it is based on «the pedagogical principle of social constructivism, with an emphasis on the relational and collaborative aspect of knowledge construction» (Laici, 2003). «The social constructivist paradigm strongly supports the role of the human mind as an active constructor of meanings and sense through interaction and constant exchange with the environment» (Laici, 2003). In this sense Moodle goes beyond a passive teaching but allows a high level of interaction through the use of the above tools as well as many

multimedia features that used wisely make the Moodle platform a highly constructive and collaborative environment .

3. Moodle as a teaching tool to train trainers

This research aims to create an educational workshop for teaching staff (from primary school to university). In view of long life learning, the workshop helps teachers improve their approach to remote teaching. Teachers will play the role of students and will personally experience e-learning through the Moodle platform. The role of students will enable them to fully understand both the platform tools and the innovative dynamics which this platform can trigger in the field of education.

Teachers are used to conducting their lessons in presence and in the synchronous mode. However, recently, due to the pandemic, lessons have moved to online platforms, but always in the synchronous mode. Moodle presents the additional challenge of designing lessons so that they can be conducted in an asynchronous mode. The asynchronous mode implies the students' full autonomy: the learner must understand the explanations, which are provided using different tools, and be able to apply the notions learned by carrying out the exercises suggested.

In addition to the question of autonomy, Moodle raises another important issue: focus. Very often, when students follow online lessons they are passive subjects of the educational process, which is why they tend to get distracted very easily and carry out other activities instead. Online teaching in the synchronous mode overcomes the problem of distraction through the teachers' control of the students by asking them to turn on their webcams. In the asynchronous mode, as there is no supervisor to check, students may be more prone to distraction. Consequently, on Moodle it is necessary to design a course that places students at the core of the educational process. For this to be possible, it is essential to use all the tools that Moodle provides to create interactive lessons. Through interactivity, the student is an active participant in the educational process and as a result is less likely to get distracted and not focus on the lessons.

Teaching in Italian schools is strongly based on frontal lessons, as is already evident in the layout of the school furniture: in most classrooms, the teacher's desk (often placed on a platform) faces the students desks. This lay-out tends to make interactions between students difficult. There are still few classrooms in Italy where the furniture has been designed for teaching strategies other than frontal lessons: the placement of desks in a horseshoe shape or the use of desks with wheels facilitate peer interaction and the implementation of the flipped classroom, in which the roles of teacher and student are reversed.

Online teaching in both synchronous and asynchronous modes cannot make exclusive use of face-to-face lessons and even when it does, teachers need to understand the negative aspects of this teaching tool.

The new generations, social media natives, are used to dealing with the digital world, whose language they know and understand very well. When designing lessons on Moodle, it is necessary to remember that the language of social media is in fact the element of comparison when talking about digital. And it is precisely from social media that we should draw inspiration when translating live lectures into the Moodle environment.

In this case the tool provided by Moodle is Lesson.

Videos are very popular on social media, but they are very short (3 minutes on average). The short duration of the videos means that the user does not get distracted and remains focused on the video they are watching. Face-to-face classes last, on average 60 minutes; when these classes are transferred to Moodle, they cannot be longer than 3 minutes, if you want to keep students' attention. Clearly, the same concepts cannot be conveyed in 3 minutes as in 60 minutes, but the Lesson tool requires that videos are not the only medium for conveying the lessons. The Lesson tool gives teachers the opportunity to create classic face-to-face lessons, but above all it gives them the opportunity to create games, quizzes and learning courses by using different resources, from written texts to videos.

The notions that are not provided in the 3-minute video are then learned by the students through different teaching methods that are characterised by their interactivity.

By browsing through the other Moodle tools, we find the Assignment one, The Assignment Tool is essential for student assessment. In fact, students are occasionally asked to deliver exercises useful for assessing their standards of competence. The main obstacle in the use of the Assignment Tool is the lack of interaction between teachers and students. Therefore, it is key that both students and teachers pay understand clearly what is asked of them to complete the task. Consequently, it will be necessary that all the aspects, including the technical ones, such as the size of the file to be delivered, are clear in the instructions and or rubric of the exercise.

It is important that teachers understand and exploit all the resources of the Assignment Tool, such as the possibility of fixing a deadline, but also the opportunity to assign collective exercises in such a way as to allow students to carry out group activities.

One of the main tools used on Moodle is the Forum. Teachers are generally attracted by this tool as they consider it highly interactive. For this reason, many teachers tend to use it too frequently without grasping its criticalities. When playing the role of students, teachers will understand and face the limits of the Forum tool. The main challenge of Forum is 'noise': the multiplicity of files and shared comments can make it difficult to follow a discussion or retrieve the material. When teachers fail to find the files they are interested in, they will realize what the correct use of Forum should be.

Conclusion

The digital world is not only a reality, but also requires a great deal of information and interaction. From this point of view the world is narrowing all distances and has no borders, so exchanges and interactions are inevitable and part of everyday life. according to the global development of the different areas of society, digital technologies have to be introduced to promote changes and transformations in the school system in our country. The combination of different learning methods and technologies, involving the interaction of different approaches and technological resources, is essential to improve the quality of education within a context that has found itself in a completely new situation.

The diffusion and affirmation of e-learning technologies and methodologies, have undergone a rapid acceleration in the period of the pandemic, providing a significant driving force for innovation in teaching, which has led many teachers to adopt this new type of teaching by producing training materials to be, then, used within platforms intended for online learning. This trend can be seen not only in universities, schools or public administration, but also in the private sector, through the provision of training courses for employees. As we have seen and analyzed, the popularity of e-learning is mainly due to the presence on the web of numerous free and easy-to-use tools for the provision of teaching materials for online learning, so much so that these can be designed by any teacher, even those with limited IT knowledge. On the basis of our research and by highlighting various functions, Moodle is the most complete, both in terms of the validity of the tools it offers and the addition of content, as well as its strong customization and compatibility with any type of device, operating system and web browser. For all intents and purposes, we have come across an absolutely professional product which possesses all the characteristics of an online course, and at the same time is easy to use. The strength of Moodle, therefore, lies not only in the maturity achieved by the program, but also in its user-friendliness, both for those who access the e-learning platform as users of the courses, and for those who are responsible for running them and monitoring the activities carried out. Its ease of use, the large number of functions it contains and the continuous updating of the software by developers, through the release of new versions, have contributed to spread and growth of Moodle and facilitated a new type of learning and the abandonment of traditional teaching experiences. A new type of teaching where knowledge and learning develop as a cooperative phenomenon emerging from the complexity of the network, a complexity that stimulates in-depth study, reflection and ideation, a process that for us, as a result of the three dimensions explored, is only in its early stages. Challenges in researching, applying and evaluating these proposals as a platform to illustrate these insights and to support reflections on this ongoing digital transformation, assessing the prospects in the near

future. The challenge of digitization lies in training the trainers: learning by doing allows teachers to experience online education from the students' point of view, understanding its limits and becoming aware of the importance of interactivity. In fact, as the educator Maria Montessori maintained, the teacher «must know how to choose the appropriate object and present it in such a way as to make it understand and to provoke a profound interest on the part of the child» (Montessori, 2008).

In order for Moodle to become a useful teaching tool, it is necessary to understand that every teaching tool has its own language, and it is therefore essential to have a thorough knowledge of Moodle in order to be able to use it in the best possible way. The online world requires different teaching methods from the offline world, and the transformation of teaching strategies relies on this idea.

The challenge of innovation that Montessori spoke of at the beginning of the 20th century now lies in the use of digital technology. The 'free child', indeed, is the student who constructs his or her own learning path independently, which is one of the main objectives of using Moodle in asynchronous mode. It is freedom that lies at the basis of education:

> an educational method based on freedom must intervene to help the child conquer it, reducing to a minimum the intervention of the teacher, whose task is to throw a ray of light and move on, using a great deal of patience and a remarkable capacity for observation. Rather than a traditional teacher, he must be a psychologist who comes close to annihilating himself; and the lessons, rather than collective, must be individual, that is, they must take into account the degree of development and the characteristics of each pupil. (Montessori, 2008).

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Learning Social Research Techniques through Digital Resources and Collaborative Approaches: the Point of View of Sociology Students

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ABSTRACT: *in this paper we will illustrate the main results of a student evaluation activity aimed at exploring the learning process in a multivariate data analysis course, offered as part of the Bachelor degree in Sociology at the University of Barcelona. More specifically, by using a structured questionnaire, students evaluated the experience realized during a workshop, i.e. a problem based and collaborative learning activity, that allowed them to design an empirical research on a 'real' and contemporary social phenomena; moreover, the workshop – made up of two sessions – was designed to foster an aware use of the digital resources and tools which in recent years are taking on an important role in the social research process.*

KEYWORDS: *Teaching quantitative methods, Statistics student anxiety, Digital resources*

Introduction

In recent years, social science researchers are trying to develop a pedagogical culture on social research methods and techniques, with the aim to reflect on the contents, actors and appropriate ways to encourage the acquisition of methodological and technical expertise amongst both students and early-career learners in different contexts. Many of them (Payne, Williams, 2011; Kilburn, 2014; Lewthwaite, Nind, 2016) are dealing with the different interrelated components, underpinning the teaching of methodological subjects, in terms of practices, tools, resources used by professors and experiences, difficulties, skills, and attitudes of students.

In particular, most contemporary works promote a student-centred learning approaches and experiential forms of *learning by doing* (Atkinson, Hunt, 2008; Aguado, 2009), without neglecting the theoretical issues which characterize the discipline. For example, Atkinson and Hunt (2008) carried out a workshop experience based on inquiry-guided learning, during which students were invited to think and act like

sociologists, engaging them in all the phases of the research process. Lovekamp, Soboroff and Gillespie (2017) realized a collaborative assignment based on the realization of some quantitative methods tasks in order to foster critical thinking, forms of self-reflection, and statistical literacy.

Within this broader scenario, in this paper we present our teaching experience of the course of Social Research Techniques IV, offered as part of the Bachelor degree in Sociology at the University of Barcelona. More specifically, we illustrate the realization of a workshop, i.e. a problem based and collaborative learning activity, and some results of the student evaluation of this learning experience (Freude *et al.,* 2020). These aspects are developed in the following sections of this paper: the first and second sections deal with the main characteristics of the course and the use of digital resources and contexts in the university educational processes; finally, the main results of the student evaluation activity are presented in the last section.

1. Teaching quantitative social research techniques

This paper presents the main results of a student evaluation on a learning activity carried out in the second semester in the academic year 19/20, within the Course of Social Research Techniques IV, part of the Bachelor Degree in Sociology at the University of Barcelona. In particular, through a structured questionnaire, students evaluated the experience carried out during a workshop, i.e. a problem based and collaborative learning activity, aimed at designing an empirical research based on a multidimensional approach. The design and implementation of this activity underlies several interconnected issues that link two main aspects: on the one hand, the teaching of quantitative methods in sociological university studies and, on the other, the role of e-learning platforms and digital resources as new frontiers towards which university teaching is moving.

With respect to the first issue, which concerns the teaching practices of quantitative social research techniques, in recent years the discussion among social sciences scholars has been focused on the following points: the difficulties and prejudices that social sciences students usually meet towards the statistical aspects; the learning goals of the social research techniques courses (Marsh, 1981; Payne *et al.,* 2011; Ni, 2013); the skills that a sociologist should develops during the university path (Domínguez Amorós, Gómez Yáñez, 2016); the disciplinary issues also linked to the new frontiers of social research due to the digitization process; the role of theory and practice and the need to find the right balance between these two components (Barraket, 2005; Trowler, 2005; Tarifa, Zhupa, 2014). This last aspect concerns on one side the need to favour a hands-on exposure to research methods and on the other side, to enhance the theoretical sociological categories as fundamental guide of the research

process, which cannot to be reduced to a set of pre-packaged automatisms and technical procedures.

All these issues converge in the development of a pedagogical culture around the methods and techniques of social investigation (Earley, 2014; Kilburn *et al.,* 2014; Nind *et al.,* 2015; Lewthwaite, Nind, 2016; Diana, Catone, 2018; Catone, Diana, 2020); it is an area of research that is gradually consolidating and which intertwines pedagogical, social, cultural and technological issues, as part of the planning and implementation of a path of learning in the university environment (Diana, Catone, 2016).

The second central aspect of this paper focuses on the use of digital resources in university learning paths, which also characterize some activities of the Course of Social Research Techniques IV.

The use of Information and Communication Technologies in higher education is not recent, as the last decades have been characterized by a increasing development of a wide range of forms of online education such as e-learning, blended learning, full distance learning, etc. in which a plurality of actors, choices, factors and dimensions on micro and macro levels converge. These digital environments can be considered as techno-social contexts that contribute to impact on the processes and methods of teaching and learning, thus affecting the nature of knowledge itself and on the way in which people use it and transform it (Colombo, 2008).

Recent developments highlight the use of digital technologies also in the teaching of social research methods and techniques, adopting a constructivist approach based on the centrality of the student and on a cooperative dimension; for instance, the implementation of gamified activities (Mattar, *et al.,* 2017; Snelson *et al.,* 2017; Zuckerman *et al.,* 2015), in order to increase the students' engagement in research; virtual world simulations capable to involve social sciences students and encourage the understanding data analysis techniques (Rock *et al.,* 2016); the use of online discussion forums for reducing anxiety about statistics (Thompson *et al.,* 2019).

2. The design of the course

Within this wider context, our experience concerns the teaching of Social Research Techniques IV. i.e. a course aimed at encouraging the understanding and application of multivariate data analysis techniques such as: log-linear analysis, principal component analysis, multiple correspondence analysis and cluster analysis.

More specifically, the course aims at achieving the following cognitive and practical skills such as:
  – Acquiring a conceptual domain of multivariate data analysis techniques to study social sciences phenomena.

- Understanding the relationship between techniques and other design aspects of the social research process.
- Developing the ability to identify and understanding the scientific literature on multivariate data analysis.
- Discerning and choosing the techniques which best suited to the different research goals and the characteristics of the contexts, in order to face the complexity of social analysis with the scientific rigor and argumentation.
- Acquiring skills in order to use of secondary dataset and to analyse data through specific statistical packages such as SPSS.
- Interpreting the results of the multivariate analysis.
- Knowing the main procedures needed to adapt the plurality and complexity of social information and data to multivariate statistical analysis.

The course is made up of 60 hours organized in 2 weekly lectures and it is structured in theoretical and practical sessions.

Theoretical-conceptual lectures represent the pillar of the course and they consist in the exposition, by the teaching staff, of the theoretical concepts of each unit and their interpretative and applicative aspects. In the other sessions, realized in a computer lab, data analysis and interpretation activities are carried out. This structure of course allows learner to foster the understanding of the delicate transition from theory to practice in sociological research.

As will be see described in the chapter, study materials and activities are provided through the Virtual Campus, the e-learning platform of the University of Barcelona.

Due to the spread of the COVID-19 which has determined the mass closures of universities in order to limit interpersonal contact, many aspects of the organization and structure of the Course have been changed last year, such as the consequent shift to online forms of teaching and learning.

With respect to the use of digital and technological resources in the Course of Social Research Techniques, an important role is played by the Virtual Campus; it is the e-learning platform, based on a Moodle System, provided by the University of Barcelona that supports the student learning experience and the professors teaching activities. The platform consists of several sections which guide the learning process through: the upload of theoretical materials (PowerPoint, etc.) for each topic; the realization of practical activities with the support of digital resources, working materials (video tutorial, interactive exercises, online questionnaires, dataset, etc.) and collaborative tools (wiki, forums, virtual classroom, chat).

Among the different activities, which characterize the Course we planned a workshop that allowed students to design an empirical research on a 'real' and contemporary social phenomenon (Freude *et al.,* 2020). In particular, students had to respond to different fictional cases engaged by city councils on different topics such as inequality (1), sports

(2), exclusion of lesbians, gays, trans and bisexuals (3) politics, participation and youth (4) and labor market and gender (5).

The workshop was made up of two sessions: in the first one, realized in the university computer lab, students had to form groups and to choose between different fictional cases engaged by city councils; to prepare a first review of the scientific literature; to elaborate a first plan according to the fictional contract, and to review and search different datasets.

The second activity was realized in virtual way due to the spread of COVID-19 and the shift to online forms of teaching and learning; during this session students developed a model of multivariate analysis in order to respond to the fictional city council request, using the Campus Virtual tools (video-tutorial, wiki, collaborate classrooms, etc.) and the digital resources, usually employed the field of social research (dataset, graphics, concept maps, etc.).

The idea underpinning the planning and organization of these activities was to bring students closer to the analysis of contemporary social phenomena, making the research 'visible' through the right combination of theoretical and empirical aspects that underlie the path of social research.

3. The student evaluation

After briefly described the overall structure of the course and the main the characteristics of the workshop, in this section we will present the main results of the empirical research aimed at exploring the students learning experience realized during the activities, in terms of knowledge and skills developed, study approach and tools used. The data were collected designing two questionnaires, one for each workshop session and analyzed using descriptive analysis techniques; next, we carried out some multidimensional data analysis techniques, such as the principal component analysis (PCA) (Hotelling, 1933), i.e. a factorial technique employed to synthetize the information contained in a data matrix, through the identification of a small number of factors expressing the relations between a set of variables and the Cluster Analysis, which that allowed us to define two groups of students with a different learning experiences in the realization of this workshop.

The questionnaires were articulated in the following dimensions through which students assessed: the level of knowledge and skills acquired before and after each activity; the tools and resources used; the relationship with the classmates and with the professor. The first questionnaire was responded by 68 students (29 males, 38 females, 1 other); the second questionnaire was answered by 98 respondents (42 males, 53 females, 3 other).

Starting from the results of the first questionnaire, more than 85% of students stated to have actively participated to the activity; moreover,

using a Cantril scale, they evaluated the level of knowledge developed on five key-competences and tasks characterizing the session: specific knowledge on the case-study, formulation of a research topic, formulation of research objectives and hypothesis and a preliminary databases research. The means of all the items evaluated after the activity are around 7, i.e. a value that is slightly greater than that they indicated before the activity which is approximately equal to a 6. In particular, students also agreed that the activity helped them to better understand how to deal with a research problem (79,4%) and according to the 77,9% of the respondents, after the activity they feel more curious and capable of adopt a critical thinking about contemporary social phenomena. Moreover, teamworking was evaluated positively compared to individual activity by the 80,9% of students and almost all the students perceived their participation as strong or very strong (95,6%).

Also, in the second activity realized online, due to the lockdown, students evaluated their previous and posterior knowledge on three different key-competences and tasks realized during the session: identification of different sources of information, selection and construction of databases and finally the identification of the appropriate multivariate data analysis techniques. All the items received an average value of about 6 which is lower than in the first activity; at the same time, the average's values are greater than that they indicated before performing the activity. These results can also be read in the light of the unprecedented situation that the students experienced during the lockdown period, characterized by a change of places, times and modes of study, suddenly adapted in the virtual context.

Next, we investigated the main dimensions underlying the student learning experiences focusing on their use of digital tools and their relation with other students, taking account of the virtual context which characterized this second activity. More specifically, we carried out a multidimensional data analysis path which allowed us to extract the factors through the principal component analysis (PCA); then, we performed a cluster analysis in order to identify a typology of students. Starting from 8 items used to detect the learning approach and tools adopted the second activity, according to the point of view of the students, the PCA (using varimax rotation) allowed us to extract two factors which reproduced the 57,7% of the total variance. More specifically, the first factor (30,4% of total variance) expresses the aspects connected to the use of digital tool and contexts which, especially during the lockdown, played a central role in the educational student experience. Indeed, this factor brings together some variables linked by the technological component such as «Internet and the technological tools that I have used allowed me be more effective to do this activity»; «this online practice allowed me to participate more actively than in the classroom»; «doing this online activity from home was comfortable» and «this activity done using online tools has required more effort than doing it in the classroom» (item with a negative value). The second factor

(27,3% of total variance) concerns the collaborative dimension and forms of reflexivity underpinning the activity and it brings together some variables such as «group activity has allowed me to feel part of our class during this period of confinement», «I would have preferred to do this practical activity alone» (item with a negative value), «this practice has given me a greater awareness of my difficulties».

Next, we carried out a cluster analysis, using a hierarchical technique, that allowed us to define two groups of students, which suggest different experiences in the realization of this workshop.

The first group includes the 51% of the interviewers who appreciated the collaborative approach and the teamworking which made the activity less boring and favored the degree of reflexivity on the skills and knowledge acquired; however, this group believes that technologies did not facilitate the realization of the activities, which instead required a lot of effort. The second group, on the other hand, is made up of 49% of students who believed in the usefulness of technologies and of digital resources in carrying out the activity, which allowed them to participate in a more actively way and to understand some aspects of the empirical research they designed. These results and in particular the identification of these groups with different orientations to technology are linked to a plurality of aspects that deserve to be deepened with further analysis and research, for example, considering the different level of digital competence possessed by learners and possible differences related to the digital divide.

Conclusion

The learning experience described in this paper was an attempt to try to overcame the sense of anxiety over statistics usually felt by sociology students (Williams, Sutton, 2011); to involve them in the practice of multivariate analysis techniques in real world contexts without neglecting the theoretical issues underpinning the social research process; to promote the socialization of learners into the «culture of research» (Eisenhart, DeHaan, 2005, 7); moreover, it has been also a challenge to foster the student use of digital resources in a scientific framework. This last point, also in the light of the teaching experience carried out completely online during this period of COVID-19, undoubtedly leads us to deeply reflect on how to bring students closer to the conscious use of digital resources in data analysis course, without determining a marginalization of the theoretical component in favor of the purely technological. These aspects suggest some directions toward which we can orientate the planning and the organization of the activities of the course in the Course of Social Research Techniques in the next years in order to find the right balance among technological, disciplinary, educational and social dimensions.

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The Impact of COVID-19 on English Language Teaching in Higher Education Chinese System. Emergency Remote Teaching in Neoliberal Universities in China

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ABSTRACT: *China is the second largest economy in the world. One of the fastest growing industries in China is English Language Teaching for youth and adults. English is the most widely learned foreign language in China. COVID-19 has taken hold of all industries and brought them to their knees. In China, the government has introduced the education policy of suspending classes without interrupting learning. This study aims to describe the challenges faced by ELT teachers in China during the pandemic.*

KEYWORDS: *ELT, China, COVID-19, e-Learning, ERT*

Introduction

Globalization is not only an economic issue, but also affects many other aspects of human life. In particular, globalization has attracted the interest of one of the largest countries in the world, the People's Republic of China (PRC, hereafter China), in the last twenty years. China is the second largest market in the world for imports and holds the first place for exports (IMF, 2017), which in the last twenty-five years has produced a number of enormous financial capitals that are both economically prosperous and diverse (IMF, 2017). According to official statistics, an estimated 40,000 foreign enterprises were established in China in 2009 (National Bureau of Statistics of China, 2009). In just eight years, in 2017, the number of foreign companies in China has increased to 122,391 (National Bureau of Statistics of China, 2017). One of the fastest growing sectors of industry in China is undoubtedly English Language Teaching (ELT) for young and adult native Chinese speakers. Today, English is the most studied foreign language in China (Kirkpatrick, 2016). China has the largest English-learning population in the world and the number is increasing every year (Bolton, 2003; Crystal, 2008; Jenkins, 2003; Jiang, 2002: 5; He, Li, 2009).

Globalisation not only affects the economy, as noted above, but also favours and accelerates the spread of disease, as was the case with COVID-19 in 2020, which some scholars read as a side effect of globalisation itself (Farzanegan *et al.,* 2021). The phenomenon of the pandemic has affected and brought to its knees all industries and has greatly affected the daily lives of the people.

In fact, due to the COVID-19 outbreak, approximately 90% of students worldwide, more than 1.5 billion learners at all levels, have been affected by school and university closures (Bozkurt, Sharma, 2020). In China, the first country to experience the COVID-19 outbreak in January 2020, the government introduced the policy of 'suspending classes without stop learning' (Zhang et al. 2020). The solution that has been unconditionally adopted in almost every country in the world is the introduction of certain type of distance learning designed to answer to the emergency.

This study aims to describe the challenges faced by ELT teachers in China during the pandemic.

1. English as a global language in China: a state of art before COVID-19 pandemic

From the 1980s onwards, it became something of a statement to regard English as a global language (Crystal, 2003).

> The world of large scale commerce, industry, technology, and banking, like the world of certain human sciences and professions, is an international world and it is linguistically dominated by English almost everywhere, regardless of how well-established and well-protected local cultures, languages, and identities may otherwise be (Fishman 1996, 628).

In China, the globalization of language, especially English, has considerably influenced Chinese educational policy and teaching and learning of foreign languages (Coupland, 2010; Kirkpatrick, 2016). With the onset of the 'Chinese reform era' from 1978 onwards, English gradually came to be seen as an essential tool for modernization (Lo Bianco *et al.*, 2009; Han, 2017). China «has sought to equip its population with English language proficiency in order to accomplish its domestic and international goals» (Kirkpatrick 2016, 50). The national survey shows that of those with a secondary education or higher in China, 67.4% have learned at least one foreign language (SGO, 2006). The fifth national census in 2000 shows that about 48.7% of the national population (about 1.27 billion in total) have completed lower secondary education or higher, so about 32.86% of the national population, 415.95 million in total, in China have learned one or more foreign languages, including 93.8% English, 7.1% Russian, 2.5% Japanese, and 0.3% another foreign language (Wei, Su, 2012). Of the 415.95 million foreign language learners

in China, about 390.16 million Chinese are English language learners, accounting for one-third of the country's population (China Daily, 2010; Bolton, Graddol, 2012; Wei, Su, 2012), but many of them are not proficient speakers. In fact, English is «a principal foreign language of trade partners, academics, technical experts, advisers, tourists, and popular culture» (Adamson 2002, 231) in China. English has become an extremely important language and symbolic resource for the citizens of China. English is especially important at the university level, and the goal of the English major in Chinese universities is «developing students' language proficiency to an advanced/sophisticated level» (Wang, 2006, 5).

English courses from beginner to advanced are available in every Chinese school and university, and since January 2001, with China's Reform Guidelines for Vigorously Promoting the Teaching of English in Primary School, English has been compulsory in all primary schools from Grade 3 (ages 6-7) (Kirkpatrick, 2016), «although in several large cities and in the private and non-formal sectors English studies begin earlier» (Lo Bianco et al., 2009, 192). The range of ELT in China is vast and extensive: in addition to the Chinese public education system, hundreds of parallel educational institutions have emerged in the last decade, promoting ELT in a different light and with different teaching methods. Many international ELT schools have been established: American, Australian, Canadian, English primary schools, colleges or universities, all offering courses in English in different and diverse fields. In 2010, more than 30,000 companies were reported to all offer private English classes in China, but such a figure, taken out of context, does not convey the incredible growth the industry continues to experience: in the last five years alone, the market for English classes in China has doubled and is now estimated at RMB 30 billion (US$4.5 billion) annually (Bolton, Graddol 2012, 3). Some analysts predict that this market will continue to grow at a rate of 12-15% over the next few years. In China, about 1,000 new English teachers are hired every month and this number is likely to double in the coming years.

In total, there are about 1.6 million foreign workers in China. Of these, foreign teachers account for a highly significant 82%: over 100,000 ELT native English speakers and 150,000 non-native English speakers. ELT 1,000,000 Chinese teachers, most of whom are themselves unable to produce intelligible English orally or in writing, or to teach in the target language (Wolff, 2010).

Every year, the demand for ELT teachers exceeds the supply, and Chinese institutions, in turn, face a constant shortage of resources and qualified teachers (ELT). Numerous fraudulent agencies or unlicensed schools recruit foreign teachers without giving them a regular employment contract or assurance. Such teachers are consequently underpaid in the ELT market, where the teaching profession is underappreciated anyway.

The average salary for professional foreigners is 52,000 yuan per month. Currently, foreign teachers are the lowest paid foreigners in

China, with an average salary of 16,500 yuan per month. The cost of a six-hour course in a Beijing language school is 300 RMB (US$47) (Bolton, Graddol, 2012). For casual classes in Beijing, RMB 120-180/hour (US$18-27) is common. A local who teaches Chinese under similar conditions is lucky to earn 50 RMB/hour (US$7) (China's Ministry of Labor and Social Security 2015).

As part of its ongoing crackdown on the scourge of unskilled teachers, China is attempting to gradually remove non-native English teachers from its schools (Moussu, Llurda, 2008; Ruecker, Ives, 2015). In October 2016, China infamously began testing a brand new work permit system that neatly divides foreign workers into three distinct categories: 'A, B, and C expats'. This system was first introduced in Beijing, Shanghai, Tianjin and other places before being further expanded from April 2017. Apparently, part of this new system is a rule that requires all foreign English teachers to be native English speakers, along with a bachelor's degree in their home country and two years of teaching experience.

Now that the Chinese government has tightened the requirements for ELT teachers, there are not enough qualified teachers to fill all the teaching positions available in China. Data from SAFEA (2013) suggest that the Chinese market needs at least 100,000 foreign teachers, while there are only 30,000 foreign experts legally recognized by Mainland China. In addition, native speakers with teaching qualifications, university degrees and experience often command higher salaries than many schools can afford.

The latter is becoming a major problem in China, with inefficient review and assessment practices in the Chinese education system completing the framework: ELT quality is falling while demand continues to rise (Lo Bianco, 2009; Han, 2017).

This situation has caused an urgency in training and recruiting new foreign language teachers for ELT Chinese market with a state of emergency of various and complex processes to legitimize professionalism in ELT and consequently regulation in professional recognition of ELT teachers.

On top of this situation, the outbreak of COVID-19 in 2020 added others challenges to the situation described below. This study aims to describe these challenges

2. Emergency Remote Teaching and COVID-19 pandemic

The term of Emergency Remote Teaching has been operationalized since 2020 as a response to the COVID-19 pandemic. In China, the first country to experience the COVID-19 outbreak in January 2020, the government introduced the policy of 'suspending classes without stop learning' (Zhang *et al.,* 2020). This policy aims to support the transition to online teaching by providing rich and high-quality teaching materials and resources. To improve the practice of ERT, the government implemented

approaches such as 'integrating national resources and planning at the top-level', 'training teachers' and 'enabling local authorities and schools to carry out online teaching in line with local conditions' (Zhang et al. 2020). Under the guideline of this policy, most schools and universities have conducted ERT since the spring semester of 2020 in February, offering 24.000 online courses through 22 platforms (Sun *et al.,* 2020), with more than 100 million students registered in online courses (Wang, Zhao, 2020). Opting for distance learning during the pandemic allows time and location flexibility for teachers and students. However, this type of teaching differs from quality online learning because teachers may not be adequately trained to teach online courses in addition to standard online courses. In typical online courses, interactions among students, learners, and teachers are among the most important features of technology-based learning (Eom *et al.,* 2006; Kuo *et al.,* 2014). Careful design of curriculum and instructional activities that include social interactions support learning productivity.

Affouneh et al. (2020) defines the ERT as a teaching method that is «not usually planned in advance and involves a sudden shift from traditional teaching into a remote one in view of emergency situations like the outbreak of Coronavirus in different countries» (Affouneh et al. 2020, 1). Hodge et al. (2020) define ERT as a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances.

The ERT involves both the concept of emergency and the use of technologies for teaching and learning. The ERT is based on three aspects:

- an imposed distance learning setting which cannot be changed unless the emergency over to the emergency is over.
- a sudden transfer of content that has been designed to be delivered on a face-to-face basis into an online setting.
- a general audience who initially did not choose to follow courses online.

ERT is

> a temporary shift in instructional delivery to an alternative delivery mode due to crisis circumstances. ERT involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will 'return to that format once the crisis or emergency has abated' (Hodges *et al.*, 2020, 6).

This instructional approach, which differs from normal online courses, is an alternative mode of instructional delivery of instructional materials, content, and activities intended for physical delivery that occurs only during times of disaster and calamity in the digital age (Bozkurt, Sharma, 2020; Mohmmed *et al.,* 2020).

Research studies have examined the potential impact of ERT on student academic achievement and the major issues in implementing

ERT. One research study examined the impact of the pandemic on the performance of Grade 12 students in Zambia (Sintema, 2020). Due to the lack of distance learning opportunities, students had difficulty connecting and interacting with teachers or peers. In a collective autoethnography of post-secondary students (Peters *et al.,* 2020), researchers indicated that some teachers and students were immediately able to accept online instruction despite the emerging shift to online instruction. Zhang (2020) discussed potential problems with the implementation of ERT in China. The network was unstable and inadequate in some areas; overloading of instructional platforms led to crashes; teachers adopted offline instructional content and resources directly into online instruction with minor adjustments.

Pace et al. (2020) offered suggestions for teachers. For example, teachers can improve student learning outcomes by building rapport with students, such as answering students' questions in a timely manner, providing immediate feedback, and engaging them in online discussions. Similarly, Zayapragassarazan (2020) proposed flexible learning strategies to improve student engagement in times of crisis. They proposed a learner-centered approach where flexible learning options are provided to students. In relation to higher education in China, the researchers also offered teaching strategies for online classes. Bao (2020) offered suggestions for a smooth transition to online learning based on observations of online classes during an ERT: creating contingency plans in advance, breaking content into smaller sections, slowing down voice output to help students understand, working with teaching assistants to help with activities, etc. A survey study of students' insights into online courses at a university in China showed that students had low concentration and retention, implying that they need to improve their concentration and self-management skills (Sun *et al.,* 2020).

Despite the existing literature on the impact of ERT on students' academic performance and insights into online learning, there are few empirical studies examining learners' experiences at Chinese universities College English in using online platforms for learning at a university in China during the COVID-19 pandemic.

Conclusion

Among all subjects in universities, English is an essential course that students take from elementary school or even kindergarten to university. China is the country with the highest number of English learners in the world and hosts about half of all English learners in the world (Liu *et al.,* 2016). College English is a required course for university students for freshmen and sophomores with non-English majors (Ministry of Education, 2007).

This means that English teaching in China is now part of the planning Chinese Ministry of education. The indispensability of English teaching

leads to a profound reflection on the status and working conditions of English teachers in China and on the negative consequences of the pandemic on learning and teaching processes and their development.

Therefore, we believe that English teachers in China face very difficult and dangerous challenges.

The challenges faced by ELT Teachers in China during COVID-19:

– Personal challenges: out of campus and out of China for many of them due to the fact that the outbreak happened during the Spring Festival holidays (usually one month and more of holidays)- time difference.
– Technical challenges: technology-related challenges in terms of mastery of new tools/ continuous adjustments and adaptation.
– Pedagogical challenges: contingency plan/ choice of assessment plagiarism.
– Techno-pedagogical challenges: teacher-centred approach (easier online) vs student centred approach (interaction in the foreign language – group work) adjustment to the different constraints of students (availability of internet/ computer/ students in quarantine).

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Help Teaching and Digital Resources: A Comparison of Classroom and Distance-Learning Experiences in a Course of Methodology of Social Research

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ABSTRACT: *The contribution compares two teaching experiences developed at the University of Salerno in the pre- and post-pandemic periods. Help Teaching is a supplementary course that supports official courses, thus preparing students for their exams. In this case, it has supported the course of Methodology and Techniques of Social Research. Before the spread of the pandemic, the course was developed in the classroom with the aid of digital resources. After the pandemic, it was taught in virtual mode through the Microsoft Teams platform. The course was divided into two main parts: a first part in which students were expected to acquire a scientific vocabulary and knowledge of theoretical, methodological, and technical issues; a second part in which students were guided through the critical application of collection, processing, and quantitative data analysis techniques. The lessons were structured by developing five distinct interrelated topics: research design, in which students were encouraged to reflect on the entire process of the research, moving from the theoretical to the empirical; the survey, where students learned to draft a questionnaire and organize a survey, while reflecting on opportunities and constraints given by subjects and context; scaling techniques, in which students learned to measure complex concepts; univariate and bivariate analyses, in which they learned to organize and analyze data as well as represent them graphically. In both cases, the course was designed mixing frontal lectures, collective activities, individual meetings, and self-assessment pauses. This contribution underlines the differences revealed in classroom and distance-learning, and how we can use digital resources.*

KEYWORDS: *Teaching experience, Digital resources, Participation, Interaction, Individualization.*

Introduction

In March 2020, the spread of the pandemic had accelerated the digitization process in all activities of daily life. The impact on society was strong and unexpected.

Among the different sectors, education was particularly affected: from primary to higher education, teachers and students faced the impossibility of continuing their classroom-learning experience and were obliged to revolutionize their way of teaching and learning. Technology

forcibly invaded the teaching and learning process (Trinchero, 2020), thus forcing us to learn or, at least, to interface with *Information and Communication Technology* (ICT).

The teaching and learning process has moved within digital spaces requiring particular skills of both teachers and students, not only technological skills but the ability to maximize their use (Argentin *et al.,* 2013). *Inter alia*, the role of the teacher is central to finding the best ways of using ICT to confront significant learning problems (Vivanet, 2020). Technology itself, in fact, can also have many negative implications, such as increasing distraction and cognitive overload (Calvani, 2020), a compelling risk overall in this emergency period.

Digital resources can be used both in classroom and distance-learning, but in the pandemic period we have had the need to use them in every activity proposed to our students, in an effort to hold their attention and motivation in complicated daily life. The teachers, in this context, had to ask themselves about the best way to carry out their teaching, reflecting deeply on their own work.

In higher education, professors have also needed to rethink their teaching approaches and redesign their courses. Designing a university course is a complex process (Diana, Catone, 2018, 144):

> the selection of the most appropriate teaching strategy depends on a reflexive practice that considers the following aspects: the characteristics of the discipline (in this case social science methodology), its teaching and learning methods, and the needs of learners according to their socio-cultural profile,

In this connection, I managed a supplementary course of Methodology and Technique of Social Research. My teaching experience was developed at the University of Salerno, in classroom and distance-learning. In both cases, the course was supported by digital resources, but the modification of the space had clear and practical consequences. Before the pandemic we had used digital resources to involve, interest and follow students on a continuous basis. After the pandemic, we were to a certain extent advantaged in the application of distance-teaching and learning methodologies, in part taking up what was previously done and re-adjusting approaches and tools to the new way of communication.

This contribution focused on strategies that a teacher can adopt in the use of digital resources, comparing two teaching experiences developed at the University of Salerno: firstly in academic year 2019/2020, before the spread of the pandemic, secondly in academic year 2020/2021, when activities were provided online.

The first section describes the main characteristics of the course; the second highlights the advantages and the limits that emerged in the various activities proposed to students.

1. A 'Help Teaching' Methodology and Technique of Social Research

1.1. 'Help Teaching'

'Help Teaching' is a supplementary course that supports official courses. It was introduced by the University of Salerno in academic year 2015/2016 to perfect student skills in specific disciplines[1]. Its aim is to guide students by providing individualizing teaching tools to overcome specific difficulties.

The program is divided into four main phases. First of all, the results achieved by students were analyzed in terms of formative credits for each semester or academic year of inscription. Thus, the University can identify the highly critical areas that can slow down a student's career. Subsequently, it is possible to implement educational interventions supplementary to curricular/institutional teaching. Finally, the University will be able to monitor the final results of each student, following their didactic support interventions.

The supplementary teaching activities are carried out by students with master's degrees, doctoral students or external experts, depending on the type of intervention requested by the teacher in charge of the discipline, through the calling of public tenders.

Here, I have supported a course of Methodology and Technique of Social Research as an expert in the discipline, certified by a Ph.D. and different work experiences in the field of teaching and research.

1.2. The course

The course of Methodology and Technique of Social Research applies to students with bachelor's degrees in Sociology. With respect to student profiles, they present substantial literacy and numeracy problems, and their attendance is frequently irregular (Diana, Catone, 2016). Considering the complex nature of the discipline that combines theoretical, procedural, and practical problems (ivi), the number of students accessing this course is quite high. The Help Teaching program is useful to identify single gaps and supports students adopting an individualized approach.

The course was divided into two main parts. In the first part, students were expected to acquire a scientific vocabulary and knowledge of theoretical, methodological, and technical issues. The aim was to acquire the correct linguistic register, basic for discussion in sociological terms, and to understand the importance of connecting theories, quantitative and qualitative methods, and practical techniques useful in empirical research. In the second part, students were guided through the critical application of collection, processing, and data analysis techniques. Considering the difficulties in applying quantitative methods, both for uninteresting and statistical issues, the course focuses on how to organize and analyze data in a matrix.

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[1] University of Salerno official website.

Finally, the lessons were structured by developing five different interrelated topics: research design; survey; scaling techniques; univariate analysis; bivariate analysis.

First, students were encouraged to reflect on the entire process of the research. They studied the process through which a researcher departs from theory, defining hypotheses, concepts, and variables, to return to theory. They elaborated on the differences between simple and complex concepts, reflected on possible detection errors, problems of reliability and validity issues.

Secondly, they learned to design a questionnaire and organize a survey, reflecting on opportunities and constraints given by subjects and context. They faced standardization problems of the *stimulus* and of reliability of verbal behavior, pondering how better to define questions and answers. They learned the more adequate way to organize and administer a questionnaire, also studying differences between diachronic and synchronic inquiries, and the particularities of secondary analysis, with a focus on the main available datasets, their risks and opportunities.

A third part concerned scaling techniques, in which they learned to measure complex concepts, mainly through Likert scale and semantic differential. In this case, the students were asked to understand (and subsequently build and compare) these particular detection tools, with particular attention to the topic of semantic autonomy. Many examples were provided.

In the last two parts, they learned to organize and analyze data, first in the univariate way, to describe the basis of data, then in the bivariate way, measuring the relationships between the different variables. They learned to build and read a matrix, as well as how to represent data in tabular and graphic forms, choosing the best way to illustrate them.

The Help Teaching of Methodology and Technique of Social Research for the academic years 2019/2020 and 2020/2021, were designed by mixing frontal lectures, collective activities, individual meetings, and self-assessment pauses, with the aid of digital resources. In the next section, the differences and similarities that emerged will be highlighted by comparing the two teaching experiences in classroom and distance mode.

2. A Comparison of Classroom and Distance-Learning

2.1. Frontal Lectures

In the academic year 2019/2020, before the spread of the pandemic, the frontal lectures were given in the classroom, also using online presentations with interactive images to engage and hold the student's attention.

For example, we used this interactive interface for presentations that succeeded in interrelating the different topics in a non-linear way, allowing the teacher to switch from one argument to another without

having to follow a traced route, thus adapting explanations to student suggestions and concerns. Through digital tools, it is also possible to embed videos, images and interactive links allowing students to make arguments that are more thorough or switch to others, thereby transforming the process of teaching and learning interactively in distinct propositions arising from the various stimuli occurring within the classroom.

After the pandemic, we developed the course via web-conference through the Microsoft Teams platform, and this digital resource allowed us to proceed with our goal: building an interactive teaching and learning process, with the fundamental collaboration of students.

2.2. Collective Activities

Collective activities stimulate the active participation of students, encourage debate, promote collaboration, and stimulate exchanges through examples, exercises, and simulations, built with the Office software. In the classroom, we had a whiteboard connected to the computer via a projector. This enabled us show examples and exercises on the whiteboard, to debate with students on ways how they can find the best solutions. Exercises were also given to students on paper so they could reflect thereon individually or in small groups. The classroom, in fact, gave us the possibility to create smaller groups for resolving problems in a collaborative way. In presence-learning, teacher supervision was developed by physically walking between the benches, observing student interaction, and identifying potential issues.

In distance-learning, these examples, exercises, and possible simulations were shared on the teacher's screen. In this way, we did not lose the possibility to encourage debate and reflection. The sharing of the screen in the Microsoft Teams platform also gave us the possibility to give commands to the students, so that each could work on a single shared file. Furthermore, in distance-learning we endeavored to create small groups to encourage collaboration among students: this type of interaction is feasible with supervision by the teacher. A critical aspect is that it is not possible to control all the groups at the same time, potentially losing some of the key interactions of the students. The teacher's work thus became less personal in coping with the limits of the platform.

Focusing on the asynchronous possibilities in the pre-pandemic period, we gave written exercises allowing the students to take time to reflect and interact on their own. After the spread of the pandemic, we shared through Microsoft Team's pre-structured files that allowed students to continue their studies and exchanges in addition to official course times.

2.3. Individual Meetings

In connection with two fundamental activities (frontal lectures and group activities) we planned several individual meetings all along the course period.

Before COVID-19, these meetings were planned at a teacher's office. An appointment was required in advance. The student was encouraged to discuss the more challenging topics so that the teacher could prepare personalized questions or exercises useful in their understanding.

In this case as well, digital resources have been fundamental in presence-learning. Communicating by email, for example, allows for individual teaching in an asynchronous way, supporting the one-on-one relationship between student and teacher.

With the introduction of distance-learning, asynchronous communication became easier: on the online platform we gained the possibility to chat (and to utilize, for example, 'emoticons'), a way of communication that reduces the distance between student and teacher. This method has the great advantage of pointing out the communicative methods of the students, making them feel freer to express themselves and open up.

However, in the synchronous way, we benefitted from the use of video-calls. Taking an appointment became more rapid and less tied to a specific reception time. In this sense, it became much more user-friendly.

2.4. Self-assessment Pauses

For this course, there were very important self-assessment pauses. On the one hand, students can understand the level of knowledge achieved; on the other hand, teachers can identify the gaps in knowledge and grasp how to adjust and individualize pedagogical practices.

In the classroom, the self-assessment pauses were developed through written questionnaires and teacher and students debated the responses together, but without immediate feedback, hence we could not be aware of individual learning. Hence, the students could not benefit from immediate comparison with each other.

In distance-learning, however, we used interactive quizzes that stimulated their engagement and motivation (Licorish *et al.,* 2018). In particular, we used a game-based tool (Bower, 2017) in which classmates represented both competitors and collaborators, and teachers supervised the entire process.

In practical terms, a digital tool called *Kahoot!* was used that employs an interactive response system creating quizzes accessible on every mobile or desktop device. *Kahoot!* is an open resource that offers thousands of quizzes across different topics: on the one hand you can create your own quiz, but on the other you can also find many pre-structured quizzes which are useful to the entire teaching community. The resources can be used by teachers to stimulate, assess and offer timely feedback, but also by students to create quizzes for their peers and improve their knowledge.

In this case, specific quizzes were created for every argument explained during the lessons. Teachers build the quizzes in content and graphics. Students can connect to different quizzes inserting a pin code at the link kahoot.it: they view questions and possible answers on a

teacher's shared screen, and on another device or internet page, they can access the buttons needed to answer. Teachers can scroll through questions quickly or discuss them individually, thus continuing the teaching-learning process. After answering every question, the numbers of those who gave correct and incorrect answers appear, so that teachers and students can discuss results. Continuing the game, each player acquires a score and ranks on a final leaderboard. Students can participate in competition against each other or create teams; in this distance-learning experience every student works from home, so we have adopted the first mode.

These kinds of digital tools make the process of self-assessment loads of fun for students (but also for teachers!) and help to stimulate participation, awareness and reflexivity (Catone, Diana, 2020).

Facing every topic in different steps allows us to proceed with the teaching-learning process cyclically: from explanation to competition, from competition to (self) assessment, from discussion to new explanation. The real-time feedback acts as a stimulus for students and teacher: students understand the level of knowledge achieved in an informal way (and overall, in comparison with the others), and the teacher identifies gaps in knowledge and understands the distinct difficulties.

Conclusion

The main question that each of us tries to answer now is if there were a post-pandemic period, what would happen? Most of the universities will revert to traditional classroom-learning, but have we learned something from this protracted period of training?

I think this could be the moment to rethink the possibility of building a «'connected school' (in a *connective society*: Van Dijck *et al.,* 2019), in which teaching and educational relationships develop in an interconnected manner, where online and offline, proximity and distance intersect and integrate» (Santagati, Barabanti, 2020, 123).

In my personal experience, in comparing classroom and distance-learning in a university course like Methodology and Techniques of Social Research, I can assure that digital resources have revealed themselves to be fundamental.

As I have explained, using digital resources in frontal lectures helps to engage and hold a student's attention, both in classroom and in distance-learning, transforming student's participation. In this kind of a traditional learning process, digital tools enhance certain phases in the learning and teaching process that are often considered boring by students.

However, as previously discussed, if the course previews collective activities, it can be useful to forecast to develop them in the classroom, because in digital spaces teachers do not have the same possibilities they have when present. The managing of these activities will be easier in the

classroom, but teachers can also organize interactive moments in digital environment aimed at overcoming spatial barriers and increase the frequency of collective activities. Student interaction can be useful in perfecting knowledge, also without teacher guides, in specific phases of the teaching and learning process.

Concerning individual meetings, digital resources have become fundamental. We always need the use of digital tools to allow a constant interaction among students. As I have previously highlighted, digital resources allow for constant communication, both in asynchronous and in synchronous ways, so they are essential both in classroom and in distance learning.

Finally, in the self-assessment pauses, digital tools certainly make the whole process more impactful and useful. This approach allows students to learn together, providing discussion and exchanges, and teachers to monitor the teaching-learning process.

Digital resources are nowadays fundamental, but their impact on the teaching-learning process definitely requires a strong pedagogical flexibility (Ferreira, Serpa, 2017). This poses a great challenge for the teacher who must possess a strong capacity of improvisation and establish an important relationship with each student.

In conclusion, in future we will face a great challenge. The spread of the pandemic has accelerated the adaptation of higher education to digital tools, but it is also necessary to question the consequences, namely the difficulties and opportunities of the integration of these digital tools in our teaching, considering not only the technical aspects but their implications on the teaching-learning process overall.

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Distance Learning: Giving Value to the COVID-19 Emergency

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ABSTRACT: *This paper addresses the current state of Italian higher education. On the one hand, the COVID-19 emergency revealed some vulnerabilities in Italian universities while, on the other hand, it enhanced their resiliency: in a short time, most of them were able to ensure the continuity of teaching activities, replacing face-to-face experiences with online ones. Teaching is one of the main aims of higher education, but it is often taken for granted and undervalued, while research activities receive far more attention. The pandemic had the advantage of bringing teaching activities back to the center of attention. It became fundamental to redesign teaching activities using distance learning methods even if stakeholders (including university lecturers) were not prepared to do so. Indeed, in addition to the difficulties of accepting and using information technologies, lecturers faced the challenge of planning and designing new forms of teaching that would ensure students' attendance and guarantee their level of learning. In the beginning, distance learning represented an emergency 'solution' introduced in response to the restrictions imposed by the pandemic. Its implementation required a significant investment in digital skills, including the learning of new software and the procurement of adequate supporting hardware. Generally, a crisis like the one we are currently facing leads us to deeply reflect on our future and on lessons learned that might give value to the emergency. Now the question is whether, in the aftermath of the health emergency, the outcomes of this digital investment can become an integral part of our educational offer and the new teaching strategies can endure. his paper reflects on the experience of the University of Milan Bicocca, discussing the outcomes of a survey administered to university lecturers using the CAWI methodology. The survey was distributed to the lecturers' institutional email addresses through the Qualtrics web platform. It is part of a broader research project, which compares the survey results to administrative data about the same university lecturers and concerns the effective use of distance learning tools available on the university online platform. Furthermore, the research employs mixed methods strategies and involves, in addition to lecturers at the University of Milan Bicocca, students and technical-administrative staff. The questionnaire was administered to a sample of 1,205 lecturers who taught*

during the first semester of AY 2020/21. A total of 955 questionnaires were collected, of which 456 were fully completed.

Introduction

Since the early months of 2020, the emergency caused by the COVID-19 pandemic has triggered deep crises at various levels, dramatically highlighting the general economic, institutional, and cultural fragility of the world-system (Giovannini, 2020). Therefore, we can consider the COVID-19 pandemic a disaster by referring to the definitions of disaster provided by the literature (De Marchi *et al.,* 1987; Oliver-Smith, 1996; Hoffman, Oliver-Smith, 2002).

When disasters happen the first matter of concern is the physical reconstruction of spaces, public or private. Unfortunately, we never give much consideration to the community that is affected by the disaster. But the characteristics of this specific disaster (the COVID-19 pandemic), vastly different from an earthquake, a hurricane, an atomic accident, etc., allow us to more deeply reflect on its consequences on the community.

In this contribution, we consider disasters as processes (social, organizational, and technical) rather than sudden and unpredictable events.

From a methodological point of view, the case studies on disasters with wide spatial/temporal coverage have shown a higher efficacy. Indeed, long-term perspectives and situated analyses of the effects of disasters on people's lives and on society as a whole are useful for reading the processes of change (Duyne-Barenstein, Leemann, 2013), breaking established patterns of thought, and re-conceptualizing non-linear processes. The COVID-19 pandemic is in fact a process, with an unknown conclusion, that will have consequences for every sector: social, educational, psychological, economic, etc.

Among the sectors most affected by the COVID-19 disaster, 'Education and Training' experienced severe disturbances in balances, routine practices, and cultural and regulatory models, with serious consequences for all stakeholders. Teaching activities are one of the main objectives of universities, but are often taken for granted and undervalued, while research activities receive a lot more attention. On the one hand, the emergency pointed out some vulnerabilities in Italian universities but, on the other hand, it enhanced their resiliency: in a short time, most of them were able to ensure the continuity of their teaching activities, replacing face-to-face experiences with online alternatives. Furthermore, the pandemic has succeeded in bringing educational activities back to the center of attention, intensifying reflections on the quality of the delivery

of the educational offer, the potential of distance learning to strengthen that offer, and the role of universities as active players in the territory (Hodges *et al.,* 2020). At the beginning of the COVID-19 pandemic, it was necessary to redesign teaching activities using distance learning methods even if some stakeholders were not prepared to do so. Indeed, in addition to the difficulties of accepting and using information technologies, lecturers had to face the challenge of planning and designing new forms of teaching that would ensure students' attendance and guarantee their level of learning. Distance learning represented an emergency 'solution' introduced in response to the restrictions imposed by the pandemic. Its implementation required a significant investment in digital skills, such as the learning of new software and the procurement of adequate supporting hardware.

In the future, this crisis will be interpreted as a decisive turning point, which forced a rethinking of models and practices that had previously seemed firmly established. Generally, crises spark new reflections about what was happening before the breaking point and what can represent an opportunity for the future. Now the question is whether, in the aftermath of the health emergency, the outcomes of this digital investment can become an integral part of our educational offer and the new teaching strategies can endure.

This paper addresses the state of Italian higher education, reflecting on the experience of the University of Milan Bicocca. We ask ourselves if we can safeguard the community of the university: lecturers, students, technical-administrative staff, etc. This paper examines the outcomes of a survey administered to university lecturers using the CAWI (Computer Assisted Web Interviewing) methodology. The survey was distributed to the lecturers' email addresses through the Qualtrics web platform.

The survey collected information on subjective perceptions of the experience of distance teaching and self-reported behavioral indicators. It is part of a broader research project (funded by the same university), which compares the information collected from the survey to administrative data about the same university lecturers and concerns the effective use of distance learning tools available on the university online platform. Therefore, subjective perceptions of the distance teaching experience, as well as self-reported behavioral indicators, are integrated with objective behavioral data extrapolated by the Information Systems of the University of Milan Bicocca.

Furthermore, the research employs mixed methods strategies (including in-depth interviews and focus groups) and involves, in addition to lecturers at the University of Milan Bicocca, students and technical-administrative staff. In fact, we are also carrying out a qualitative study through in-depth interviews with first- and second-year students of bachelor's degree and single master's degree courses, in order to analyze the learning experience provided by distance learning tools. The results of the survey and in-depth interviews will be the stimulus for subsequent focus groups with lecturers, students, and technical-administrative staff

to discuss and evaluate their experiences of both planning and implementing new strategies of teaching and learning.

In the third and final phase, the results of the previous research activities will inform university guidelines, complete with quality indicators, for the design of teaching proposals to be delivered in presential, semi-presential and distance learning modalities.

These guidelines specifically concern: the quality of curricular teaching; the methods of teacher training; the development of training proposals aimed at different users (students attending and not attending, curricular and extracurricular courses, etc.); and the development of training proposals aimed at the territory (so-called third mission).

A multidisciplinary team is working on this project. All members share a scientific interest in the design, implementation and evaluation of teaching and learning activities. The interdisciplinary nature of the group responds to the need to investigate the quality of the teaching-learning process from a combination of different research perspectives: the perspectives of sociology of education, didactics, and social psychology.

As stated by Guri-Rosenblit (2018), distance education radically changes the work of teachers. It requires a broad reformulation of their teaching practices and new forms of teaching support. Furthermore, it involves a lot more tools and resources. Over the past year and a half, the shift towards distance learning has radically accelerated due to the restrictions imposed by governments in response to the COVID-19 pandemic. Nonetheless, the digital acceleration created by this extraordinary situation can represent an opportunity to innovate education, its tools, and its languages (ibidem). Even before the pandemic, the gap between the educational system and the generation of digital natives, in terms of models and communication skills as well as content, was already the subject of debate (Landri, 2018).

Even if distance learning was born as an emergency solution in response to the restrictions of the health emergency, its implementation required a significant investment in specific skills, such as knowing and learning new software and procuring hardware to support it. Looking to the near future, the question we ask is whether the outcomes of this investment can become part of our offer along with the activities delivered in presence and semi-presence modes.

The current situation represents an opportunity to reflect on how to make learning activities more effective and efficient, teaching students the skills they need for the future and using modern digital technologies for communication. Now more than ever is the time to implement an actual process of cultural, organizational, and institutional innovation.

There are still few studies on this issue and most of them focus on the students' experience. As far as we know, the only research on Italian university lecturers is *Universi-Dad* by Francesco Ramella and Michele Rostan – Centro Luigi Bobbio of the University of Turin, Department of Cultures, Politics and Society with UNIRES (Interuniversity Center for Research on Higher Education Systems). The study focused on lecturers'

experience of distance learning in some Italian universities (Milano, Pavia, Bologna, Florence, Turin, Scuola Normale Superiore of Pisa, Liuc Università Cattaneo di Castellanza and Fondazione CRUI) during the first period of the COVID-19 pandemic (March-June 2020). The achieved sample of lecturers was 3,398. The results show a very positive experience, indicating that lecturers did not want to abandon distance learning: 54% of respondents believed that online classes should be reproposed and integrated with face-to-face classes in the future.

This paper is divided into four sections: the first describes the research aims, the second outlines the data, variables, and methods, and the third illustrates the results from a descriptive data-analysis. The paper ends with a summary and conclusions section presenting the main outcomes.

1. Research aims

New forms of teaching through distance learning not only involve lecturers on the one hand and students on the other, but also the technical-administrative staff responsible for both planning and implementing the new strategies of teaching and learning. These professionals were forced to adapt to new educational models in a short period of time and seek alternative solutions, not only disciplinary in nature but also communicative. Furthermore, these stakeholders were asked to address these changes while safeguarding the educational relationship in the absence of bodily proximity.

As stated above, this paper addresses the main outcomes of the survey distributed to the lecturers. The research aims of this paper are merely descriptive and aspire to: identify subjective-perceptual indicators and self-reported behavioral indicators to assess the quality of distance learning teaching processes; monitor the quality of the teaching processes from the previously identified indicators to:
- verify which factors (for example, individual characteristics) favor the acceptance and use of new technologies in teaching.
- Evaluate the relationship of these indicators with the variables concerning the learning context (for example, disciplinary field).

2. Data, variables and methods

The survey was administered to university lecturers using the CAWI methodology. It was distributed to their institutional email addresses through the Qualtrics web platform.

The questionnaire was administered to a sample of 1,205 lecturers (full, associate, assistant professors, but also adjunct professors which include PhD students, research fellows and external professionals) who held at least one course during the first semester of AY 2020/21 (from October 2020 to January 2021). The survey started on March 8, 2021; we

sent reminders to those who had not yet answered or had started but not completed the compilation, on March 13, March 18, and March 24. Currently, a total of 955 questionnaires have been collected, of which 486 are fully completed.

Respondents are 49.8% men and 50.2% women and predominantly aged 35-55 (61.5%), followed by over 56 (24.9%) and under 35 (13.6%). 33.3% of them are associate professors, followed by adjunct professors (32.2%), full professors (18.6%) and assistant professors (15.9%). We categorized our sample into scientific areas drawing from ISTAT definitions of macro-disciplinary areas and adapting them to the Milan Bicocca University configuration of the areas (https://www.istat.it/it/files/2018/11/Report-Dottori-di-ricerca-26nov2018.pdf). As a result, we obtained the following: scientific area (52.9%), humanities and social sciences area (38.5%) and health-care area (8.6%).

The majority of respondents live with a partner and their children (55.8%), followed by those who live with only a partner (18.9%), those who live alone (13.8%), those who live with other people who are neither partners nor children (7.8%), and finally those who live with only their children (3.7%).

To reduce the amount of data produced by the scales relative to lecturers' subjective perceptions of the experience of distance teaching and self-reported behavioral indicators, we used the Principal Component Analysis Technique. In this way, we obtained the following indexes:

– Fostering student reflection
– Student engagement
– Monitoring and supervision of learning
– Re-elaboration of contents
– Lesson design and planning
– Use of Moodle's feature
– Use of platform educational features

In this paper we present an initial and partial descriptive analysis of the data. Indeed, among the aforementioned indexes, we consider only the first two: Fostering student reflection and Student engagement.

Furthermore, we created additive indexes to reduce the data produced by other scales in the questionnaire. These indexes show the perception of ease of use and of usefulness of digital technologies for distance learning. They are:

– Involvement
– Technology availability
– Support from the university
– Impact on family care
– Anxiety
– Ease of use
– Future use of digital technologies for distance learning
– Usefulness

— Perception of control
— Perception of efficacy

Of these, we consider only three in this paper: Impact on family care, Ease of use and Future use of digital technologies for distance learning.

3. Initial outcomes

We begin by presenting some of the main results related to the additive indexes regarding the perception of ease of use and of usefulness of digital technologies for distance learning.

Firstly, referring to the Future use of digital technologies for distance learning we can observe that the higher the academic role, the lower the percentage of those who want to use the technologies for distance learning in the future. Indeed, the percentage is lower among full professors and higher among adjunct professors (Tab. 1).

TAB. 1. *Future Use of digital technologies for distance learning by academic role of respondents (%)*

Academic role	Disagree	Neither agree nor disagree	Agree	Total
Adjunct Professor	35	26	93	154
	22.7%	16.9%	60.4%	100%
Assistant Professor	13	20	43	76
	17.1%	26.3%	56.6%	100%
Associate Professor	36	42	81	159
	22.6%	26.4%	50.9%	100%
Full Professor	18	33	38	89
	20.2%	37.1%	42.7%	100%

This outcome is mainly attributable to age-related skills, as can be seen from the fact that the percentage of respondents who agree with the statement that they will continue to use digital technologies in the future decreases with increasing academic role, with full professors being the least likely to agree, followed by associate professors, assistant professors and finally adjunct professors. However, it should be noted that even among adjunct professors there are professionals who are no longer young.

Further proving our argument, the percentage of respondents who found it easy to use digital technologies for distance learning was lowest among full professors and highest among adjunct professors (Tab. 2). Regarding the impact of distance learning (in terms of commitment to the design and implementation of new activities) on family care, we can observe that more women agree that it has a strong impact (recording a difference of 10 percentage points compared to male colleagues) (Tab. 3).

TAB. 2. *Ease of Use of digital technologies for distance learning by academic role of respondents (%)*

Academic role	Disagree	Neither agree nor disagree	Agree	Total
Adjunct Professor	10 6.5%	32 20.8%	112 72.7%	154 100%
Assistant Professor	5 6.6%	11 14.5%	60 78.9%	76 100%
Associate Professor	9 5.7%	47 29.6%	103 64.8%	159 100%
Full Professor	15 8.2%	17 19.1%	57 64.7%	89 100%

TAB. 3. *Distance learning impact on family care by sex of respondents (%)*

Gender	Disagree	Neither agree nor disagree	Agree	Total
Man	126 52.1%	59 24.4%	57 23.6%	242 100%
Woman	105 43%	57 23.4%	82 33.6%	244 100%

With regard to the indexes on lecturers' subjective perceptions of the experience of distance teaching and self-reported behavioral indicators, we can observe that the higher the academic role of the lecturers, the lower the percentage of those who practice strategies to encourage student engagement during lessons. The percentage is lowest among full professors and highest among adjunct professors (Tab. 4).

TAB. 4. *Student engagement by academic role of respondents (%)*

Academic role	Low	Moderate	High	Total
Adjunct Professor	25 21.6%	46 39.7%	45 38.8%	116 100%
Assistant Professor	25 47.2%	14 26.4%	14 26.4%	53 100%
Associate Professor	36 29.5%	42 34.4%	44 36.1%	122 100%
Full Professor	34 50%	18 26.5%	16 23.5%	68 100%

Furthermore, we can observe a relationship between how much the lecturers encouraged student reflection and their disciplinary area. Indeed, lecturers from the social sciences and humanities area are more involved in terms of inviting students to reflexivity compared to their colleagues in the scientific and health-care areas (Tab. 5).

TAB. 5. *Fostering student reflection by disciplinary area of respondents (%)*

Disciplinary areas	Low	Moderate	High	Total
Social and Human Sciences Area	22 19.6%	41 36.6%	49 43.8%	112 100%
Health care area	12 37.5%	11 34.4%	9 28.1%	32 100%
Scientific Area	81 40.3%	64 31.8%	56 27.9%	201 100%

Conclusions

This preliminary and descriptive analysis of the survey data allowed us to analyze the experiences of distance learning (forcibly introduced due to the COVID-19 pandemic) focusing on three main aspects: academic role gap, work-life balance, and teaching strategies.

The first results are related to the perception of ease of use and of usefulness of digital technologies for distance learning. We observed a gap in academic role because full professors have a lower propensity to plan for the use of digital technologies in the future, especially compared to adjunct professors. Consistently, full professors reported having more difficulty using these technologies than their younger colleagues. It seems that different generations respond to and utilize digital technologies in very different ways. The months of lockdown, smart working and distance learning exposed the divide among these university lecturers in terms of digital competencies. Furthermore, an academic role gap also emerges with respect to experience of distance teaching, with younger lecturers appearing to be more student-centered, using strategies for student engagement during lessons more often than full professors. Younger lecturers seem more able to fill the distance between the educational system and the generation of digital natives in Italy.

The second issue pointed out in our analysis is work-life balance. The level of commitment necessary to design and implement new distance learning activities impacted women lecturers more than their male colleagues. Contrary to what we might have expected, the positive role of a high academic qualification and a highly qualified job in protecting individuals from the impacts of typical factors, such as sex, is only partial. Unfortunately, this gender difference in care responsibilities does not surprise us. Women remain the principal caregivers of families and their responsibilities have increased dramatically since many of the children's school activities and mothers' work activities have gone remote (see, for example, Pastori *et al.,* 2020).

The third issue is related to teaching strategies: some differences emerge with respect to disciplinary area, because in the human and social areas there is a greater propensity to encourage student reflection.

As sociologists (like all social and human scientists), we know that the relationship and interaction between teachers and students is key, not only to learning, but also to students' social and emotional development and teachers' professional development. Thanks to recent technological advances, various forms of online teaching and distance learning had been growing even before the COVID-19 emergency. These modes of learning are characterized by the fact that teachers and students are not in the same physical space (and often not in the same timeframe either).

However, we know that educational innovation cannot take place without an overall plan for digital development that considers both teacher training and the technological infrastructure of universities: the

potential of distance learning should be explored beyond the emergency in order to allow teachers to become more familiar with some tools.

These interventions would make it possible to consolidate the efforts made so far. For many lecturers, distance learning, which until now posed a complex challenge, now represents an exceptional opportunity for the development of inclusive, innovative, and quality education.

New technological platforms might be capable of innovating didactics, but their effective use requires the adequate preparation of teachers and a thorough reflection on educational structures and teaching strategies. Our initial outcomes (although related to a local context) highlight the need for a national digital plan for Italian universities, one with an adequate investment program for infrastructural equipment and specific attention dedicated to teacher training so that teachers are not burdened by their disciplinary and (sometimes low) competencies on top of their family responsibilities. New technologies can help to advance the good practices of didactic innovation already present in university classrooms. Indeed, many of these technologies, rather than replacing face-to-face teaching, can improve it by facilitating more interactive and collaborative forms of teaching.

The literature highlights how the unexpected shift from face-to-face learning to online instruction during the COVID-19 pandemic has led to negative health consequences for higher education students. The disruption of normality that students experienced during lockdowns and quarantines exacerbated symptoms of health disorders in the student population (Aguilera-Hermida, 2020; Hasan, Bao, 2020; Hawley *et al.,* 2021). These concerns should be addressed by politicians working on the many dimensions that require continuous effort prior to a disaster: improving information flow across organizational boundaries, career planning and placement, providing social support, expanding technical support, and requiring feedback are all strategies for engaging students (Vicente *et al.,* 2020) and increasing their wellbeing, as well as that of lecturers, both within and outside of the university.

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Reinventing Education in and through Artistic Languages

Art as a Didactic Tool: 'The Bauhaus 2.0' Digital Workshop

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ABSTRACT: *Starting from Dewey's theories and his concepts of school as a 'means of social reconstruction', 'pedagogical activism', 'miniature community' and 'school-workshop', the Bauhaus school of art (1919-1933) was avant-garde not only in contents, but also in teaching methodologies. Its founder, Gropius, believed that the objective of the Bauhaus was to achieve social progress and improve human life through art. The similarity between Dewey and Gropius is even clearer in the principle of learning by doing, which was applied to all the Bauhaus courses and led students to gain a highly practical experience. The pandemic has accelerated the digitization process of Italian schools. This context is the starting point of the present research, which aims to create educational digital workshops for primary and secondary school pupils. Such workshops follow the methods and contents of the Bauhaus school. The 'Bauhaus 2.0 Lab' is divided into eight modules. Each module can be used as a single experience or as part of the course. Each module follows the contents and teaching methodology used in the experiment conducted by the German art school: Knowledge of the artistic avant-garde: an approach to the context in which the Bauhaus was born; Theory of colours: starting from the research on the interactions between colours carried out by the painter Albers, students will be guided to develop these interactions and to understand their dynamics; Elements of composition: the experiments on collages and photoplastics, carried out by Bayer and Moholy-Nagy, will help students understand the importance of each element of a photographic and pictorial composition; thanks to the acquired knowledge, they will be able to create their own compositions; Discovery of materials: just as the students of the Bauhaus attended the workshops of materials (Werklehre), the students of 'Bauhaus 2.0' will learn about the different materials they use in everyday life; Relationship between the human figure and space: Schlemmer's studies on the human figure will be very useful for students to gain awareness of their own corporeity; Relationship between words and images: television, advertising and social networks are more and more present in the daily life of young people, who will therefore have the opportunity to understand the foundations of such media, starting from Bayer's studies; Relationship between the interior and exterior: the glass and concrete buildings designed by Gropius will be an opportunity to reflect on the concepts of interiority and exteriority from the point of view of both architecture and identity; Bauhaus toys: the masters of the Bauhaus believed that society should have and aesthetic education and for this reason they created numerous toys, which will be recreated in a digital key in 'Bauhaus 2.0'.*

KEYWORDS: *Art, Bauhaus, Digital laboratory, John Dewey, Walter Gropius*

Introduction

In 1919, the architect Walter Gropius founded the Bauhaus art school in Weimar. The Bauhaus was based on

> a new educational method, which aimed to integrate art, craftsmanship and industrial production in order to create an aesthetic society where people could improve their living conditions through the daily presence of art objects in their homes. (Camargo Molano, 2022)

The Bauhaus was perceived as a subversive element by the emerging German National Socialist government from the very beginning. Strong political pressure and the resulting lack of funding forced the then headmaster, architect Ludwig Mies van der Rohe, to close the school in 1933.

The life of the Bauhaus was very short (1919-1933). However, in just 16 years of activity, the Bauhaus left a fundamental mark not only in various artistic fields, but also in pedagogy and didactics thanks to its avant-garde approach. The didactic legacy of the Bauhaus was picked up by numerous art schools founded in various parts of the world after 1933. Very often these schools were founded by Bauhaus masters who had been forced to leave Germany to avoid government persecution. In 1937, Walter Gropius was invited to the United States, where he began his new job as a lecturer at Harvard University's Graduate School of Design.

When he arrived overseas, Gropius increased his contacts with the world of American industry, to the point that he pushed the Chicago Association of Arts and Industry to offer his former Bauhaus colleague, Lazlo Moholy-Nagy, the direction of the nascent design school financed by Chicago industrialists.

Moholy-Nagy, at first reticent towards the American way of doing things which he considered too friendly and confidential, decided to accept the offer and on 18 October 1937 the school called the New Bauhaus was inaugurated. The name left no doubt as to the link that was to be established with the German school. Nevertheless, the adjective 'new' should not be overlooked: the Chicago school, in fact, did not want to emulate the previous Bauhaus, but to be a renewed version of it that addressed the new problems of society.

Among the heirs of the Bauhaus it is also important to mention Black Mountain College. In March 1933, the president of Rollins College, Hamilton Holt, dismissed John Andrew Rice and three other 'gold stars', as Holt called them, Theodore Dreier, Frederick Georgia and Ralph Lounsbury, who had previously been called in to give Rollins a boost to innovation and to make it an avant-garde college. The dismissed teachers then decided to found Black Mountain College in response to and in open opposition to Rollins College.

According to Rice, Rollins was a symbol of the American standard of higher education that had to be surpassed. The founder of Black

Mountain College conceived of education as «an education of the whole man». Rice believed that, over the years, the humanities had failed, as they were too distant from the factual experience of the action-oriented world; similarly, the sciences had also failed in education as they did not place the student in an active role. The choice, therefore, had to fall on the arts: «This is why we at Black Mountain start with art, the artist thinks about what he is going to do, does it himself and then reflects on the thing he has done».

The organisational structure of Black Mountain College takes the Bauhaus concept of democratisation to the extreme: all academic structures linked to the traditional college world are abolished, above all the Board of Trustees. Rice himself refused to be called 'President' and gave himself the title of 'Rector.' Rice immediately saw the commonality of purpose with the Bauhaus, which is why, when the German school was closed, he decided to offer the position of the head of the art department to Josef Albers, who had a role «equal, and in many ways superior, to that of Rice» (Adamic, 1938, 144) in the college's subsequent development.

In the same year as the Bauhaus closed, 1933, the NieuweKunstschool was founded. This was another art school with roots in the Bauhaus and was founded by three Dutch artists: sculptor Jan Havermans, and painters Charles Roelofsz and Paul Citroen. Citroen had moved to Weimar in 1922 to join the Bauhaus, where he attended courses held by Paul Klee, Wassily Kandinsky and Johannes Itten. The Bauhaus had a strong influence on Citroen's artistic education and led him to found a school with the same values in his homeland after he had been awarded the title of a Bauhaus Master. Many former Bauhaus students became teachers at the NieuweKunstschool. Citroen decided to apply Gropius's principles from the very start and to establish a close relationship with industry. The school was private and Citroen's aim was to make it economically self-sufficient through contracts with companies. The Hochschule für Gestaltung (HfG), known as the Ulm School, was founded in Ulm after World War II at the behest of Max Bill, a former Bauhaus student who wanted to bring back to Germany the experience of the school he had attended.

The passing of the baton between the Ulm school and the Bauhaus is evident through the presence of Walter Gropius at the inauguration where the founder of the Bauhaus gave a speech. The link with the Bauhaus is also evident in the school's teaching structure. The Hochschule für Gestaltung is inspired by the pedagogical models of John Dewey and Maria Montessori, who focused on the student and the principle of learning by doing. As in Gropius's school, students are introduced to education at the Ulm school through the preparatory course: here there is a complete correspondence between the Bauhaus course and the Hochschule für Gestaltung one, as both are designed and taught by Johannes Itten.

Since its foundation, the Hochschule für Gestaltung developed an even closer link with industry than the Bauhaus. Bauhaus students designed prototypes which were then presented to companies whereas those at the Ulm school worked on specific requests from businesses. It was from these collaborations that products such as the Braun shaving razor, which became mass-produced, were born.

In this context, which outlines the main didactic heritage of Bauhaus, the Bauhaus 2.0 digital laboratory finds its place, in line with its predecessors. The workshop aims to take up the founding principles of Bauhaus and to interpret them in a contemporary key through the use of digital media. The aim of the introduction is to place this research in its historical context. The analysis is organised as follows: Section 1 illustrates the didactic method of Bauhaus; Section 2 deals with the new frontiers of remote learning; Section 3illustrates the 2.0 Bauhaus digital laboratory; finally, in the Conclusions, the research findings are discussed on the basis of the analysis.

1. The Bauhaus educational model

The Bauhaus distinguished itself from the outset as a democratic school, based on the collaboration between teachers and students. In fact, unlike other institutes, Bauhaus students would participate in all decisions related to the school. The students took part, with the right to vote, in the school council, which was primarily responsible for deciding on the relationship between the school and the world of industry.

The Bauhaus was not just a school, where knowledge was passed on from teacher to student, but an organised artistic community. The sense of community was reinforced by the fact that both teachers and students were required to live within the school for the duration of the courses.

The Bauhaus thus became a way of life: even in the off-hours, collaboration between students and faculty was encouraged, and the result was a flourishing of initiatives such as exhibitions, plays and sports events. The obligation to live on campus had a precise objective: to make art an integral part of everyday life by removing its character of exceptionality and sublimity, «art destined to have repercussions and blend into life had to be born as an act of life» (Argan, 2010, 40).

The total duration of the course was three and a half years. In the first semester, students were required to attend the preliminary course (*Vorlehre*), in which the elementary theory of form was studied and students were given the opportunity to carry out laboratory experiments using various materials. The activity in the lab allowed students to have a greater awareness in the subsequent choice of technical teaching (*Werklehre*), which was integrated with the theoretical study of the material and working tools. Students could choose from workshops in stone (sculpture), wood (cabinetmaking), metal, earth (ceramics), glass (stained glass), colour (wall painting) and textiles (weaving). Elements of

bookkeeping, price calculations and contracting were also taught in each workshop. In addition to technical teaching, students had to attend formal education courses (*Formlehre*), which were divided into three stages: observation of reality, representation (projection theory, construction technique, modelling) and composition (theory of space, theory of colour, theory of composition).

At the end of the three years, students had to take an exam with an external examination board and, if they passed it, it qualified them as 'craftsmen'. Then they had to undergo a more rigorous test before an internal examining board to obtain the title of 'Bauhaus Craftsman'.

Once the title of craftsman had been achieved, the Bauhaus course was completed for most of the students; only a few, in fact, decided to continue their studies by going on to do the advanced programme. This focused on the study of architecture and included a practical apprenticeship at the school's experimental construction site. There was no fixed duration: the teachers decided whether a pupil had reached the objective of the programme on the basis of their commitment and results. Also, in this case, at the end of the programme, the student would sit for the exam before an external examining board to garner the diploma of Master of Art, and would sit for another exam before an internal examining board for the qualification of master of art of the Bauhaus.

The Bauhaus teaching methods are clearly innovative. The ideas of John Dewey may be found in the philosophy of Bauhaus education. According to Dewey, education is the «participation of the individual in the social consciousness of the race» (Dewey, 1897, 77) so any educational activity must take into account the student as a social being. A principle strongly held by Walter Gropius, who not only actively sought to involve the citizenry in the activities of the school, but also designed the Bauhaus buildings themselves in such a way that they could merge with society.

According to Dewey, education fails when it neglects «the fundamental principle of the school as a form of community life and conceives it as a place where certain information is to be given, where certain lessons are to be learned, or where certain habits formed» (Dewey, 1897, 78). The Bauhaus shared Dewey's vision that «the focus of the school curriculum should reflect the development of humans in society» (Dewey, 1897, 77). The aim of the Bauhaus, in fact, was to achieve social progress and improve human life through art, thus adopting Dewey's idea of the school as a means of social reconstruction.

Dewey was the initiator of the learning-by-doing movement, based on the idea that practical experience is the starting point of all educational knowledge. This principle is evidently applied in all Bauhaus courses, but particularly in the didactics of the preliminary course, especially during the period in which this course was taught by the painter Johannes Itten (1919–1921) and later by Josef Albers, a pupil of Itten and the first Bauhaus student to be awarded the rank of master.

Before teaching at the Bauhaus, Itten had gained many years of pedagogical experience managing a public school in Vienna. Itten's aim was to develop the creative abilities of his students beyond all practical purposes, because only after they had acquired this wealth of experience would they be able to critically choose which workshop to specialise in:

> Hands-on experience is the most effective teaching. Experimentation enables results that cannot be achieved by study, and starting with play gives a good spirit and leads effortlessly to inventive construction and discovery, which is just as important pedagogically. Invention is the goal. (Albers, 1928, 21)

2. New frontiers in distance learning

The outbreak of the pandemic has greatly accelerated the processes of digitisation in many areas of life: from work to social relations and education. Remote learning, which at first appeared to be a provisional training tool and an alternative to face-to-face teaching, has proved indispensable over the months, significantly changing students' lifestyles and ways of learning. Digital immersion has brought to the surface the fragility of a school system that in many cases was unable to respond rapidly to the changes that had been taking place for some time. At the same time, it has highlighted new opportunities, so much so that in the near future e-learning is likely to become a component of the educational programme. In the world marked by strong socioeconomic and educational inequalities, e-learning is a tool that can overcome these inequalities, as well as geographical distance, provided that access to the network and technologies is widely available.

In fact, distance learning, by its very nature, is a tool created to overcome inequalities. Born in the 1960s to bridge geographical distance, it has evolved from the birth of web 1.0 to web 4.0 with an increasingly active and collaborative type of training on the web.

Distance learning, in its different forms, in synchronous and asynchronous modes, represents an opportunity to bridge various gaps that can occur within the same class, but also between different classes and schools located in distant places. It is a democratic and sustainable tool that focuses on an active and collaborative type of education.

This research starts from the above-mentioned assumption and aims to use digital tools to apply the didactic principles of the Bauhaus to contemporary life.

In fact, the creation of a digital laboratory makes it possible to overcome numerous problems that characterise the Italian school system: from the lack of funds to create workshops to the absence of essential materials for art classrooms. It also allows the students to use a language and approach that they are familiar with, being a generation of digital natives, and to deepen their knowledge and its use.

3. The 'Bauhaus 2.0' digital laboratory

The acceleration of digitalization that has taken place in Italian schools has been the core stimulus to develop the 2.0 Bauhaus digital laboratory. Even if in the near future everything goes back to normal and all school activities return to face-to-face mode, there is no doubt that in Italian schools some courses will continue to be held online. The digital laboratory can be followed by both each student at home and the whole class at school through the devices placed at their disposal.

Moreover, digitalization allows the use of tools that can make a course interactive and innovative.

The 2.0 Bauhaus laboratory is divided into eight modules. In the first module students will learn the concept of avant-garde and will discover the protagonists of the twentieth century. This module will focus on storytelling: through the stories of each protagonist students will have the chance to learn the elements necessary to have a complete historical, political, social and artistic picture of the time. The topic of the second module will be the theory of colour. Starting from the studies on the interactions between colours by the painter Josef Albers, students will be asked to develop these interactions and to understand their dynamics personally. It is interesting to note how in this case digitalization becomes useful, if not essential: Josef Albers carried out his experiments by using coloured papers, in this case students will not need any additional material other than their computer. Module three will analyse the elements of composition. The experiments on collages and photoplastics, carried out by Herbert Bayer and Moholy-Nagy, will be an opportunity for students to understand the importance of single elements in a photographic and pictorial composition and experiment with them.

Module four will focus on the discovery of materials. As the students of the Bauhaus were required to attend material workshops, so the students of the 'Bauhaus 2.0' laboratory will have the opportunity to learn about the different materials they encounter in everyday life. Even in this case it is possible to note the importance of digitalization: students following the laboratory at home or in a classroom could not have as many different materials, as they have at their disposal by using digital tools.

The topic of the fifth module will be the relationship between body and space, which is a fundamental stage in the development and growth of children. Oskar Schlemmer's studies on the human figure will be the basis of experiments aimed at making students discover their own bodies.

Module six will deal with the relationship between word and image. Television, advertising and social networks are increasingly present in the daily life of young people who will now have the opportunity to

understand the foundations of these means of communication, starting from the studies of Herbert Bayer.

Module seven deals with the relationship between the interior and exterior. The glass and concrete buildings designed by Walter Gropius will serve as the basis for reflection upon the concepts of interior and exterior, both in architecture and in one's identity.

Module eight focuses on games and in particular on the toys created by the Bauhaus designers. The masters of the Bauhaus believed that it was essential to educate people in aesthetics since their childhood. With this in mind, they created numerous toys that Bauhaus 2.0 lab will propose again in a digital key.

The Bauhaus 2.0 digital lab can be used in full form, from the first to the eighth module, or by following one or several modules, as each one is a separate course.

The strength of the Bauhaus 2.0 lab is to make students aware of the thought and experimentation of the great avant-garde of the twentieth century in a modern style, with the help of technology.

Conclusion

From 1919 to 1933, the Bauhaus became a landmark for the avant-garde in all areas, from art to education. For 16 years the Bauhaus was the hub of innovation, a cradle of experimentation and innovation. This revolutionary drive did not stop after the school closed, but through the school masters who left Germany for fear of being persecuted by the National Socialist government, it reached numerous countries, both inside and outside Europe, where schools inspired by Bauhaus were founded.

More than a hundred years after its foundation, not only does Bauhaus continue to be a source of inspiration, but also the experiments conducted within it are still avant-garde. It is for this reason that the didactic principles of Bauhaus are both applicable, and also extremely functional and innovative in this day and age, even in an online teaching condition, a type of teaching that, obviously, the Bauhaus masters could have never even imagined.

The Bauhaus 2.0 digital lab is not only based on the didactic principles of Bauhaus, but also on the German art school's own programs in terms of content it offers to its students.

In fact, the topics addressed in the early 1920s are still relevant today and can be a way for young primary and secondary school students to develop new points of view for understanding the surrounding reality.

The experiments carried out by the teachers of the school and the learning by doing applied in the Bauhaus labs are declined in a digital key, giving life to a new didactic experience that places the student at the centre of their educational process, making them an active subject of their own educational journey.

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Improvisation in Teaching Profession: An Embodied Approach for Inquiry

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ABSTRACT: *This abstract presents the main features of a still ongoing PhD research project which is developing in different scholastic contexts in Lombardy (Italy). Its aim is to describe the phenomenon of improvisation in teaching, namely the ability of teachers to grasp what's in the here-and-now of children contribute and environmental situation, realizing creative connections between their original intention and what is given from the world around. This posture is fundamental whenever a pedagogical action aims to consider children as active participants of learning process, since none of democratic teaching methodology can overlook what comes spontaneously from children and reality. The perspective of this study is to describe improvisation focalizing teachers' bodies: their tensions, movements, gazes and locations in the space of the classroom when unforeseen elements emerge in the pedagogical relationship. Improvisation is increasingly considered an inherent part of teaching, as evidenced by a growing interest in literature in the last 20 years. The axes of research in this topic are nowadays directed towards teacher training or theoretical understandings, while there are less contributions oriented to describe what happens in classrooms. This lack of literature manifests the need for an understanding rooted in schools' reality, in qualitative studies where teachers are considered active sources of knowledge. The epistemological framework of Embodied Pedagogy, which enhances the sense perception and the holistic participation of body, mind, and emotions in educational contexts, informs this study, besides the theory of educational dispositive. This study aims to enrich the understanding of the pedagogical value of the bodily presence of teachers. In order to embrace an embodied perspective towards the complex phenomenon of improvisation in teaching, I opted for a qualitative approach, expressed by an ontological position which can be considered phenomenological, and a methodology which comprehends ethnography, visual ethnography and arts-based methods. My axiology, lastly, entails a vision of schools as democratic and collaborative contexts. The research currently involves 5 teachers of two schools of different grades, located in two provinces in Lombardy. From a starting slot of observations for each teacher, the study entails a following phase where teachers are involved in an improvisational theatre training, where they'll discuss their insights about their embodied participation in improvised moments in classrooms and in the training experience. Also, interviews will be performed for data triangulation. Eventually, the epoch where this study takes place opens new questions and possibilities, such as, despite the spatial and movement restrictions imposed by the pandemic, how teachers' bodily presence is affected and how they find ways to improvise pedagogically building contexts and activities where children are protagonists.*

Introduction

This paper presents the main features of a still ongoing PhD research project which is developing in different scholastic contexts in Lombardy. Its aim is to describe the phenomenon of improvisation in teaching, namely the ability of teachers to grasp what's in the here-and-now of children contribute and environmental situation, realizing creative connections between their original intention and what is given from the world around. This posture is fundamental whenever a pedagogical action aims to take into account children as active participants of learning process, since none of democratic teaching methodology can overlook what comes spontaneously from children and reality. The perspective of this study is to describe improvisation focalizing teachers' bodies: their tensions, movements, gazes and locations in the space of the classroom when unforeseen elements emerge in the pedagogical relationship.

1. Improvisation: a liminal object of research

While in the artistic field improvisation arose again as a noble form of art in the XX century, the interest towards this form of human action and creativity grew in social sciences, giving precious insights especially in the last 20 years. If in theatre, music, dance, and graphic arts improvisation is the freedom of the creation meeting the language of predefined structures, it became interesting in social science to focus upon what happens when humans – and most of all, practitioners – meet the unexpected in their profession and in their daily life. This interest needs to be growing, in the opinion of Montuori, since the growing complexity of the world asks humans to achieve higher level of improvisation and creativity (Montuori, 2003). In the context of business studies, Yanow and Tsoukas claim that improvisation is strongly linked to reflection-in-action, a concept retrieved from the work of Schön: this kind of reflection is triggered by the 'materials' of the practice, leading the practitioner to improvise a reaction or response. For those authors, there are different kinds of surprise, and each one elicits a different type of improvisational response, ranging from 'non-deliberate' (spontaneous readjustments) through 'deliberate' to 'thematic' (explicitly intentional) (Yanow, Tsoukas, 2009).

Education field also dealt with this topic most of all in the framework of active and democratic teaching-learning approaches. The improvisation of teachers and educators becomes of critical importance

when students are supposed to play an active role and, for this reason, are free to express themselves and bring to the interaction their knowledge, their reflections and, why not, their worries. For learning to become more experiential and connected to students' reality, the teacher should know how to adapt his/er planning, ideas and content to unknown situations. We can find in literature pedagogical reflections about the meaning of this adaptation and ability to change, like the one of Donmoyer (1983) which makes explicit reference to activism and pragmatism:

> The best laid plans, however, can be inadequate, and certain conceptions of human development suggest that the curriculum should not be entirely preplanned by professionals and imposed on students (Piaget 1971, Dewey, 1963, 39)

Perticari also describes the teacher as a professional that can wait for the unexpected, to 'tail' students in their unique exploration path, supporting and fostering with what is needed in the here-and-now (Perticari, 1996). Currently, the research above this topic has followed different paths: one, more theoretical, is well represented by the recent work of Santi and Zorzi (Santi, Zorzi, 2016); another one is rooted in a psychological approach and relates to studies on creativity and socio-constructivist development: two great representatives of this work are Lobman (2019) and Sawyer (Sawyer, 2011); and finally, the branch of studies related to teacher's profession, interested in finding ways to train teachers for improvisation (Ben-Horin, 2016; Lobman, 2005; Pelletier, 2017).

However, there are less contributions oriented to describe what actually happens in the live situation of classrooms. In order to deepen the understanding of the phenomenon of improvisation for teachers, even considering the lack of studies in the Italian area, I decided to design a study rooted in schools' reality, in qualitative studies where teachers are considered active sources of knowledge.

2. An embodied perspective on improvisation

The epistemological framework of Embodied Pedagogy (Gamelli, 2011) and the theory of educational dispositive (Ferrante, 2017; Massa, 1986) inform this study: to say, on one hand, the perspective which enhances the sense perception and the holistic participation of body, mind, and emotions in educational contexts, while on the other hand the attention towards the unspoken and latent aspects and meanings of education that move between bodies, spaces, materials, and symbols. With a particular emphasis on the characterization of the dispositive as 'theatre', where classroom is seen as a scene where actors (teachers and students, which eventually represent an audience too) move and interact, and where the dual tension of the presence of the teacher, natural and authentical on

one side, while tied to an institutional role, is clear. When a teacher is called to an improvised response or an improvisational attitude, both sides of the presence are active, and the structure that guides the decisions priorly made, the institutional aims and the curriculum meet the bodily perception of something unexpected. If theatre is a metaphor to look at the scholastic context (Massa, 2001), my hypothesis is that improvisation can be the conception that helps us to look at teachers' actions, especially in cooperative and active scholastic contexts.

Improvisation is the creative action that happens in the here and now, without any previous planification. Improvisation is triggered from attention and perception of the environment, the situation, and the interlocutors; in order to be of a certain quality, needs training and a good type of presence. However, improvisation happens constantly in daily life, it is a natural modality of acting in the world: for this reason, since its great importance for education, what does the improvisation in classroom looks like?

With this study, I wanted to understand the nuances and the lived experience of this phenomenon for the teachers, and, in order to do that, I searched for a way to embrace the embodied aspects of the teaching practice and the individual presence, with particular attention to movements, gazes, tensions, and performative actions of teachers.

This is the reason why I opted for a qualitative approach. My ontological position can be considered phenomenological: I try to grasp the nature of a phenomenon letting it manifests itself to me, without provoking it (Bertolini, 1988). The methodology that felt more appropriate to grasp the phenomenon of teachers improvising in their classrooms has been ethnography (Cardano, 2003), with the use of video-recordings to collect and keep data about embodied aspects. I also used a paradigm for collaborative research/training in focus groups, proposing theatrical improvisation training to solicit further reflections and have further insights (Formenti, 2017). Eventually, during the beginning of the phase of analysis, the needing for art-based research methods arose (McNiff, 2007). My axiology, lastly, entails a vision of schools as democratic and collaborative contexts.

3. Research questions

The research questions that guided the project were the following:
  - How do teachers perceive and experience improvisation when teaching?
  - How do they embody the unforeseen events, how do they improvise?
  - What are the insights they have about this phenomenon when given the possibility to experience a theatrical improvisation training?

4. Phases of the research design

4.1. Participant observation and interviews

The first phase consisted in the participant observation of teachers for six hours, with the help of a video camera that was only recording the teacher. Teachers were aware of the aims and scope of the research and signed modules for informed consent. The ethnographic approach allowed to take into account everything I, as a participant observer, could see and feel instead of considering only the videorecording. This approach has been very helpful since it allowed me to collect data from the environment, my inclusion in the context, which gradually allowed the situation to become more and more natural, and most of all it allowed me to consider the backtalk of participants, commenting on their practices and adding unprompted reflections about the object of research. I began a raw analysis of data collected to select brief extracts of the video material, to use them in the video-cued part of the interview. The interview had a concentric structure with three grades of depth: the more external, with general information about years of teaching and theatrical experience, the second dedicated to grasp new insights about improvisation and the core one with the video-cued part, where teachers could watch themselves and comment upon new unrevealed insight about their lived experience.

4.2. Research training: theatrical, classroom improvisation

To build this part of the research, my main reference was the work of Pelletier (2017) and the pedagogical scenario for professional training of teachers he proposes at the end of his thesis. The selection of exercises he proposes are the result of a literature review analysis made especially rooted in the work of Lobman (2005): he selected three structures of play typical of improvisational training as especially adapt for the competence of classroom in-situation management. In addition, he proposes one hour of discussion after each hour of training, where teachers can express their thoughts upon the relation between the theatrical training and their practices in the classroom. I used this model to approach the second phase of my research, which comprehended the teachers of the phase one as participants and other teachers of the same schools (as you can see in paragraph 5). The intensity of the discussion phase of this model allows to adapt the curriculum of the training to the interest expressed by the participants, which are engaged as collaborative researchers, while providing a basic recognizable structure in all contexts of the research. The research-training lasted 3 meetings, 2 hours each.

4.3. Art based research: an unprompted method

This study embraces a form of art to gain understanding of human experience in a professional context: even if I was considering a computer-aided narrative analysis of all the verbal data I was collecting

(my field notes, the analysis of the videos, the interviews, the discussions of the focus groups), while the project was progressing, I realized that there was something that I could not grasp with written words nor about the embodiment of improvisation nor about the conversations I was having with teachers. For example, while I was watching again the video recordings about a teacher, I found myself imitating the movements and the posture of the teacher to gain understanding of what I was seeing; or even a teacher told me that what he did in class depended upon 'the swing' he had inside. Thanks to a Global Classroom in art-based research I was taking in my university, the momentum to explore in an artistic manner the collected data felt more and more adequate to not lose the nuances and the unspoken aspects of what I was observing. I have a background as an improviser, so I am exploring a silent theatre improvisation with the elements I isolated as recurrent in the videos and especially fruitful in the interviews. As ABR methods suggest, the perspective could be to show this artistic analysis to the participants and to engage them in a further improvisation. This part of the research is still ongoing.

5. Sampling

The first phase of the study involved 8 teachers of three institutions, located in two provinces in Lombardy:
- Province of Lecco (LC)
  - Institution Y:
    - School A: 2 primary teachers
    - School B: 1 secondary (1st grade) teacher
  - Institution X:
    - School C: 3 secondary (2nd grade) teachers
- Province of Cremona (CR)
  - Institution Z:
    - School D: 2 primary teachers

For a total amount of 4 primary teachers, 1 secondary (1st grade) teacher and 3 secondary (2nd grade) teachers. The focus groups for the second phase of the research have been organized internally in each institution and consisted in:
- Institution Y: 10 teachers (8 from primary school, 2 from secondary school)
- Institution X: 9 teachers (secondary, 2nd grade, teachers)
- Institution Z: 7 teachers (from primary school)

For a total amount of 26 participants.

Other considerations

Eventually, the pandemic epoch where this study takes place opens new questions and possibilities, such as, despite the spatial and movement restrictions imposed by the pandemic, how teachers' bodily presence is affected and how they find ways to improvise pedagogically building contexts and activities where children are protagonists. Or even the consistent presence of masks in all classrooms moments. These considerations open up new possibilities for further investigation in the context of this research, to see how much and where teachers needed to involve the COVID restrictions to their explanations, most of all when commenting their own video-recorded action, but also other research is needed in the general perspective of understanding the pedagogical impact of the pandemic.

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Preliminary Data from a Dancing Practice in Distanced Learning

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ABSTRACT: *Before the pandemic, art-based teaching and learning approaches were used to enhance wellness and physio-social skills with adolescents and adults. In March 2020, the rise of COVID-19 casualties in Italy required a national lockdown from which, a year later, schools and sports centres are still closed. According to the embodied theories, the body works as a link to both learn and communicate, and deprivation in motor-cognitive experiences can leave a gap in adolescents' learning process, affecting their everyday social and relation skills. The forced new normality re-shaped the between and within students-teachers relationships, and attention should be upon new languages and novel patter of communication. Therefore, we are investigating the effects of a validated dance intervention carried out in distanced learning (DL). Between March and May 2021, 25 adolescents (3 male, 22 females; age range 14-17 years old) were recruited from the same institution. The students performed 15 lessons of 2 hours each of unstructured, validated dance practice completely in DL, with one trained teacher. Questionnaires are being collected on the 12th of each month (March, April and May) in order to monitor the progression and perception of the intervention. Based on published research, the questionnaires focus on sports practices, movements' skills, eating habits, relationship with peers, use of technologies, and perception of DL. Preliminary data showed that the students reported previous obstacles from DL such as technical difficulties, lack of movement, and lack of social interaction, whilst DL's positive outcomes were the health safety for themself and their teachers. In conclusion, we aim to investigate the effect of a validated dance intervention on five domains (i.e., sports practice, movements' skills, eating habits, relationship with peers and use of technologies) and students' perception of DL. Preliminary data will be presented to facilitate and enhance the debate on research with novel education artistic practices in cross- and post-pandemic scenario.*

KEYWORDS: *Distanced learning, Education, Adolescents, dance, pandemic*

1. Introduction

Dace-based interventions are used to improve health and wellbeing in education (Aruta *et al.,* 2021), physical (Kim *et al.,* 2019) and mental health (Stueck, Tofts Paul, 2016). The majority of unstructured dance-based

approach combines dance with aspects of empathy, empowerment and emotional management (Aruta, Ambra, 2020; D'Alencar *et al.,* 2008). Recently, the lockdown in Italy (Guzzetta *et al.,* 2021), among other socio-economic (Nicola *et al.,* 2020) and health issues (Rossi *et al.,* 2020), also produced increments in the level of stress and depression the adolescents (Giannopoulou *et al.,* 2021; Pisano *et al.,* 2020). According to the embodied theories, the body works as a link to both learn and communicate, and deprivation in motor-cognitive experiences can leave a gap in adolescents' learning process, affecting their everyday social and relation skills (Shapiro, Stolz, 2019). We have previously reported the dangerous lack of relationship and interaction (Ferraro *et al.,* 2020) and other authors reported similar results (Commodari, La Rosa, 2021). The lack of social, positive interaction seems to produce unpredicted violence in the younger generations that uses social media to organise fights (Maltese, 2021) and produce anti-social, racist and violent messages (Elias *et al.,* 2021). Additionally, recent reports showed how the level of school dropout caused by lack of students interest to follow Distanced Learning (DL), or technical difficulties (e.g., lack of internet connection or personal computer) along with teachers and tutors not trained to the novel technologies has produced a dangerous gap in students' educational progression (Save The Children, 2020).

Therefore, it is urgent to assist the Education System with blended approaches that can facilitate and enhance student perception of distanced learning. We designed a dance-based intervention called Bodytasking that was carried out completely online, via synchronous teaching using laptops and personal computers. The full intervention is described below. We aimed to monitor the perception of our un-structured intervention on students and reported whether or not it could be beneficial to increase student perception of DL. Preliminary data will be presented to facilitate and enhance the debate on research with novel education artistic practices in cross- and post-pandemic scenarios.

2 Methods

2.1. Participants and Intention

The study took place between March and June 2021 and involved 25 students (22 Female and 3 Male) selected by their teachers among those with a higher risk of school dropout from the institution Liceo 'La Mura' of Angri, Salerno as part of the project *Scuola Viva Danzo, dunque sono*. Following University of Naples Parthenope ethics guidelines and approval, all students signed a consent form and agreed to participate prior to data collection. All participants then performed 15 meetings of 120 minutes with a Bodytasking tutor (LA). Bodytasking is defined as an experimental dance approach based on unstructured creative movements that have been already used in similar cohorts (Aruta, Ambra, 2020; Aruta *et al.,* 2021) with positive results in health and

wellbeing outcomes. Table 1 summarizes the Body-tasking activities used in this specific study.

TAB. 1. *Bodytasking methodology used in the project*

Didactic Units	Focuses	Actions	Objectives
'Around the dance': floorwork, urban dances and contemporary dances. *(Duration 5 meetings)*	- Coordination exercises for between upper and lower limbs. - Coordination exercises for torso - Exercises of body and gravity experimentation.	- Hip hop and house dance sessions, mainly using the lower limbs, in fast movement routines, physically intense and rhythmically marked by the music. - Sessions of contemporary dance mainly using the upper limbs in movement routines with complex spatial coordination and free musical rhythm, listening to one's own bodily self. - Floorwork sessions with simple movement routines constructed on the functional relationship between hands, elbows and shoulders in conjunction with head and pelvis for the organization and management of the body against gravity.	Increase self-confidence with by experimenting with different movements
'Post Fata Resurgo': give body to emotions. *(Duration 5 meetings)*	- Exercises for creating a movement routine. - Exercises to personalize a movement routine. - Exercises for dramaturgical composition starting from a specific theme.	- Instant composition workshop sessions and guided core-graphic composition. - Dramaturgical composition workshop sessions mediated by listening to varied musical pieces and watching dance video performances. -Creation of a video-performance as a performative outcome of the project and inspired by the myth of Deucalion and Pyrrha[1], in the thematic setting of the 'Post Fata Resurgo[2]'.	Use the corporeality to tell and communicate

2.2 Data collection
The SMART questionnaire was used to measured students' baseline habits in relation to Sports, Meals consumption, recreational Activities, Relationship with peers and adults and usage of Technologies. The SMART questionnaire has been already presented and used elsewhere with good results in predicting adolescents risks of antisocial behaviours (Ambra *et al.,* 2019; Ferraro *et al.,* 2020). Each domain contains a different number of questions that present multiple answers with a score from 0 to 3 (0 being the lowest and three the highest score); a higher score indicates healthier habits, whereas a lower score indicates unhealthy habits. The mean of all the answers gives the score in each domain, and the total score is calculated by summing each domain with a total, maximum score of 15. It is important to mention at this stage that the SMART questionnaire has been in development and has not yet been

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[1] Metamorfosi (Ovidio, 8 d.C.)
[2] Please find the video-performance at the following link: https://youtu.be/CuTKLvaVGyI.

validated. Nether the less is adopted at this explorative stage to monitor its feasibility and foster its reliability and validity in future studies.

To report students' perception of distanced learning activities, three questionnaires were performed, The first one (T1) at the beginning of the Bodytasking intervention, the second at two months into the intervention (T2) and a third questionnaire was completed at the end of the intervention (T3). These were carried out using an online platform called 'SurveyMonkey' (Symonds, 2011) and data were analysed using SPSS (Bazeley, Jackson, 2013; Field, 2020) A paired sample T-Test was conducted between T1vsT2, T1vsT3 and T2vsT3, with $P < 0.05$ as the significant threshold.

3. Results

A total of 22 students completed the dance-based intervention (i.e., Bodytasking). Only three students drop out of the study (2 M and 1 F) for personal reasons unrelated to Bodytasking.

3.1. SMART Questionnaire
Data from the SMART questionnaire are reported in Table 2.

TAB. 2. *Results from the SMART questionnaire*

Domain	Mean ± St Dev
SMART	8.9 ± 1.6
Sub-domain	
Sport	1.8 ± 0.3
Meal	2.0 ± 0.2
Activities	1.4 ± 0.5
Relationship	1.9 ± 0.2
Technologies	1.7 ± 0.4

Data are reported with mean ± standard deviation

3.2. Interviews
Table 3 summarised the results of the 4 questions in which students were asked to rate between 0 and 100. T-test analysis between the three-time period showed no differences between T1, T2 and T3, with $P > 0.05$.

TAB. 3. *Results for the 4 questions delivered at different times.*

QUESTION/SCORE	T1	T2	T3
Your Experience of DL	61.9 ± 24.5	56.4 ± 19.5	62.2 ± 21.7
Your Relationship with Peers during DL	67.2 ± 24.9	64.8 ± 20.4	60.9 ± 21.0
Your Usage of Technologies during DL	67.5 ± 15.3	64.4 ± 19.1	71.2 ± 21.0
Your Consumption of Junk Food during DL	59.5 ± 23.8	50.1 ± 22.6	54.8 ± 28.1

For each question students were asked to rate between 0 (lowest negative score) and 100 (highest positive score). Data are reported as mean ± standard deviation and were collected at different times (i.e., T1, T2 and T3). DL = distanced learning.

4. Discussion and Conclusion

We aimed to monitor the perception of our un-structured dance-based intervention (i.e., Bodytasking) on students and reported whether or not it could be beneficial to increase student perception of DL. Preliminary data have been presented to facilitate and enhance the debate on research with novel education artistic practices in cross- and post-pandemic scenarios.

4.1. SMART Questionnaire

The SMART questionnaire has been used to monitor baseline details about health and wellbeing students' habits. The questionnaire has been already used (Ferraro *et al.,* 2020) and presented elsewhere (Ambra *et al.,* 2019). The questionnaire validity and reliability with adolescents is currently under study. The questionnaire explores five domains of pedagogic interests i) Sports, how adolescents interact in sports activities with peers and adults; ii) Meals, the relationship that adolescents have with food consumption; iii) recreational Activities, how adolescents engage in their free time; vi) Relationship, how adolescents interact with peers and adults; v) Technologies, which reports the interaction and usage of tech devices (such as smartphone, tablet and computer). The SMART can be fostered as an index to predict adolescents' attitudes toward antisocial behaviour and prevent school dropouts. Our results show a score of 8.9 out of a maximum of 15. This value can indicate that the students have a good but not excellent attitude toward the five sub-domains of the SMART. However, additional analysis needs to be done to increase the questionnaire feasibility. Indeed, studies that focus on reliability and validating with repeated measurements are necessary.

4.2. Interviews

Students were interviewed at different times during the Bodytasking practice. The questionnaire that focused on distanced learning perception, relationship with peers and usage of technologies and consumption of junk food showed that there had been no changes over the course of 4 months. These results are similar to what we have reported with a larger sample size when comparing the overall perception of distanced learning over the course of several months (Ferraro *et al.,* forthcoming). Indeed, we reported that Chomsky's adaptation could cause these adolescents' response to the current situation (Chomsky, Foucault, 2015). The lack of interactions with peers and others for longer than a year might have produced a routine of sensory, cognitional, and educational deprivation that the younger generation can no longer express. Future studies should investigate body (e)motion cognition to improve the learning and educational experience with the COVID-19 generation.

4.3. Intervention

Bodytasking is defined as an experimental dance approach based on unstructured creative movements. It has already been used in similar cohorts (Aruta, Ambra, 2020; Aruta *et al.,* 2021) with positive results in health and wellbeing outcomes. The term Bodytasking comes from 'body' and 'task' and uses a grouping of elementary and various activities that contribute to forming a movement routine. The methodology proposes a dance practice that involves the participation of all parts of the body, working on unified and global movement. This idea is in accord with Laban's dance theories, which proposed separating the surroundings standard dance practices and explore dance in un-structured academic performances (Laban, 1926). We have reported some parallelism between Bodytasking and Biodanza (Toro, 2008), which might foster our dace-based intervention as a novel tool to improve educational outcomes. However, the intervention needs to be improved, and additional studies are now necessary to build a solid, rigorous foundation upon which to build Bodytasking methodologies and applications, similar to what has been done with other dace-based interventions (Sheppard, Broughton, 2020).

4.4. Post-COVID-19 Scenario

The Post-COVID-19 scenario appears in favour of blended approaches (Celestino, Noronha, 2021), in which tutors and teachers need to integrate Information and Communication Technologies (Tropea, De Rango, 2020), along with synchronous and asynchronous teachings methods (Nieuwoudt, 2020). Emerging research also suggests integrating social media coverage in teaching practices (e.g., TikTok, Instagram, Twitter) (Van Den Beemt *et al.,* 2020) which can be beneficial to increase students interaction and educate adolescents in positive uses of social media. However, it is difficult to predict how the upcoming semesters will look like, whether or not we will face new restrictions that might lead to a limited number of students per class. Therefore, it is crucial to help our pupils cope with the curet situation, as isolation and unhealthy usage of technologies can potentially lead to the aforementioned phenomena of antisocial behaviours and racisms (Iavarone, 2021; Iavarone, Trocchia, 2020). Nevertheless, it is important to keep monitoring the current situation with questionnaires that facilitate mixed-methods approaches and increase awareness in teachers and students upon the importance of positive, healthy relationships that can be achieved with social, inclusive activities (such as the Bodytasking we presented).

5. Limitations

The study presents several limitations. The Bodytasking was designed for the specific trial. However, a more robust and standardised approach to dace-based intervention should be adopted in future studies.

Bodytasking needs to be designed and structured so that its repeatability can be clearly reported for the benefit of other researchers. Continuing, there is an evident lack of questionnaires that can help to monitor students' current situation of engagement with distanced learning activities. We have adopted the SMART questionnaire and its four sub-domains which, as reported, have not been fully validated. Additionally, the four questions reported in the interview were sufficient to monitor the students' perception only partially, and a more comprehensive questionnaire should be used. Moreover, the majority of research about distanced learning and the students' perception does not take into account a high group of individuals that cannot take part in distanced learning activities due to lack of internet connection or absence of devices (such as computer, tablet and smartphone). Future studies should monitor these adolescents and assist teachers and tutors in finding novel strategies to diminish school dropout. Finally, future studies should also research new strategies to engage with students returning to in-class frontal teaching. According to the embodies theories, the deprivation of social engagement caused by lockdown might have directly affected students' abilities to interact with peers and adults without a digital screen in between them.

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Commemorating Piazza Fontana through the Arts: Learning Practices, Artistic Productions and Public Memory

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ABSTRACT: *This contribution will investigate the relationship between learning practices, artistic productions and public memory concerning the case of the first Italian terrorist attack happened in Piazza Fontana (Milan, 12 December 1969), where a bomb explosion killed seventeen men. This case is very symbolic in Italy, because it opened the 'strategy of tension' and it still divides the city after over 50 years, notwithstanding the recent empowerment of the role of the association of victims' relatives and new reconciliation policies attempted. This brief paper will illustrate a part of a long empirical research on the public memory of this case. In particular, it will explore the relationship between artistic mediation of this trauma and learning practices. This contribution concerns the central role of the artistic productions in educational processes, documenting how the association of the victims' relatives often uses them during conferences and meetings with students. Artistic productions, giving voice to the victims of trauma and mobilising the members of communities, affect the public definition of justice and the collective understanding of what happened.*

KEYWORDS: *Commemoration; Public memory; Terrorism; Artistic languages; Learning practices*.

Introduction

How can the first Italian terrorist attack happened in Piazza Fontana (Milan, 12 December 1969) be explained to high school students who often don't study these dramatic events of the recent Italian history in school textbooks? What impact can artistic languages have on remembering and educational processes? In what way artistic productions exercise their performative power in education settings?

In 1991 Corrado Stajano, a key journalist linked to the Piazza Fontana bombing in Milan and its aftermath, worried in the pages of the satirical magazine 'Cuore' if the younger generation knew anything about this massacre. His article, provocatively titled *Piazza Lontana* (distant square), was followed by the publication of a series of articles on the massacre written by some students. It was clear that many of them didn't have any idea about the first terrorist attack in Italy during the 'Strategy of Tension'

period (1969- 1993) and its consequences. The majority ascribed the massacre to the Red Brigades, a far-left terrorist group born only in the early 1970s. Others simply admitted their total ignorance (Foot, 2002).

Departing from an empirical research I carried out from 2011 to 2020, whose main results have been published (Luchetti, Tota, 2016; Luchetti, Tota, 2021), this short paper aims to investigate the ways in which the Piazza Fontana massacre is told to the younger generations, in particular by the association of victims' relatives, in order to explore the role of artistic languages in secondary education, focusing on how they reinvent learning and teaching processes.

1. The Piazza Fontana bombing (Milan, 12 December 1969) in short

The title of this paragraph is almost a paradox, only thinking of the amount of judicial documents produced by the subsequent trials of this case. The analysis of the procedural events and the social trajectories of this public memory over half a century certainly cannot be treated briefly. However, a summary, although not exhaustive, is proposed in the following lines.

The National Bank of Agriculture is located in Piazza Fontana in the centre of Milan, a small square just behind the city's cathedral. On 12 December 1969 at 4:37 pm, an explosion in the bank's hall killed seventeen men, fourteen upon impact. The blast additionally injured 88, including 33 employees of the bank. The victims were in the bank for the agricultural market held on Fridays after normal business hours. The blast was a tragedy that struck the nation, in part because of the socio-demographic profile of the bank's customers on that particular afternoon: a bomb seemingly placed at random but appearing as a symbolic assault on the working class employed in the agricultural sector.

A few minutes before the explosion at the National Bank of Agriculture, a second bomb was found undetonated in the headquarters of the Italian Commercial Bank, in Piazza della Scala, again in the centre of Milan. On the same afternoon, additional explosions occurred in Rome: one at the National Bank of Labour and two in front of the famous Italian monument, 'Altar of the Fatherland' (*Altare della Patria*) in Piazza Venezia, with about twenty wounded. In total, five terrorist attacks concentrated within just 53 minutes occurred simultaneously in Italy's two largest cities (Boatti, 2019).

The victims' funerals were held at the cathedral of Milan on 15 December 1969. Even though it was a cold and gray day, 300,000 people gathered in the cathedral square. On 15 December, Giuseppe Pinelli, an anarchist railway worker taken to the police station the evening of December 12th with other left-wing activists and suspected of being involved in the slaughter (even if he was innocent), died falling from the fourth floor of the police station. Luigi Calabresi, the police inspector who had questioned him continuously for three days, always claimed he had

not been in the room at the moment of Pinelli's death, but on 17 May 1972 he was murdered outside his home with two gunshots.

In 2005, after seven trials (in Rome, Milan, Catanzaro, again Catanzaro, Bari, Catanzaro and Milan) and 33 years of investigations, the *Corte di Cassazione* of Milan (the court of last instance) completed the longest trial in the history of the Italian Republic, an 'impossible trial', as Benedetta Tobagi (2019) defined it. The Court confirmed the not guilty verdicts for all the defendants in the Piazza Fontana bombing case. The judgment of the Milan court, however, stated that the Piazza Fontana massacre had not been committed by a splinter group, but was the result of a «well-organized conspiracy, though of obscure origin, outlines and dimensions»[1]. So, even though no convictions were made, the legal arena had performed its function within cultural trauma process (Alexander *et al.,* 2004) by recognizing the responsibility of the Ordine Nuovo neo-fascist group and discussing the material consequences of trauma. Now we can see this in Piazza Fontana in Milan, where one of the 18 commemorative panels inaugurated in 2019 around the fountain in the Piazza Fontana square has the inscription «bomb placed by the far-right terrorist group Ordine Nuovo».

This case is very symbolic in Italy, because it opened the so-called 'strategy of tension', the term coined by the journalist Leslie Finer in his article titled *480 Held in Terrorist Bomb Hunt* published just few days after the massacre (The Observer, 1969). This expression has come to denote the past four decades of internal terrorist attacks. Italy offers an important case because, for its duration and intensity, this period has no precedent in contemporary Europe. This period is still a very obscure period in the recent Italian past. Although the terrorist attacks occurred only a few decades ago, they are in many cases almost forgotten or, at least, not yet properly inscribed in the Italian and international public discourse. During that period, violence and terror were used as a political means to obtain political consensus. In many cases, even after decades, numerous terrorists have not yet been prosecuted and there have been no convictions, as the access to the legal arena was systematically denied through a variety of tactics, such as the transfer of the trial from Milan to Catanzaro, 1,200 kilometers away from the city where the massacre took place, causing many difficulties for the families of the victims to reach the court.

2. The theoretical framework and the research design

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[1] «[*Programma eversivo ben sedimentato, ancorché di oscura genesi, contorni and dimensioni*] Well established subversive program, albeit of obscure genesis, contours and dimensions » (Corte di Cassazione, 2005 our Translation).

This contribution refers to the theory of cultural trauma formulated by Alexander (*et al.,* 2004) and Eyerman (2001) and applied in many studies. Collective trauma can be expressed and expressively mediated through dialogue as well as through various forms of aesthetic representation, i.e. literature, film, music, photography and all forms of the visual arts. Commemorations thus play a crucial role in repairing and recovering the effects of traumatic and cruel events. In other words, cultural trauma can be understood as a meaning struggle, where individual and collective actors attempt to identify a situation by proposing a particular interpretation on it. Therefore, the process of cultural trauma is always a process of mediation, which necessarily brings to the fore unconventional strategies and alternative voices if the community is to be recovered. In this sense, the concept of mediation can have a double function:

> on the one hand, it acknowledges the social nature of art and suggests the active role of what emerges from dispositions, actions, material objects, and procedures that inform and surround the arts. On the other, to confront the artwork as mediation means to accept (rather than reject) its irrevocable, performative and specific nature, and to consider the diversified ways in which social actors describe and try their aesthetic pleasure (Grenier, Hennion, 1999, 5-6).

In particular, artistic representations have played a central role in cultural trauma, as forms of artistic expression can be an important part of the healing process, the process of social repair that is crucial to cultural trauma, as collectives attempt to re-narrate the foundations of their crushed identities. Cultural forms and artistic codes become resources with which to articulate the struggles over the past that influence the process of constructing identities. Literature on social memory has stressed the importance of the cultural forms of art (i.e. Erll, 2011; Tota, Hagen, 2016). In other words, art becomes an active part of social life and, in a practical way, culture enters into action: 'Arts-in-Action' (Acord, DeNora, 2008).

In the case of Piazza Fontana, like in many other terrorist attacks that occurred in Italy in those years (Tota, 2004), the access to the legal arena was not available to process the cultural trauma. For this reason, cultural elaboration of the trauma took place on other levels, such as aesthetic ones. So, art plays an increasing role in affecting public knowledge for those who had not experienced the event and represented a past that had difficulty finding space within the institutional arena.

This contribution also addresses the dynamic interaction between the content and the forms of collective memory (Wagner-Pacifici, 1996), the relationship between 'quantum events' and memory studies and the recognition of the restless nature of traumatic events (Wagner-Pacifici, 2010; 2016; Tota, 2016).

The results illustrated in the following paragraphs represent a part of a long qualitative and ethnographic social research on the public memory of this case based on data collected through: a) ethnographic observation during the commemorative ceremonies held on the anniversary from 2011 to 2020; b) 35 in-depth interviews with members of the Piazza Fontana victims' relatives association, Pinelli's daughters, members of the Italian Union of Victims' Relatives, Italian Partisans' Association, and other witnesses; c) documentary analysis of 600 news articles published in nine national newspapers and magazines. Moreover, all the significant material and all the cultural artifacts have been analyzed.

From this empirical research, some results have been published. One concerned cultural dimensions and public knowledge of the Piazza Fontana terroristic attack (Luchetti, Tota, 2016) and one related to the online commemoration which took place on December 12 2020 during the pandemia, focusing on the deep transformations of the commemorative practices due to the digital technologies (Luchetti, Tota, 2021).

With these aims, by conducting a case study on the Piazza Fontana terrorist attack, the research objectives are: 1) to analyze the social trajectories of this public memory; 2) to analyze the negotiations among different social groups and their consequences for the inscription of the crucial event in public discourse; 3) to explore how and to what extent artistic productions, giving voice to the victims of trauma and mobilizing the members of communities, affect the public definition of justice and the collective understanding of what happened; 4) to investigate the relationship between artistic languages and participatory and inclusive pedagogies. In the last part of this short paper slides I will present the first results that have emerged from the analysis of the interviews and that consider the central role of the artistic productions about the Piazza Fontana bombing in educational processes.

3. Arts and remediation in Piazza Fontana case

An indicator of the deep division in the Piazza Fontana case is represented by the story of an Enrico Baj's painting devoted to Giuseppe Pinelli. The painting (a large collage work that is 12 x 3 meters) was never displayed because the day of the exhibition's preview, 17th May 1972, Luigi Calabresi, the police inspector considered responsible of Pinelli's death, was murdered. The exhibition was immediately suspended and since 1972 the painting has been in search of a definitive location. Now the painting is in the warehouse of an art gallery and is waiting for an institutional location in Milan. It is a 'homeless art work', still without any solution.

In the last years the association of the victims' relatives has very often lent their voices to writers, filmmakers, photographers, dramatists, and graphic novel authors.

In particular, there are some cultural forms based on the testimony of the victims often used by the association of the victims' relatives during conferences and meetings with students together with their testimonies in schools. There is the comic book 'Piazza Fontana'; it is victim-centered through the figures and accounts of Fortunato Zinni, an employee of the bank who survived the massacre, Francesca Dendena, daughter of a victim and the first president of The Piazza Fontana Association, and Licia Pinelli, Giuseppe Pinelli's wife. Furthermore, we have to mention *Pino Vita Accidentale di un Anarchico*, an animation documentary written by Claudia Cipriani in 2019 together with Silvia and Cladia Pinelli, daughters of Giuseppe Pinelli. These recent artistic productions, giving voice to the victims of trauma and mobilising the members of communities, affect the public definition of justice.

Besides an ethical role, artworks regarding the terrorist attack at Piazza Fontana have a marked emotional function. Artistic productions like films, plays, comics, paintings and music seek to produce in their receivers some sort of identification with the victims so that they share the pain that the event has caused. In general, the analysis of these cultural artefacts—Baj's collage, Fo's play, the Piazza Fontana comic and Pasolini's poem—reveals the central role assigned to the moral testimonies of the victims and their relatives. In other words, these artifacts take the perspectives of the relatives of the victims of terrorism.

4. The association of the victims' relatives: learning practices and social trajectories of memory

This case still divides the city after over 50 years, notwithstanding the recent empowerment of the role of the association of victims' relatives and new reconciliation policies attempted.

The path of the Piazza Fontana Association for the public memory of this case is very relevant. Family members initially acted jointly in a spontaneous manner. Then, after the Bologna massacre, in 1980, the most active Piazza Fontana victims' families decided, in 1981, to form an association, but without formalizing it.

In 2005, the victims' families regarded the Court verdict as one of two breakthrough events that ushered in a new phase in public history. They launched an appeal to the city of Milan for the participation in the anniversary of the massacre and for the introduction of the commemorative march. The 2009 was one of the most significant steps of the associative path. Indeed, forty years after the massacre, during the celebration of Remembrance Day for Victims of Terrorism and Massacres, Pinelli was considered by the former President of Italian Republic, Giorgio Napolitano as the eighteenth victim of Piazza Fontana bombing, even more than a victim, because of the way his memory had been treated. The President pronounced these words in front of the widows of Pinelli and Calabresi, in order to formalize an act of

reconciliation between the two social groups that had competed for years to assert their own definition of the past. However, Calabresi has not yet been recognized as the nineteenth victim.

The Association is now engaged in keeping alive the memory of this act of terrorism among the young people and organizes, with support of cultural associations and local governments, meetings and debates in schools, in order to disseminate the historical truth that emerged from the 2005 judgment and especially to make young people aware of it, despite the fact that these topics were generally not taught as part of the curricula in secondary school.

In particular, in the last years a Memorandum of understanding has been signed between the Italian Ministry of Education and the main associations of the victims of the terroristic massacres to carry out educational and training initiatives to get deeper the theme of terrorism and to keep the memory of all the victims of terrorism among young people.

To better understand the relationship between the testimony of the victims and artistic productions in educational process, some excerpt from interviews to association of the victims' relatives, artists and teachers are reported.

Here we can read the words of Matteo Dendena, the grandson of one of the victims and Vice-President of Piazza Fontana Association. He underlines that the testimony of a victims' relatives allows a young who listens this storytelling to identify with the words and feelings of the family member and to try to take both the suffering and the message of hope in this research of justice and truth.

The words of Costantino Leanti, school project responsible, Demetrio Association, point out that in the school meetings there is the historical and legal aspect of the story, but above all the emotional involvement of the students who identify themselves with the witness who at the time of the events was a child who one day saw his father leave the house and not come back. These are events that always provoke great emotions and a strong collective awareness.

But, what happens when artistic languages support and come up beside testimony in secondary school education?

Costantino Leanti told me television, cinema, theater, comics are very effective ways of communication to young people and Marika Puicher, photographer and author of the exhibition *In the Name of the Children* told me that to raise awareness the younger generations on these issues, the secret is to tell them in the right way, for being them active subjects in this debate.

Indeed, the Association very often uses the movie *Piazza Fontana: The Italian Conspiracy*, by Marco Tullio Giordana (2012) to introduce debate in schools, before own testimony, as we can see from the words of Arnoldi: «Now there is the movie and so let's show that. Thanks to this movie, in the last year we received many more requests from schools and

other associations to go and debate after the movie. That's what we want, don't forget».

Conclusion

In conclusion, these artistic productions became tools to support and relieve the testimony of the association of the victims' relatives, to produce less pain in young people who listen to their words and to transmit the public memory of the Piazza Fontana massacre. Ultimately, arts contribute to the growth of democratic values in young people, promote awareness and exercise of democratic rights in educational setting and increase active citizenship through the arts.

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The Aesthetic Thinking. Reconnecting the Subject with the Reality, the Society and the Cosmos

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ABSTRACT: *In this paper, we will argue that the basic form of thought is the aesthetical form because it permits us to give meaning to our basic experience of reality. The basic human experience evolves aesthetically into a further 'mentalized' experience because a complex web of presymbolic operations (resonances, rhythms, transmodal interactions) and feedback is activated between the subject and the reality. This allows the experience of more sophisticated plots, as far as to reach the abstraction of thought. Indeed «knowledge is a product of art», as Dewey observes (1925, 273). The cognitive dimension of art, however, must not outshine its faculty to be in contact with the primordial meaning of being alive. Thanks to art we understand that «beauty is a grand fact in the universe» (Whitehead, 1938, 173). Starting from the «elementary contents of human life», from which it must never detach from, on pain of insignificance, art makes humans «aware of what it means to be alive. There is no other final end for this life» (Arnheim, 1954, 417). The current socio-cultural context, however, does not allow us to see art as a foundational experience of the human-world-society relationship and reduces it to a type of self-expression. In the post-modern era we don't believe that life can create 'organic forms' with their own spiritual content and internal purpose, on which the romantic idea of art as a 'living form' (Schiller, 1906, 76) was based. This paper is intended to reconsider valid this perspective applying the epistemology of complexity and showing its educational implications.*

KEYWORDS: *Basic experience, Internal purpose, Creativity, Complex systems*

1. The problem

Which contribution can the aesthetic experience offer to the comprehension of reality, society and ourselves? And which contribution in the education field? On the one hand, art seems to play an important and pervasive role in today's society. On the other, its main functions seem to be the means of the subject's emotional expression in a subjectivist perspective or his/her possibility to experience moments of relaxation or excitement.

In both cases, the aesthetic experience is confined to a world apart that runs parallel to life experience, to the day's toil, to the true innovation,

whereas science deals with them. It is indeed science that is connected with the world, while art seems to have a role of entertainment.

> On many university campuses, those who study the humanities are often made to feel like second-class citizens. Einstein or Shakespeare, we seem to believe, but not both in the same room. This split is a fracture down the middle of our integrated humanity (Kauffman, 2008, 7).

Is it possible that art will once again take on a significant cultural and social value equal to that of science?

What is its role in education? Applying the epistemology of complexity as an explanatory and integrative basis of different disciplinary perspectives, in this paper we will try to overcome the distance between art and reality by arguing that artwork is not a mere surface on which the projections of the subject pour. Art is a living system, with an internal purpose that generates a profoundly transformative aesthetic experience by entering into complex isomorphic relationships with our mind.

2. The artwork as a 'living organism': from the deteleologization of nature to its rehabilitation in complexity epistemology

2.1. Deteleologization of nature
The difficulty in the present world to think about the transformative potential of art depends on the 'deteleologization' of nature that took place since early modernity. Nature has been reduced to a passive matter capable of receiving any extrinsic determination (Spaeman, 2005). Whitehead (1925, 25-26) also points out that, since 1600 a new concept of reality has developed within the 'scientific materialism' for which there is only raw matter that is subject to forces which organize it from the exterior.

There is no implicit order in nature. The scent of the rose, the song of the nightingale, the brilliance of the sun, examples made by Whitehead (80), do not really belong to the experience, they are the result of our projections. Therefore they exist only in our mind, they are 'secondary qualities', as Locke defined them. The only qualities that really exist are the 'primary' ones: size, shape, motion, number, and solidity. So, Whitehead (ivi) observes: «The poets are entirely mistaken. […] Nature is a dull affair, soundless, scentless, colourless; merely the hurrying of material, endlessly, meaninglessly».

At the same time that matter was dematerialized, the mind was dementalized (Bertalanffy, 1967, 96). If the human being is an aggregate of elements governed by laws, it is difficult to understand how he can develop intentionality, meanings, consciousness, 'qualia', which are the property of the entire living organism. All aspects of our life, including

education, lose their qualitative nature and are transformed into mere procedures that can be reconstructed in a technical-scientific way.

The artwork undergoes this reductionism in a particular way: once the concept of internal purpose disappears, the work of art is nothing more than an aggregate of parts deprived of any qualitative aspect.

2.2. Art as the creativity of nature: Goethe

The approach is quite different if we conceive the piece of art as in Goethe: as an expression of the infinite creativity of nature, of which the artist is part. Apparently, the artist part himself/herself from nature to complete his/her own path of individuation, but instead, he/she continues to take part in the universal life and through the productions of the genius, is able to express his/her creativity.

Goethe's pantheism makes him believe in a consonance between the inside and the outside: nature and feelings are found in a primeval unity. The forces that move the poet inwardly and those living outward must be congener forces, belonging to the same world. According to this perspective, knowledge is never just something external and objective, it means participating in the universal life, and that's why there is no knowledge if not through fondness, affinity, congenericity (see Pareyson, 2003).

Knowing is not separated from feeling and creating.

Every rift has been overcome: artist and nature are part of the same reality. Artworks prolong nature, «they *are* the earth in one of its operations» (Dewey 1934, 3).

Another central concept of Goethe's thinking is that creativity is the secret plot that holds the parts together in that living whole that is the organism. Indeed «the corpse is not the whole animal», says Mephistopheles in *Faust*, because it lacks the fundamental element: life (Goethe, 2014, 49).

2.3. Kant's compromise

Kant was perfectly aware that the idea of nature, if interpreted according to the causal-mechanistic perspective outlined in the first Critique – which validate an idea of nature as a cause-effect play that has no purpose –, was incompatible with the idea of finalism outlined in the second Critique. In the second Critique, however, finalism concerns only the moral life of humans and not the whole reality, while in the third Critique Kant tried to find finalism in nature consistent with the aspiration to finalism that is present in the human mind.

According to Kant «thing exists as a natural purpose if it is *both cause and effect of itself*» (1987, 371). How can such causality be explained? Kant gives the example of the tree (ibidem), which is different from a man-made thing, such as a watch (374). In fact, a watch does not organize itself, it is unable to produce other watches or replace its missing parts as it is produced by an external cause (the man who made it). When something is endowed with a natural aim, like the tree, there is a co-

production between parts and the whole because within an organism end and means are intimately linked: «everything is a purpose and reciprocally also a means» (376).

The reflective judgement is not a determinative judgement (in the sense of the first Critique), but rather stems from an analysis on the objects in search for the category of purpose (which therefore must be found, it is not given) (373). There are two types of reflective judgement: the aesthetic judgement, with which man seeks beauty in things, and the teleological judgement, with which man seeks a purpose in the object, in the nature.

3. Artwork as complex system

3.1. Artwork and complex system: similarities

The problem of finding a generative principle that cannot be reduced to a mechanism has given trouble to philosophers and, today, to the scholars of epistemology of complexity.

A system, in very general terms, is a network of relationships (an organization) that mutually binds elements. Unlike what would happen in a non-complex system, such as a local telephone exchange, where signals pass linearly from one node to another, in a complex system runs a particular form of causality called 'non-linear' (or 'circular' or 'non local') which puts all the parts in relation to each other producing 'a whole that is more than the sum of the parts'. The category of the 'whole' is an 'emergent property' of the system (Anderson, 1972), a characteristic that does not belong to the individual parts but to the whole system. Another way of looking at this is to say that the system is self-organized. The whole acts on the parts that cease to be mere mutually extrinsic parts and become 'parts of their whole' (Wertheimer, 1923). As we have seen already in Kant, in a natural organism with an internal end there is a co-implication between means and ends.

Let's think of how in a artwork each element is necessary and functional to the final result according to a logic that is not merely additive but organic. Furthermore the entire work 'retroacts' on the parts by guiding them in the direction of the final result. It follows that the same note, the same stroke of colour, the same word or even a sequence of words will have different meanings if placed in different artworks. «The creation of art [...] is not exterior composition by addition of elements [...]: a living body is not composed of scattered limbs [...] it is a small world in which all the elements hold each other and each other cooperate» (Pirandello, 1960, 134; 217-18). In a work of art, all the parts work according to the final result and this, retroactively, operates the selection and organization of materials.

3.2. Co-evolution, processuality, historicity

Another salient feature of complex systems, especially living ones, is their constant interaction with the environment. While having organizational autonomy, they are 'open' (Bertalanffy, 1968; Maturana, Varela, 1980) co-evolving with the environment. The irreversibility of these interactions defines a path (Prigogine, 1979): complex systems have a history. The artwork becomes dense and valuable thanks to the challenges that the author must face to forge the *medium* according to his own intentions. «There can be no movement toward a consummating close unless there is a progressive massing of values, a cumulative effect» (Dewey, 1934, 137).

Pareyson recalls the metaphor of the artwork as a development from the germ to the organism, which dates back to Aristotle. He underlines that the epigenesis of the artwork is not guided by a mechanical necessity: the germ does not act with the elements in a rigid and predetermined way but, as in any living organism, it follows a creative path that is unpredictable a priori. So unpredictable that only when the work is finished, looking back, the artist understands that, in the uncertainty of his attempts, «every successful operation appears to him, once, as the only one that could have been done. However, to know it, he had to do it, and only by doing it he comes to know it» (1966, 23). The internal purpose that moved the work of the artist has taken on a 'living form'. For Pirandello the artwork is born when an image is installed in the artist's mind (no one knows why!) and when it creates the right movements to be expressed. The image can wander for its author, as happened in the *Six Characters in Search of an Author*.

3.3. Density, articulation, stratification

A system can then be considered internally articulated and stratified.

Regarding the first aspect, there is not a connection among all of the elements, which would prove to be fragile and uneconomic, but there are intersections and hubs responsible for the connection between macro-areas (Licata, 2011, 90). A complex system is often in turn formed by complex subsystems too, such as our organism.

By stratification, on the other hand, we mean that a system has different qualitative levels that generate many 'fields' reverberating in all parts of the system, and vice versa, according to the logic of a 'stratified determinism' (Weiss, 1969). The artistic form is not only a surface but, as a living system, it has a density, a stratification, an articulation.

3.4. Artistic communication as isomorphism

Both our mind and the artwork, as complex systems, can enter into isomorphic correspondence. As Bertalannfy (1967, 100-101) points out, we can find structural similarities or isomorphisms among different systems. Thus, a biological system and the mind can be structurally considered the same thing. Gestalt psychology had already realized that

isomorphisms are triggered between the brain as a biological object and the mind. For example, the perception of a circle finds its parallel in a circular field of excitation, geometrically analogous, contained in the brain. But Bertalanffy observes (ibidem) that the geometric isomorphism outlined by Gestalt psychology (an idea postulated when a systems theory was not yet available) is rather naive.

Therefore, between structurally similar systems, correspondences can be triggered between the salient properties of one system and those of another. Weiss (1970, 162) uses the term 'specificity' to refer to «a sort of resonance between two systems attuned to each other by corresponding properties».

We can assume that the aesthetic experience is the result of this flow of resonances that allows us to 'empathize' with the structure of the work. To use simpler words, it is as if our mind was in tune with the structure of artwork by making a 'mapping' of it and recreating the structure of the work in its own phenomenological experience, and thus, becoming similar to it. We 'embodies' the structure of the artwork. On this matter, the applications of the discovery of mirror neurons to the artistic field are interesting. They reconsider the controversial theme of empathy and show us, with elegance and simplicity, how the 'intentionality' of the artwork can 'resonate' with our mind thanks to the activation of mirror neurons (Gallese, Freedberg, 2007).

4. The renewed centrality of art in Dewey and its educational value

In the writings dedicated to art, Dewey reaffirms the idea of art as a development from the embryo to the complete organism. This development, despite being the result of an interaction with the environment, is governed by an internal purpose. Infact a artwork, to be such, cannot obey external needs (functionality, practicality, the need to excite, to shock, etc.) but must find in itself the reasons for its development up to its completed form. This is why «this esternality may […] be regarded as a definition of the non-esthetic» (Dewey, 1934, 198). The artwork only obeys itself.

For Dewey – in whom Hegel's anti-dualist lesson remains alive – art does not concern only the subject, but the subject and the object in their transaction (1949). Dewey defines this constant relationship between man and the environment as experience. While having to submit to the constraints of reality, the man is a 'vital centre' of the universe (1929a, 419), an active pole that struggles to regain balance in the face of the challenges to which reality subjects him. Art marks precisely those moments in which harmony with nature is regained. They are 'celebrative' moments because they indicate that, after all, «there must be, in spite of all indifference and hostility of nature to human interests, some congruity of nature with man» (Dewey, 1934, 185). But they are also 'incremental' moments, because – according to a 'continuist' and

'cumulative' logic that recalls the immanent development of the Hegelian spirit – any reconquest of harmony is never a mere return to the previous stage but a reaching of new and more extended balances, of an enlarged vitality.

For Dewey, therefore, «experience […] is art in germ» (1934, 19). It truly becomes aesthetic when it allows the artist to achieve a new balance and bring an expansion of vitality. When used to achieve a broader vision, mental activity such as feeling the mysterious rhythms of nature or being moved by the sociability of animals, is already an aesthetic experience. We will pick up this topic later.

Furthermore, since Dewey starts from the unity of subject and object, the creative expansion that characterizes art does not only concern man but, in some way, also nature itself: man, thanks to his own capacity for creative imagination, develops the potentiality of things by placing them in new relational orders (1929a, 381). So, Dewey affirms, with an almost romantic spirit, that «the belief, and the effort of thought and struggle which it inspires are also the doing of the universe, and they in some way, however slight, carry the universe forward» (420).

In Dewey there is a revival of the Goethian idea of man as a successor of the creativity of nature. «Art thus represents the event nature of as well as the culminating climax of experience» (IX). «Art is nature that thinks», we could say. Art already contains the 'thinking' because it gives the opportunity to experience the ineffable primary qualities of which the world is made. Even «knowledge is a product of art» (382) because it permits us to get in contact with these qualities and develop their potential by including them in new relationships, leading to 'new' experiences.

In the educational field, for Dewey, the attainment of a purpose should never be separated from aesthetic appreciation. Dewey notes, for example, that children will love literature if they enjoy it aesthetically, otherwise they will develop the ability to read in its narrowest meaning as the ability to recognize, pronounce and combine words together. They won't however develop the behaviours that will direct the use of this same capacity in one or another direction. (1929b, 59-64). For Dewey, in fact, the aesthetic experience is 'final', it is not 'instrumental' for further purposes. Means and ends for Dewey must not be seen as separate, on the contrary: it could even be said that ends are but totally realized means (ibidem). The separation between means and ends leads, on the one hand, to 'emptying' the ends and, on the other hand, to the inability to fully understand the means itself and to conceive new means to achieve qualitatively different goals. Therefore, without the 'internal purpose' included in every aesthetic-imaginative experience, even the 'purpose' for which something has been learned would not be able to be understood specifically, it would not have further developments or be applied to specific cases.

It is the imagination that allows us to source from an intimate understanding of a situation in all its dimensions, and to create symbols

and then translate them into specific meanings related to a more restricted activity. Last but not least, the aesthetic imagination allows us to achieve a meaningful life, which is the ultimate goal of education (1916, 271-277): to live fully.

5. Aesthetics as a primary form of learning in Bion

The ability to connect things into a new orders of relations that Dewey attributed to the human mind – and which finds its original expression in aesthetic experience – is also found in Bion's psychoanalytic thought for whom knowledge is relational, it is a form of 'bond'. Relationships need to be established, this is the job of the human mind. From relationships emerge the symbol (from the Greek *symbállein*, 'to put together') which is a form of bonding. The first form of thought is the oneiric one, which will then be followed by the abstractions of thought (1962). For Bion we dream even when we are awake because dreaming already involve a symbolization of emotional experience. Even the aesthetic imagination is one of the earliest forms of organization of experience.

5.1. False learning

In order for a symbol to emerge it is necessary to rely on the range of the imagination and wait for it to coagulate into rational conjectures. We must wait for when «a pattern begin to emerge» (Bion, 1980, 11). To allow the imagination to run its course it is necessary what Bion (1970) defines – with Keats – 'negative capability', or willingness not to saturate the unknown with the known, the capability «of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason» (Keats, 1899, 277). Vice versa the inability to tolerate the unknown, placing the control of the known before it, leads to a 'negative capability' (Keats) that dry out all experiences. Things are 'thought' but not 'known'.

Fromm (2008) similarly distinguishes a learning according to the having mode and a learning according to the being mode. In the first case «the content does not become part of [student's] own individual system of thought, enriching and widening it. Instead, they transform the words they hear into fixed clusters of thought, or whole theories, which they store up. The students and the content of the lectures remain strangers to each other» (24). There is acquisition, but not transformation, because the deep core of the personality is not involved in the learning process and it is limited to collect information or 'structures of thought'. The student's in the being mode of relatedness to the world

> receive and they respond in an active, productive way. What they listen to stimulates their own thinking processes. New questions, new ideas, new perspectives arise in their minds. Their listening is an alive process. […] They do not simply acquire knowledge that they can take home and

memorize. Each student has been affected and has changed: each is different after the lecture than he or she was before it (25).

6. Aesthetic dimensions of the relationship in the Infant Research

The aesthetic qualities of the basic relational experience brings to mind the relational density between child and caregiver described by Infant Research with the use of 'dynamic-aesthetic', terms that emphasize the role of 'rhythmicity' (Sander, 2008), of 'harmonious coordination' (Sander, 2008) and of 'interactive dances' (Stern, 1985) between caregiver and child, and emphasizing also the role of 'forms of vitality' (Stern, 2010) or of 'heightened affective moments' (Beebe, Lachmann, 1994).

In the earliest and most fundamental relational experiences, the 'how' of the 'what' counts more. As in a work of art, in which 'style' is priority over 'content', the 'form' of the relationship is the index of underlying dynamic-qualitative processes, of a harmony existing between the different forces in game. Good interaction is visibly aesthetic.

Conclusions

The aesthetic experience is the first and fundamental form of relationship with the world. The primary qualities present in reality are, with aesthetic experience, recognized, accepted and developed in further qualitative experiences. Art, as Goethe thought, is a continuation of the creativity of nature. Man's 'thinking' is part of this process. Art invites us to recognize that thought is defective, if not false, if it does not recognize itself as indebted to the primary qualities present in nature, if it places itself in a position of domination rather than respect and relationship, if it refuses to develop them according to their internal purpose, if it is not animated by authentic creativity. The sense of displacement produced in us by certain works of contemporary art derives from the lack of recognition of this link. The conception of aesthetic appreciation in terms of the projection of the subject's emotions on an 'artistic' object hides the primordial relationality of art and casts a nihilistic shadow on the aesthetic experience. Aesthetics marks every authentically evolutionary relationship, as can be clearly seen in the musicality of the first care relationships highlighted by Infant Research.

If aesthetics is a form of relationship then everything is aesthetic: «the fire-engine rushing by; the machines excavating enormous holes in the earth; […] The tense grace of the ball-player infects the onlooking crowd; […] the delight of the housewifein tending her plants» (1934, 5). Mental experience itself is aesthetic when it is an expression of such a form of respect. Being aware is already an aesthetic experience. Keats wondered, in this regard, about his lack of existential understanding:

> I am however young writing at random – straining at particles of light in the midst of a great darkness – without knowing the bearing of any one assertion of any one opinion [...] May there not be superior being amused with any graceful, though instinctive attitude my mind may fall into? [...] our reasonings may take the same tone – though erroneous they may be fine – This is the very thing in which consists poetry» (363).

The «aesthetic significance», suggests Whitehead, with which we conclude, gives us «the sense of external reality» allowing us to understand that at the basis of specific qualitative experiences there is a more basic experience: «the large-scale feeling as to the totality» (1938, 150). It precedes any qualitative discrimination. Is the experience of a «vague grasp of reality» (ibidem), the sensation that there is «something that matters» (159) out there. «The primary glimmering of consciousness» (ibidem) comes from that.

This understanding is aesthetic.

> For example, take the subtle beauty of a flower in some isolated glade of a primeval forest. No animal has ever had the subtlety of experience to enjoy its full beauty. And yet this beauty is a grand fact in the universe. [...] then our sense of the value of the details for the totality dawns upon our consciousness. This is the intuition of holiness, the intuition of the sacred, which is at the foundation of all religion (164).

Also for Dewey the aesthetic experience allows us to touch the primordial meaning of being alive and it is for this reason that art is related to the religious (Dewey, 1934, 28-32).

> There is always a vague 'beyond'» (Whitehead, 1938, 7) and art allows us to grasp it. This is the reason for what «we must grasp the topic in the rough, before we smooth it out and shape it [...] One function of great literature [is] to evoke a vivid feeling of what lies beyond words» (ibidem). Aesthetic significance is that which gives us the «sense of external reality (165).

Even if this primordial qualitative experience remains in the background, it should not be hidden, as happens in epochs of decadence: it constitutes «a drive towards some ideal, to be realized within that period» (164).

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The Process of Crossbreeding in Contemporary Artistic Production. New Routes in Aesthetic Education

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ABSTRACT: *This contribution analyzes the different ways in which the transcultural dimension acts in some contemporary artistic practices linked to experiences of migration, exile, diaspora. The artistic practices that will be examined are intertwined with each other as they propose a critical reflection on the complex and stratified interconnections between the cultural, geographical, historical, economic and social contexts of Europe and the contemporary world, with particular attention to the Mediterranean area, recognizing the global migration processes and their historical formation an essential element for understanding the present. The hope is that the point of view adopted for the understanding of artistic processes allows us to grasp an often underestimated aspect: on the one hand, the creativity of métissages, that is, the original configurations to which they can give rise; on the other, the infinite and unprecedented forms of relationship with the Other that art produces. Glissant's (1990) theory of relation seems to us indicative for understanding the productive and creative sense of mixing and wandering: the poetics of relation is a form of philosophical nomadism that emphasizes the importance of being in the middle as an ontology of non-unity, of non-purity, of non-origin, reconnects us to the living chaos of the world and to the possibilities of transformation that are inscribed in it. This contamination has repercussions on a social, cultural but above all educational level: for example, in its ability to reduce prejudices towards the foreigner or the different; to rethink the identity-otherness opposition, to build new spaces of 'participation' and 'coexistence'.*

KEYWORDS: *art, aesthetic education, transculturality.*

Introduction. Art means movement, the crossing of spaces and territories

In this article, we will look into the artistic practices emerging from experiences of migration and cultural hybridism. They will be analysed in terms of active practices, of processes in the making through constant contamination between art and theory (Grosz, 2008). I, therefore, considered it worthwhile to accept Guattari's idea of art not as an Institution but starting from its techniques, from the processes of creation, from its practices, making it pour in other domains to play with

it from the 'outside', on the edge of or across, the space designated by the art as an Institution (Guattari, 1991).

The artistic practices analysed in this study are placed in a decisive period of time in contemporary art, the first twenty years of the 21st century. They are intertwined with each other in proposing a critical reflection on the complex and stratified interconnections between cultural, geographical, historical, economic and social contexts of the contemporary world and in recognizing the global processes of migration and their historical origins as essential elements to understand the present and in order to create new dimension of 'coexistence' and 'belonging'.

This argument is connected to the acknowledgement of the unavoidable resort to 'implicit aesthetics', which can be found both in the declarations of the artists and in the artistic practice itself, as well as 'in the dominant concepts and in the *vox populi*', in the common tastes, trends and costumes. (Tatarkiewicz, 1979). Indeed, as Władysław Tatarkiewicz properly observes: «if the historian of aesthetics were to source his material solely from aestheticians, he would not be able to provide a complete picture of the past thought on art and beauty» (ivi, 12).

Today we face a 'new course of aesthetics' related to a vast range of issues, objects, events, activities that affect everyday life in its various manifestations: from nature to the urban environment, from craftsmanship to industrial design, to the beauty of sport (Welsch, 2017). From this point of view, Yuriko Saito – one of the most renowned voices within this line of research – highlights that there are virtually no limits to what can become a source of an aesthetic experience: it is an extension or indeed, as she claims again Saito, an expansion of the field of aesthetics, rather than the opening of a new field of study (Saito, 2015).

Furthermore, the most relevant fact that has emerged in artistic production since the 1990s is the configuration of art as a 'relational experience'. This has radically changed the nature of the place of art as well as of the artistic object itself (Bourriaud, 2010). An art capable of creating space-time interweaving, areas of contact between global and local, proximity and distance, of creating itself new relational spaces, activating meeting points in which the interaction of the public is a substantial part of the art piece, and where the aesthetic act implies not only a formative dimension but a social dimension as well (ivi). Again, it is a way of making art that developed during a period of transnationalism of migrants, of artists, a period of diasporas and cultural nomadism (Appadurai, 1996; Hannerz, 1996). Thus, it is art itself a producer of new meanings, of a 'migrant' feeling, not exclusive, possessive, but open and plural.

In this work, I will suggest some artistic examples chosen in the field of digital cinema for an aesthetic education program in secondary schools.

1. Elements of digital aesthetics in transcultural cinema

Given the potential that digital technology offers to the artistic works presented in this contribution, it is necessary to build a critical framework of the digital technology field, comparing it with the cultural complexity of contemporaneity.

Digital technology represents a new possibility for artistic production and experience that has its roots in the artistic experiments of the late twentieth century, and it focuses on the event, on public participation or on the importance of collage as opposed to the display of isolated and structured objects (Weibel, 1999; Manovich, 2000).

In *Digital Art* Christiane Paul tries to clarify the terminology used for art forms using technology: what is now known as 'digital art' was also called 'computer art', then 'multimedia art', and now it is enclosed in the umbrella term 'new media art', which at the end of the twentieth century was mainly used both for film and video and for the so-called 'sound art' and other hybrid forms (Paul, 2003).

It must be said that the novelty element contained in the expression 'new media art' is the fact that technology offers previously unknown possibilities for artistic production and experience. The name 'digital art' refers to a wide range of artistic practices that could hardly be classified in a specific aesthetic field. In *The Digital Film Event* by Vietnamese director Trinh T. Minh-ha, which we will deal with later, the director operates on the borders among documentary, fiction and experimental cinema and suggests that the digital format is not only more flexible and versatile than the analogue format but also allows to cross the boundaries between film and video, breaking the continuity of the narrative (Minh-ha, 2005).

In the field of cinema and new media studies, the work of Laura U. Marks: *The Skin of the Film* deserves to be remembered for its relevance to the topic and the times. For those artists that she herself defines as 'intercultural', the skin of the film is seen not so much as a screen, but as a membrane that brings the audience into contact with the material forms of memory (Marks, 2000). 'Intercultural cinema' is described by Marks as a movement between the second half of the eighties and the end of the nineties, expressed by artists who belong to the new cultural groups of the West, emerging from migratory and diasporic flows. It is a cinema that expresses the political issues of displacement and hybridity, and which in some cases has been defined as third world's cinema, marginal, anti-racist, postcolonial, Third Cinema. The artists involved live in the metropolis but come from or have their origins in Asia, Africa, the Middle East, the Caribbean, Latin America. Some of them are: Hanif Kureishi (*My Beautiful Laundrette*, 1985; *The Buddha of the suburbs*, 1991); Mira Nair (*Monsoon Wedding*, 2001; *The Reluctant Fundamentalist*, 2012), Julie Dash (*Daughters of the Dust*, 1992), Trinh T. Minh-ha (*Reassemblage*, 1982; *Surname Viet Given Name Nam*, 1985), Michel Khleifi (*Fertile Memories*, 1980; *Wedding in Galilee*, 1987; *The story of the three jewels*,

1995). Whether it is short experimental works or longer films, this wide production is defined by Marks in terms of 'cinema', not only because it consists of time-based audiovisual works, but also because it concerns the experience of an audience gathered in a room (Marks, 2000). Now, the fact that the release is rarely in traditional cinema and more frequently in cultural centres, galleries, museums, festivals and, we hope, in schools and university classrooms, can only make the displacement of the cinematographic paradigms of representation and enjoyment of the work stronger (ivi).

In this cinematographic production, formal experimentation cannot be separated from the political conditions in which the pieces were produced: experimental forms of art suspend the norms of representation and realism, trying to recall the experience of living through two or more cultures, or within a minority group. Many of these works evoke both individual and collective memories, through some kind of non-visual knowledge. In particular, Marks rethinks cinema produced with new media in connection to multiple sensorialities and developing the concept of «haptic visuality» (ivi, 22). As a form of vision and knowledge that involves the senses, haptic visuality offers a method of sensory analysis that involves directly the body of the beholder.

2. Analysis of the case studies.

The preliminary acquisition of some elements of digital aesthetics certainly does not go in the direction of a complete and cohesive theorization, but it is an essential way of understanding the artistic practices emerging from digital cinema, which ends up enclosing the concept of 'beauty' and the way of living the aesthetic experience, also in light of what we affirmed about the 'haptic visuality'.

In the works analysed in this article, the emphasis is not on the representative power of the images, but on their material presence which is perceived before any logical understanding. Since there is no narrative to follow, the experience of watching/listening/hearing pushes the public to expand the meaning of the images and the sound, not with the purpose of isolating and understanding them, but in order to feel close, to 'speak nearby', as the film says. *Reassemblage* (1982) by Trinh T. Minh-ha: «I do not intend to speak about/Just speak nearby».

2.1. First case study. Night Passage by Trinh T. Minh-ha, 2004.
This provoking digital tale tells the story of three young friends who travel for a brief moment on the train between life and death. Their journey in and out of the land of 'awakened dreams' takes place during a long journey on a night train. Director Trinh T. Minh-ha and artist Jean-Paul Bourdier ingeniously frame through the train window, whimsical and sensual oneiric landscapes, accompanied by an equally beautiful and otherworldly soundtrack. Minh-ha challenges and provokes her audience,

changing the way she engages with the spirit and the forms of cinema.

From the very first sequence (the passage of a train), *Night Passage* presents itself in its formal setting, that of a digital journey. Technology has a major impact on the creation of the film: first of all, it facilitates the director's work on the fluidity of time, because it allows the audience to go back and forward easily. In that sense, digital technology enhances an effort extensively made by independent film-makers in the previous years, that of breaking with the linear time dominion. In the experience of *Night Passage*, time multiplies in the proliferation of crossed events and spaces. Furthermore, another aspect of technology influences the experience of the spectators: without a logical narrative structure, the magic of a film like *Night Passage* captures the spectator and leaves him/her to jump in and out of the screen and to interpret the meaning according to his/her expectations. In an evocative and poetic way, the film shows the limits of multiculturalism and interculturalism and emphasizes transient states and trans-cultural differences, in which the prefix 'trans' doesn't refer to the achievement of a fixed abode or the integration of diversity into society, but to the processes of identity construction that challenge the monolithic constitution of national and cultural identity.

2.2. Second case study. The nine muses by John Akomfrah, 2010.
A visual essay on mass immigration to the UK after WWII. Through nine chapters called as the muses daughters of Zeus and Mnemosyne, the director mixes archival images on the topic of immigration with footage of Alaskan scenery and quotes from John Milton's *Paradise Lost*, The *Odyssey* by Homer, *Richard II* by William Shakespeare, *The Divine Comedy* by Dante Alighieri, *The Unnamable* by Samuel Beckett, *Under Milk Wood* by Dylan Thomas, *Thus Spoke Zarathustra* by Friedrich Nietzsche, *The Song of Solomon* from the Old Testament, among many others. He does that with the intention of deconstructing the Western poetic and philosophical canon.

The journey becomes a key theme, with the emphasis on the route, on the transit and not on the final destination. In the digital montage of the film, ships arrive with migrants, while the voice reads passages from *The Odyssey*. The spectators contemplate the desolate ice, while the voice becomes a critical tool of interpretation.

As Akomfrah suggests, there are no local or universal realities, but connections between the local and the universal, in a constant dialogue between the two. In *The Nine Muses*, Akomfrah focuses on the creative use of archival images and materials, photos and quotes, radio and television excerpts, to reread the archive in its ambiguity and let it become an aspiration for the future, a continuous, concrete and incomplete project for the construction of memory. For a diasporic subject, the archive is meaningful because it is the space of the memorial, a tangible space in which memory proves the existence but also the battle between the official and the unofficial, the inside and the outside, the inclusion and the repression. After all, as Achille Mbembe reminds us,

each archive in its architectural structure, in its organization and division, always recalls the cemetery, a place where fragments of lives are preserved but also buried, hidden, made invisible (Mbembe, 2002).

Akomfrah is the co-founder of the 'Black Audio Film Collective' in 1982, which is specifically looking for mass media forms of telling about the identity issue of the black people of England in the most appropriate way. And in this film, Akomfrah clearly pursues the path of poetic lyricism, which links memory (archive images, quotes) to a reflection on the need to find a new meaning for those same events, exploring roads not yet travelled (the wandering of men in the glacier). The invocation to the Muses can then be taken also as an indication of the reading that the author provides to his spectators: we are in the realm of poetry, drop logic and follow the sound, the image, their various and polysemous combinations.

2.3. Third case study. Babel – Judgment Day, 2018, documentary film produced for the web by Manuel Coser, Gianluca De Serio, Andrea Grasselli, Giulio Zingari.
Babel is a collective and polyphonic work. It is a fragmented overview told in the first person. It is a plot of stories, confessions, visions, contemplations. It is a multi-handed diary. The centrality of the physical place from which the film is born, the 'Reception Centre' where the protagonists live, is the hub from which every story, every escape, every path starts and returns. The story is told by heterogeneous sources: photographs, audio recordings, videos, home movies, video calls and telephone calls. The linguistic and iconographic explosion of the film allows for a permanent search, between immersion or dispersion, between description and disorientation, between geography and doubling, of a common ground, of one's own gaze. This fragmentation of languages gives the opportunity to each protagonist-creator, as well as each spectator, to move freely in the territories, real or imaginary, near or far, that made up his/her city.

A solemn Turin unfolds to the eye in the early hours of a warm autumn day. We explore the city with David Ewere, Frank Makata and Alle Mbaye, three asylum seekers living in an Extraordinary Reception Center on the edge of the northern suburbs. Starting from this place, through fragments and glimpses of life, a hidden, unpredictable, personal and collective city is gradually created. We wander as adventurous captains, immersed in the emotional geographies of a territory made up of encounters, ties and connections with other languages, other cultures and other traditions in a game of differences and similarities, of clashes and encounters. Cultures are entities with extremely unstable and 'porous' boundaries (Chambers, 2007, 9). The gaze of the Other reveals another Turin, un unknown Turin: the workers, the friendships, the projects, the affections, the civic commitment, the stories, the conflicts, the claims, the forms of solidarity that animate the city behind a composite and rigid facade. A magmatic universe of a small community of young people is outlined in

the maps drawn by the walk of the protagonists, who have just landed in a new world, over which the Day of Judgment inexorably looms over. They will have to contend with the bureaucracy for the change of rules produced by the 'Decreto Sicurezza bis' of 2019. Will they get a residence permit? Or will they be rejected?

Conclusions

The works of the directors mentioned here can be an opportunity for growth as they present guiding themes that can be found in a diverse range of cultures: travelling, pilgrimage, nostalgia, roots, the stranger. However, what makes tangible the transcultural device created by these works are the following discoveries.

The first: the value of melting pot and hybridism as coexistence among different cultural identities, as an increase of internal dialogues, as a work of listening and of integrating the different selves. Listening to internal otherness represents a training process that promotes the creation of a richer and more articulated identity, able to integrate, and unable to exclude, the different concepts of humanity developed by various cultures. The educational value of the transcultural, a dimension evoked by the artistic examples in this article, lies in the fact that it challenges every monolithic identity drift by inviting it to welcome the Other and doing the same with the internal 'others'.

The second: the transcultural dimension gives to Otherness a crucial role in the construction of identity, promoting authentic relations among cultures (against any form of synthesis) and fostering a greater ability to explore one's own experience. This perspective urges us to decolonize the monocultural mind, rewrite the 'history of the other' (Ngugi wa Thiong'o, 2015; de Certeau, 2005). In particular is in the field of social, anthropological, educational sciences, in psychology and transcultural psychiatry (Devereux, 1975; Leff, 2008; Goussot, 2014), that the crossing of cultures with the loss of some codes and the acquisition of others, fosters processes of inclusion and contrast of every form of 'assimilation' of the 'cultures of origin' to the dominant culture. Over the last three decades, these areas of study and intervention have made it possible to break down borders, to embrace cultural changes and to open spaces where to think of new meanings for 'law', 'health', 'coexistence' and 'sense of belonging'.

My proposal cannot but present itself as movable and nomadic to the 'multicultural mind' (Anolli, 2006) of a 'border operator' (Ancora, 2017), capable of synchrony with a world in motion and able to cross the disciplinary borders that often block our thinking and acting. The current situation seems to suggest that it is not enough to stick only to a 'neutral' and 'institutional' mandate, ignoring the internal and external movement that every cultural process requires and produces.

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A Universities Programme of Art-Based and Art Informed Research

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ABSTRACT: *Recent decades have seen growing recognition of the role of artistic languages in educational and research settings. What was once an exclusive focus on the expressive production of children has now expanded to include far greater use of artistic languages in the domain of education, including with younger and older adults. Artistic production itself has become a key tool for interpreting society, and has thus been accepted into mainstream research as a language that it is no longer possible to do without. Proponents of arts-based research (ABR) and art-informed research are currently calling for a focus on «systematic use of the artistic process [...] as a primary way of understanding and examining experience» (McNiff, 2008, 29). These methods are alternative means of exploring aspects of reality that are inaccessible to traditional forms of knowledge and more conventional methods of inquiry. In a contemporary era that is different to the past and characterized by greater uncertainty, ABR offers a strategy based on a form of observation that is complex and wide-ranging, and thus more appropriate than exclusively linear and causal approaches. This paper presents a post-graduate course in ABR that takes the form of a virtual international classroom entitled Global Classroom in Arts-Based Research. This programme involves – in addition to the Human Sciences and Education Department at Milano-Bicocca University – Florida State University, Drexel University, University of Leuven, FLAMES, and Northern Illinois University. It is offered to PhD students in education, with a view to familiarizing them with the potential of artistic languages, getting them to constantly compare notes concerning their practices and documentation, and helping them to design research actions that include the use of these languages.*

KEYWORDS: *Art, Education, Research, Teaching University, ABR.*

Introduction

In recent decades, the debate surrounding educational and social research has no longer exclusively focused on the use of quantitative versus qualitative modes of inquiry, viewed as essential to carefully observing reality and attempting to impact on it by developing shared proposals for potential change. Theoretical reflection now also considers the languages used, which are no longer limited to oral or written words or to logical and causal thinking. A new line of inquiry emphasizes the

importance of using plural languages and more specifically artistic languages: iconic, figurative, photographic, video, bodily, performative, and musical languages have all proven their value and importance and have begun to be used to for the purposes of observing and collecting data, and not only to be used by the research participants, but also by the researcher, to whom they offer an alternative perspective on his or her journey of inquiry. Research practices that deploy artistic languages have thus multiplied and the debate has intensified accordingly. These developments have created the need for a focused and in-depth conversation between researchers from different disciplines and cultural contexts, with a view to enhancing even further the awareness of the potential to draw on arts-based languages in research and building a research community with a specific focus on this approach. In parallel, scholars have also begun to develop a focus on the different types of intelligence (Gardner, 1983), and consequently an emphasis on the importance of always considering the different routes to learning and knowledge building, and of respecting and valuing individual preferences. Innovative and avantgarde research is often conducted on doctoral research programmes, which are therefore among the key places where the potential for artistic languages to play a role in scholarly inquiry is likely to be taken into consideration. Accordingly, in this paper, we present a currently on-going international Global Classroom for PhD students, that offers a specific focus on arts-based research (Leavy, 2015, 2019).

1. Why can art play a key part in a journey of inquiry?

It is crucial to ask ourselves why art and its languages can play a key part in educational and social research among other fields of inquiry.

As Graeme Sullivan reminds us, the contemporary world is characterized by a constant lack of certainties and inalienable definitions, as well as by the need to be capable of coping with uncertainty. A mode of inquiry that draws on both instruments and paradigms that are predefined and closed paradigms risks losing some of the richness that is given by complexity. Hence, our contemporary era calls for competence in using open and exploratory methods that are better suited to capturing the latest developments in human thinking and achievements. «The realization that in an uncertain world there is a need to develop more widespread means of exploring human understanding and that visual arts can play a key role» (Sullivan, 2010, xxiii)

This concept has been echoed by Patricia Leavy, who in her work has described the importance of the contribution of art and specific value of arts-based research (ABR). In addition to these key theoretical reflections concerning the domain of research, we must take a step back to consider that art itself, and the work of artists, is itself a form of constant inquiry. Some artists have explicitly described their particular mode of action, and

how they have questioned it, proceeded, acted again, and reflected again, thus pursuing their own journey of inquiry in their own unique way. Emulating and making explicit such an approach in educational and social research, could be of value, although it should remain clear that researchers who use arts-based instruments and languages are not necessarily artists. A first consideration to bear in mind in relation to arts-based research is that it should in no way be viewed as a simplified or superficial approach to inquiry. On the contrary, we oppose such a mistaken view, advocating for the hidden depths of this approach to be taken seriously. ABR represents a complex field of knowledge, made up of countless factors, among which: the world of art itself, with contemporary artistic actions to the fore; the availability of the most up-to-date media and materials; the specific features of the children's, adolescents', and adult's graphic and three-dimensional productions; people's relationship with cultural heritage; advances in artistic inquiry itself.

A second point is that some have sought to restrict the definition of what may be viewed as art, an attempt that we have been warned about by Caterina Zaira Laskaris, who questions the reason for this need:

> We are generally obsessed with the meaning of art (and Art), or rather, with the idea that art must have meaning. In reality we too often forget that this is a historicized, modern sensitivity and that for centuries art had no meaning 'in itself', of itself, in absolute terms; that is to say, it was independent (ontologically) of its practical function as an object (and type of objects) and its meaning as an image (representation code, ornamentation, reading). Let us think, for example, of the function of a reliquary or an altarpiece, or of the meaning – over time, iconic, symbolic, decorative, cultural – of a fresco or a bas- relief, etc. Form, for a very long time, was not detached from content, rather they were mutually dependent. (Laskaris, 2017, 15)

A further reflection on this theme has been contributed by Dino Formaggio, who saw art as independent of its specific functions and definitions that cast its position in stone:

> Art is all that men call art. This is not, as some might believe, a simple ice-breaking remark, but rather, perhaps the only acceptable and verifiable definition of the concept of art. Such a definition is the most valid, and – if you will – based on well-known theories of contemporary logic, it is not even tautological. It possesses, first of all, a healthy negative validity: that of preventing one from going in search of a 'real', essential, or concealed definition, as all the poetics have done for centuries, arguing that art is intuition or that art is form, or that art is an idea, or that it is prayer, that it is this or that it is this that, always under the truly Don Quixote style illusion, on the part of each of these positions, that they and not the others, have captured it, impaled it on the sharp lance of their conceptual system, the very universality of art, all art and forever. (Formaggio, 1981, 11)

He subsequently continues:

> As a form it is empty. It is coloured with the colours of the cultures that it permeates, it emits the reflections of the experiences of the moment: but neither is it a static crystal of pure reflection. It is a combination of the active motion of the concrete artistic experience in progress and the equally active motions of the reflection. Thus, every epoch, every people, and every culture give life to a certain specific way of filling the general notion of art with meaning (Formaggio, 1981, 12).

These reflections lay the ground for the project presented in the next section, as they suggest that art can support inquiry effectively because it evolves in tandem with changes in society. An additional way of advancing our understanding of the potential inherent in the process of creating art is to engage with the first-person accounts of artists. For example, the following are Jackson Pollock's answers during an interview by William Wright on a 1951 radio show.

> *Pollock, what do you think is the meaning of modern art?*
> For me, modern art is nothing more than the expression of the ideals of the age in which we live.
> *Did classical artists have the means to express their era?*
> Yes, and they did it very well. All cultures have had the means and techniques to express their ideals. The Chinese, the Renaissance, all cultures. What interests me is that today painters are no longer obliged to look for a subject outside of themselves. Most modern painters have a different inspiration. They work from the inside. [...]
> *There has been a lot of controversy and comments about your method of painting. Would you like to tell us something about it?*
> I think new needs require new techniques. And modern artists have found new ways and means of getting across their ideas. It seems to me that a modern painter cannot express our age, aviation, atomic science, radio, using the forms of the Renaissance or other cultures of the past. Every era has its own technique. [...]
> *Let us return to the problem of technique, which many today find important. Can you tell us how you developed your technique, and why you paint this way?*
> In my opinion, technique is naturally developed based on a need, and from this need, the artist draws new ways of expressing the world around him. I use methods that are different to traditional painting techniques. Today it seems strange, but I do not think it is really so different. I paint on the ground, but that's not such an abnormal thing. The Orientals used to do it. [...] the colour I use is almost always liquid and very fluid. I use brushes more as sticks than as actual brushes. [...] I think it is possible, to control how the colour come out to a large extent, and I do not use... I do not use chance – because I reject chance. (Pollock, 2006,79-81)

2. The ECQI conference in Leuven: the beginning of a journey

During the ECQI European Congress of Qualitative Inquiry conference organized by the University in Leuven in 2018, a group of university lecturers who had been experimenting for years with incorporating artistic languages into their research practices, came up with the idea of organizing a seminar for the doctoral students of their universities.

The initial experimental phase of this project, entitled Global Classroom, aimed to offer systematic and reflective experience of the principles underpinning Arts-based Research (Baron, Eisner, 2012; Barrett, Bolt, 2016) and Art-informed Research (Cole, Knowles, 2008). The first Global Classroom, was implemented between October 2018 and April 2019, with the involvement of two universities: Drexel University and the University of Milano Bicocca. The group of lecturers involved in the project were: Professor Nancy Gerber and Jacelyn Biondo (Drexel University, Florida, USA), Elisabetta Biffi and Franca Zuccoli (University of Milan Bicocca). The students who took this course were able to attend it in video conference mode, from the campuses of their respective universities. The second 2019-2020 edition involved two additional universities, University of Florida University and KU Leuven and was implemented from February 2021 to end-June 2021. The lecturers involved in the design and running of this Global Classroom were: Nancy Gerber, Florida State University; Elisabetta Biffi and Franca Zuccoli, University of Milano-Bicocca; Jacelyn Biondo, Drexel University; Sara Coemans and Karin Hannes, University of Leuven, FLAMES and Richard Siegesmund, Northern Illinois University. In this case, the students involved were from four different universities and the students joined the video conferences from their homes rather than from their respective campuses, on account of the public health emergency. The distance education format previously imposed by the geographical distance between the partner universities ended up foreshadowing the online formats forced on universities by the restrictions adopted due to COVID-19. In keeping with the theme of artistic languages, the use of video and digital technologies, right from the first edition of the Global Classroom, imposed a divergent, participatory and artistic approach, as well as a use of the body and of various instruments and materials, that was far removed from conventional online classes. From the outset, the distance format was approached from the point of view of its artistic potential.

The syllabus for the seminar states that:

> We have created a new course for doctoral students and interested faculty based on a partnership between the University of Milano-Bicocca, the University of Leuven, and Florida State University to explore:
> 1) the various definitions of arts-based research in the US and Europe;

2) philosophical, theoretical, and methodological approaches to ABR across multiple disciplines in the social sciences, education and healthcare;
3) the social and cultural influences impacting the advancement of ABR;
4) a global research agenda specific to ABR; and,
5) strategies for promoting the advancement of ABR on a global scale.
In order to accomplish these goals, we will use a hybrid pedagogical approach integrating technology to conduct distance videoconference classes in which faculty and students will meet to study the current status, trends, approaches, and social and cultural positioning of arts-based research.
The class is conceived as a learning laboratory in which students will discuss, critically and reflexively evaluate perspectives, philosophical positions, and research questions culminating in the design and construction of their own collaborative research projects using arts-informed or arts-based research.

During the Global Classroom sessions, many projects were presented and implemented by faculty and doctoral students, in which artistic languages played a key part in the inquiry process. Concrete experience was always the starting point for learning, with the integration of theoretical frameworks, but heavily based on laboratory methods, which gave the doctoral students the opportunity to experiment with and explore a selection of artistic languages.

Learning laboratory structure
Reading, Discussion, and Reflection
Arts-based Research workshops (collage, assemblage, dance, painting...): Arts-based research practices will be integral to each class, as students explore how the arts can inform each phase of their research from conception, definition of research question, organization, data generation, data analysis, data synthesis, interpretation, representation, and dissemination. Students work in transglobal pairs to investigate and document how different artistic processes, media, skill levels, and team collaboration may be used at the various stages of a research project.
Discussion
Reflection and journal writing

Tutoring and academic support were offered to small groups in parallel with the main large group sessions. The students' feedback about this PhD module was positive. For example, one student wrote that:

This feeling of dialogue and true experimentation was perceived by all the students who participated as holding the potential to impact on their own research journeys, alongside having made contact with other universities and other doctoral students engaged in the same process.

Conclusions

This paper presented a Global Classroom for doctoral students on Arts-based Research and Arts-informed Research. It has been already been implemented over two academic years, and is expanding, in terms of the number of participating students, faculty and universities. The concept underpinning this offering is that PhD students, who are training in conducting research in the educational and social science fields, need to learn about artistic languages and their use in the research domain. It is not so much and not only a matter of keeping artistic languages in mind in order to collect different types of data (for example by collecting drawings by children, adolescents or adults, or the photographs of research participants, or biographical or autobiographical texts, musical compositions, collages (Biffi, Zuccoli, 2015, 2016), or three-dimensional compositions…) but rather to use art in the very process of inquiry itself (Biffi, Zuccoli, 2019; Gerber *et al.,* 2020; McNiff, 2013; Wang, Hannes, 2020). Enhancing doctoral students' awareness of this domain and facilitating exchanges between doctoral students from different universities opens up the possibility of more fully exploiting the true potential of these languages.

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Scaling Up Innovation: from Educational Practices to Systemic Change

The Art Ecosystem. Promoting Innovation, Inclusive Learning and Active Citizenship

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ABSTRACT: *This paper describes some aspects of the integrated model for research, education, innovation and development devised and experienced at the Artigianelli Institute in Trento (IT), in cooperation with the University of Trento (IT). The model, which draws on systems thinking and complexity theory, sets out to build a learning ecosystem which includes different actors and partners, and transcends the dualism of school/business, education/innovation, learning/development. The model grew out of a research project which was initially designed to explore new modes of integrating students (14-18 years old) with disabilities into Italian high schools. It has proven to work, both in terms of helping all the students to develop their cognitive, emotional and relational potential, and also as a resource for partner enterprises, in their endeavours to innovate and generate new business opportunities. The elimination of the division of knowledge into subjects and students into age determined classes is key to this innovation, which opens the way to new teaching methods capable of promoting active citizenship and better valorizing the different potentials of every student. The diversity of the students' capacities and interests thus effectively becomes a value.*

KEYWORDS: *Learning ecosystem, Personalized curriculum, Competence-based education, Problem solving, Active citizenship*

Introduction

Contemporary society is characterized by constant transformation and acceleration – technological, economic, social, existential –, and more and more extensive interactions, in which knowledge plays a key role (Lévy, 1994; Rosa, 2013). To cope with this transformation, the capacity to see oneself in relational terms as part of a dynamic reality is required, as are the constant recreation of relationships and meanings. An articulated set of competences for active citizenship and employability is needed. This cannot lead merely to the adjustment of existing practices or theories, and entails the redefinition of the psychological, cognitive, relational, social and even spiritual constructs that drive human activity.

While education and training systems are a crucial piece of the puzzle in facing this transformation, they, too, need major innovation, first

redefining the anthropological and pedagogical foundations of the models to be adopted and then going on to rethink the organizational and school management models in their entirety. The strategies for implementing and developing educational innovation should also involve a combination of centralized/decentralized and top-down/bottom-up strategies in order to ensure scalability (Murray *et al.,* 2010; Kampylis *et al.,* 2013).

Although there is general agreement on the need to reimagine educational systems and strategies in pursuit of these objectives, no clear, coherent model for this pursuit has yet been established. The various experiments that have taken place, while adopting innovative methodologies often inspired by the EU Council Recommendation on key competences for lifelong learning (EU Council 2018), have tended to deal with quite narrow didactic questions and to remain within the bounds of traditional pedagogical and organizational models. However, a systemic change requires a radical innovation of the model of schooling, starting from its basis. If we really want to create a new model and to promote active citizenship, the anthropological vision that underpins it must first be clarified. This can then be followed by the choice of a pedagogical approach consistent with the appropriate teaching methods and – no less importantly – of an organizational and managerial model that will best support the new pedagogical model.

This article is intended as a contribution to the development of a coherent way forward: it describes the integrated model for research, education, innovation and development which, beginning in 2007, has been devised and implemented at the Artigianelli Institute (*Istituto Pavoniano Artigianelli per le Arti Grafiche*, a high school in the field of graphic design based in Trento, IT), in collaboration with the University of Trento (IT). The model has proven to work, both in terms of helping all the students (14-18 years old) to develop their cognitive, emotional and relational potential, and also as a resource for partner enterprises, in their endeavours to innovate and generate new business opportunities (for some data see Faitini *et al.,* 2019). The article begins by recalling the contribution that systems thinking and complexity theory can make to understanding contemporary society, then briefly describes the pedagogical approach which, if adopted skillfully and sensitively, allows us to build a new model for schools, and, finally, outlines some of the teaching and organizational systems that can enable the realization of this vision.

1. Why Do we Need a Holistic Vision of Learning Processes?

The model grew out of a research project which was initially designed to explore new ways of integrating students with disabilities – particularly those with Autism Spectrum Disorder (ASD) – into Italian high schools. The choice to integrate young people with Special Educational Needs

(SEN) by mainstreaming them is, in fact, problematic, particularly in terms of how emotionally dependent on their support teachers they often become, and how frustrating the experience of being integrated into educational settings in which their difficulties and inadequacies are constantly in evidence can be; such settings, indeed, frequently provoke inappropriate social and relational behaviours (Gadotti *et al.,* 2018).

Close analysis of these dynamics revealed an opportunity (and, arguably, the necessity) to reorganize the education system by overturning traditional structures based on the division of knowledge into disciplines and the grouping of students into classes and thus allowing students to interact in learning environments that enable them to fulfil their own unique potential. Peer interaction in situations which permit young people with SEN to experience their own strengths and competences has been shown to be a crucial factor for their psychological and educational development (Gadotti *et al.,* 2016).

These initial observations set us on a journey which led to trialing a new educational model, and to joining the Italian movement *Avanguardie Educative* promoted by INDIRE, a national research institute that has been involved in educational innovation since its foundation in 1925 (INDIRE 2014). We were prompted to interrogate the theoretical assumptions underpinning the construction of such a model. There is a growing recognition that this construction necessitates the adoption of systemic, more holistic approaches (Joseph, Reigeluth, 2010), and coherence between anthropological vision, theoretical constructs and pedagogical/didactic activity. As a matter of fact, the acquisition of competences linked to problem solving, creativity and innovation requires an education system that focuses on the capacity to interpret the complexity of reality. This process requires each person to perceive themselves in relational terms and to be actively involved in a continuous redefinition of relations and meanings (Watzlawick, Weakland, 1977).

Theories which take inspiration from constructivist, systemic approaches and complex systems theory are good at helping us in this regard: general systems theory (Bertalanffy, 1968), the ideas of the Palo Alto school on complex systems and the constructivist approach to knowledge (Watzlawick, Weakland, 1977; Bateson, 2000) are particularly valuable guides on this journey. Then there is Edgar Morin, who has, in fact, had a more direct impact on theories about learning. He established an approach to education consistent with the abovementioned paradigms, a holistic approach that meets the challenge of complexity and the new aspiration for a non-sectorial and non-reductive knowledge (Morin, 1990, 1999). Other authors, thinking along the same lines, have underlined the importance of complex systems theories when redesigning learning systems (Romei, 1995). Recent developments in the use of design thinking as a method to support governance and advanced problem solving also provide us with powerful tools (Brown, 2009; Dell'Era, Verganti, 2013).

At the heart of the proposed model lies a vision of the world as a constantly evolving network of related elements, and the perception of each person as an integral part of this relational flow. An anthropological vision in harmony with these premises must first dispense with any residual self-referential and solipsistic tendencies, and instead place humans in structural relationship, constantly drawn beyond themselves, beyond their immediate – singular – surroundings and, thus, transcendent. Humans are, in other words, to be viewed as the constituent nodes of a network of constantly shifting relations (Weick, 1988), a network which is made up of each and every element of reality. In this vision, diversity becomes a crucial factor for the co-construction of meaning, in a process firmly rooted in a sense of mutual responsibility.

Through this holistic relational lens, teaching and learning activities take place within an integrated network of different, but tightly interconnected, experiences and actors: an ecosystem. The self-referentiality so often found in the traditional school can thus be avoided: in fact, the students' development of the competences and meta-competences they need is fostered by their interaction with a diversity of actors in education, research and productive settings, all of whom share a common project. This by no means entails denying the value of teaching practices aimed at developing knowledge through theoretical study and personal exploration. The aim is to combine these latter with others, which focus on the goal-oriented exercise of knowledge in real-world environments. The development of these competences is intrinsically linked to how harmonious, holistic, fluid and dynamic the integration of these different experiences can be.

2. From School to Learning Ecosystems

The Artigianelli Institute has created a network of settings and actors which – both singly and together – are contributing to the students' development of the competences they need. Until 2007 the Institute offered a standard professional curriculum in graphic design. Now, it is better defined as an ecosystem (the 'ART' ecosystem) dedicated to development, innovation and applied research in the broadest sense, where different partners and actors interact (Fig. 1).

The Institute provides both a professional education curriculum that enables its (380) students to obtain a professional qualification and the state high school diploma, and a higher professional training path in graphic design. It also runs lab projects, some involving product/process innovation for partner firms, others focusing on more experimental work. Both high school and university students participate in these laboratories, which are supervised by researchers from the Bruno Kessler Foundation (https://www.fbk.eu/en/, Trento). The ecosystem also includes two cooperatives which manage the bar and a student canteen, a student cooperative which packages and markets organic products, and a 2D and

3D graphics lab run by an international cartoon studio which produces cinema cartoons. Another actor is Contamination Lab Trento, co-sponsored by the University of Trento, an interactive – physical and digital – space designed to foster entrepreneurship, where participants can work and problem solve together. As a matter of fact, problem solving is a keyword to this ecosystem, both as a method and a general goal. Business development and support for start-ups are important themes considered integral to the ecosystem, which offers new businesses (usually started by students or former students) frequent opportunities to collaborate on projects, orders and commissions. Last but not least, systematic research is being undertaken against this backdrop, in collaboration with the University of Trento, into how young people with SEN and those most likely to drop out of school can best be supported in their learning.

FIG. **1**. *The ART Learning Ecosystem*
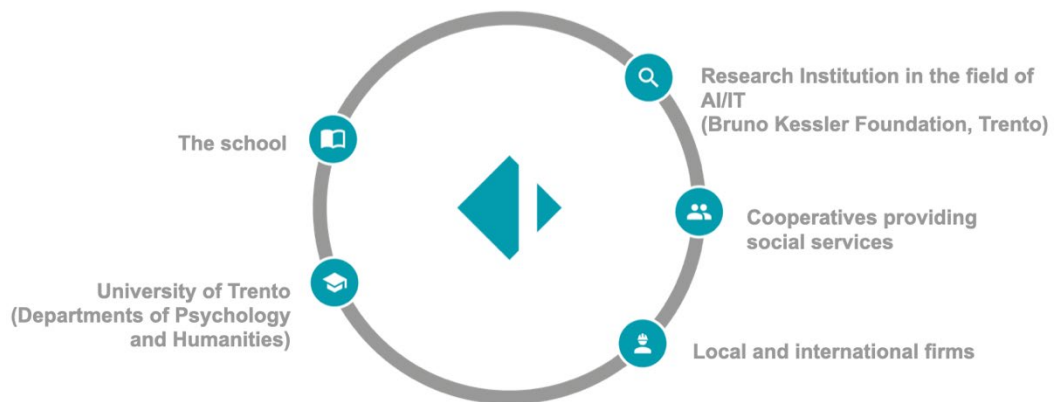
Source: Artigianelli Institute

In the meeting of all these initiatives and actors, a synergy is generated which optimizes resource use, know-how and business opportunities. This organized ecosystem allows the dualisms of knowledge/action, education/innovation, school/business, learning/development to be overcome, thus freeing businesses to become training places and training places to become spaces in which businesses and young people can together generate new ideas and projects.

3. Transcending Divisions: The School Subject and Class Group

If young people are to be given the opportunity to learn in different environments within a complex ecosystem, our entire teaching system must be reimagined. In our experience, key to this is the overcoming of division: that of knowledge into subjects and of students into classes. These divisions are grounded in a principle which is both deterministic

(the subjects are clearly defined, organized and divided in each year of the curriculum) and linear (subjects are studied according to a rigidly predetermined sequence). However, these divisions fail to adequately develop the competences necessary for an individual to participate actively – as a professional and as a citizen – in today's society.

The experienced model, in contrast, takes a competence-based approach and involves a teaching framework structured around 'courses', learning units which develop specific competences. The competences to be developed on each course are decided collectively by the teaching staff, on the basis of the cultural and professional profile envisaged as the learning path objective. Other courses are intended to strengthen competences linked to creativity, innovation and problem solving or to develop meta-competences. Particular attention is paid to the use of different methodologies, frequently adopting the design thinking approach (Institute Artigianelli, 2021). Some courses are specifically oriented to creating innovative solutions for businesses, while others focus particularly on entrepreneurship. The courses can be taken in any of the different settings within the ecosystem or externally (as part of a joint initiative). The assessment of competences is carried out through standardized tests and shared scoring rubrics, either established collectively by the relevant teaching staff or devised by external experts. The evaluation of soft skills is carried out by all Institute staff through shared rubrics.

Some examples follow, in order to explain how the model works. The (roughly) 60 students enrolled in the third year (i.e. 11th grade) are divided into three 'literature' courses and five 'writing' courses. Each group is different – in both composition and size – and works with different teachers, in line with both the workshop methodology of 'writing' (which necessitates smaller student-teacher ratios), and the particular learning needs of students with SEN. Two of the 'literature' courses are designed to allow participants to obtain all the competences covered by the curriculum, and one focuses on acquiring the minimum competences required in order to pass (and includes alternative methodologies such as drama workshops). The 'writing' courses, focused on reading, comprehension and writing of texts in Italian, are organized as follows: three are working to acquire all the relevant competences, one is endeavouring to obtain the minimum necessary competences, and using the most appropriate methods for young people with a range of SEN (learning difficulties, or social disorders). The last group is made up of students with the most severe SEN and is not working towards any quantifiable goal; at times some students from the other groups interact with them, in peer education activities. A similar organization applies to courses developing linguistic and logical thinking competences.

The 60 students are also divided into 4 year-long 'graphics' courses. These run in parallel with 3-month course cycles, each course made up of a small, diverse group of students (rather like the learning station approach). One particular girl, for example, with the same group of 8

peers, participates (on a 3-month rotation) in courses in 'AI/IT', 'video' and 'printing processes'; it would also, however, be possible for her to participate in only 2 of these, and take a third course in a research laboratory at one of the partner institutions, with students older and/or younger than her, working on a multi-channel graphics project involving AI. This same girl also participates in some elective annual courses that make up the 'START' project (packaging, creative graphics, photography), which are open to all students in Years 1-4 (9th-12th grade), including those with SEN. It would also be possible for her to take the year-long mindfulness course and a 3-month course in public speaking.

As this example indicates, the model does not include class groups – or rather, does not entail a single group of the same students following the same path. Each learning group varies from course to course, and age is not a factor in its composition. The students are brought together in course groups according to the following criteria: each student's personal capacities and learning style, their attitude to entre-/intra-preneurship, and the particular sectors to which they are most strongly drawn.

The way in which the courses are planned and the elimination of class groups allow each student to follow a learning path specifically designed to optimize their own particular capacities. Each customized path is designed to foster the individual student's educational attainment and to allow them to experience educational environments that promote the development of whichever competences they can realistically acquire at that particular stage of their life. Students with SEN, who have to have individually tailored learning paths, all too often feel ashamed and even humiliated by traditional school programmes since they are frequently involved in specific activities which exclude them from their peer group, who are all following the same (standard) learning paths. Learning support in class is no less embarrassing, particularly for teenagers. In contrast, the proposed solution allows – if necessary – for each and every student to have their own individual path: group participants change from course to course, and the students experience how important it is to choose those courses which best facilitate the development of their own unique potential. These aspects, for students with SEN, foster an awareness of both their own potential and their own challenges, normalize their individual learning paths and, above all, contribute to the creation of a culture of diversity which emphasizes the value of what *each person* can bring to the community of which they are part. It does not imply ability-level grouping in any strict sense: a student who takes part in a 'writing' course aimed at acquiring the minimum competences could also be participating in a 'mathematics' course designed to develop the full range of competences, and in a 'START' course (alongside both older and younger students), while also attending mindfulness classes.

4. Building a Personalized Curriculum

This course-based educational process requires a careful consideration of how to build personalized curricula. The issue is important because it means addressing both psycho-pedagogical questions and formal aspects such as the official recognition of school qualifications. In order to keep the proposed system on the very 'margins of chaos' (Lanzara, Pardi, 1980; Keene, 2000) – and thus able to foster development and generate genuine learning processes without degenerating into chaos (i.e., a disordered mess deprived of formal recognition) – each student's personalized path must take into account the dynamic equilibrium between how best to teach and the necessary formal procedures.

The teaching method – centred as it is on the creation of personalized learning paths – can be said to be in harmony with human mental functions and the courses are classified into five different areas on the basis of which mental functions they tend in particular to enhance. The courses which foster the development of reflective thought through language use comprise the first area. The second includes courses that develop logical thinking and its use in interactions with our surroundings. The third area covers those courses which develop problem solving and executive functions and creativity, while the fourth includes courses linked to multilingual cognition. Finally, the fifth area comprises courses believed to develop the integrative functions of the mind and awareness of self and others. Each student's learning path is built by including those courses that most effectively enable the harmonious, integrated development of all the abovementioned functions, in light of the personal development and aspirations of the individual concerned.

The formal procedure takes into consideration the competences developed in the included courses and their correlation with the school qualification that each student wishes to obtain. For the purposes of official certification, all courses are categorized as either required or elective. Students have to include the required courses in their curricula because the competences that the latter develop are prerequisites for certification. The minimum required development of the relevant competence(s) has also been established for each course.

This procedure makes the system very flexible and thus enables real openness to the students' needs If a student requires extra support in a specific area, it is possible to reduce their curriculum so that they can focus on the core competences required for the basic level of certification (professional qualification); this may also involve doing extra courses in the area(s) of concern, or repeating a course. The students with higher potential can take on extra courses run off-campus in collaboration with businesses, or simply higher level course options onsite.

The courses do more than simply develop the competences identified by breaking down traditional school subjects ('literature' and 'writing', for example, in the case of the Italian language). There are also courses aimed at developing mindfulness and self-awareness, or mutual

attention. Some courses involve high school students, university students and researchers in projects that provide support for business innovation, while others aim to develop entrepreneurial competences. This capacity to offer such a wide range of courses is mainly due to the fact that specific courses can be activated by different actors within the ecosystem. Fourth and fifth-year students participate regularly in a product innovation lab for businesses, working with university students and researchers from the Bruno Kessler Foundation and the University of Trento, who are part of the ecosystem. The fact that research institutes are involved means that courses specially designed for the most talented students can also be provided. On the other hand, the onsite restaurant and bar can also serve as training grounds for developing the competences of some of the more practically oriented students.

Conclusion

This paper has described some aspects of the integrated model for research, education, innovation and development devised and experienced at the Artigianelli Institute, a high school in the field of graphic design based in Trento (IT), in cooperation with the local University and a number of partners. The model, which draws on systems thinking and complexity theory, sets out to build a new educational system in which learning takes place within an ecosystem and the dualism of school/business, education/innovation, learning/development are transcended. The implementation of the model has proven effective, in both educational and managerial terms. The elimination of the division of knowledge into subjects and students into age determined classes is key to this innovation which opens the way to new teaching methods capable of promoting active – professional and political – participation and better valorizing the different potentials of every student. The diversity of the students' capacities and interests thus effectively becomes a value, an outcome which harmonizes with EU educational policies for our knowledge-based society, which see strength in diversity (European Commission, 2013).

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'Boundary' practices: Reinventing education across and beyond the *forme scolaire*

Forest Pedagogy and Neoliberal Challenges: Exploring the Discursive Construction of Forest Children's Subjectivity in Italy

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ABSTRACT: *Forest pedagogy is emerging in Italy as an alternative to state education. This pedagogical approach stands out for valuing immersion in wild settings and learners-led curricula. It also has a strong democratic ethos which is expressed in the idea that each learner is met where she or he is. Yet, neoliberal assemblages shaping the educational field may undermine its emancipatory potential. Recent public debates have put into question, among other issues, the marketization of forest pedagogy as an approach that paradoxically develops skills in children that are valued by neoliberal institutions. This paper enters such discussion by exploring the construction of children subjectivities by main actors in the field of forest pedagogy to the end of reflecting on what is represented as the very aim of education. In particular, it discusses the construction of 'forest children' as resilient, identifying points of tension and overlapping between this construction and neoliberal discourses. Methodologically, the paper relies on the literature of Critical Discourse Analysis and it makes use of Thematic Analysis and Representation of Social Actor.*

KEYWORDS: *Forest pedagogy, Italy, Neoliberalism, Resilience*

1. Introduction

This contribution deals with the emergence and growth of forest pedagogy in Italy as an alternative to state education and traditional schooling. Specifically, it reflects on the interaction between discourses produced in the field of this pedagogical approach and the deployment of neoliberalism, intended as a governmental rationality that is hegemonic in the educational field. To this end, the paper explores how the discursive construction of the subjectivity of 'forest children' by main actors in the field of forest pedagogy in Italy relate to, negotiate, and resist neoliberal constructions of learners. In doing so, the paper intends to illuminate what type of learner actors in the field of forest pedagogy

aspire to educate, so as to support reflections on what is and should be considered the very aim of forest pedagogy today.

The paper begins by introducing the emergence of forest pedagogy in Italy. It then synthesises a recent public debate on the interplay between forest pedagogy and neoliberalism, showing the significance of problematising this interaction in the current context. Later, it discusses the heuristic potential of conceiving neoliberalism as a governmental rationality – especially to the end of exploring the connections between the construction of learners' subjectivity and ideas about the function of education. Subsequently, the essay explains the relevance of the construction of forest children as resilient due to its centrality in both the fields of forest pedagogy and neoliberalism. It thus examines the different meanings associated to the concept of resilience by main forest pedagogy actors, identifying points of contact and tension with the neoliberal rationality. Finally, some implications of the research findings for forest pedagogy's theory and practice are outlined.

Methodologically, this contribution relies on the literature of Critical Discourse Analysis (Wodak, Meyer, 2016). It takes texts on social media and talks in training and public events by main actors in the field of forest pedagogy as its principal data. These have been examined mainly through methods of Thematic Analysis (Krzyzanowski, 2013) and Representation of Social Actors (van Leeuwen, 2007) to understand the construction of learners they convey and its implications for thinking the function of education. Triangulation of secondary sources have been made possible thanks to my insider role in the world of forest pedagogy (as a parent, a forest operator, and a trainer) that gave me access to relevant conversations on the topic beyond public events. Yet, there are limitations to consider within this study: for example, it would be especially interesting to include attention to the links between discourses and educational practices. Hence, this essay must be considered an exploratory research to be followed up.

2. Forest pedagogy in Italy and neoliberalism

Within the wide framework of outdoor and nature education, forest pedagogy stands out for valuing immersion in wild settings and learners led curricula. In particular, it emphasises the role of spontaneous play as essential for children's learning with adults facilitating, supporting and extending this type of play. Forest pedagogy also has a strong democratic ethos which is expressed in the rejection of behaviourism and in embracing the idea that each learner is met where she or he is (Knight, 2013; Kenny, 2013; Sobel, 2015; Schenetti *et al.,* 2015; Negro, 2019; Sackville-Ford, Davenport, 2019).

The roots of forest pedagogy can be located in Denmark, where the first forest kindergarten was set in the 1950s building on the Scandinavian philosophy of Friluftsliv (William-Siegfredsen, 2017; Schenetti *et al.,*

2015). In the 1990s, forest pedagogy expanded to many parts of the world – including various European countries such as the United Kingdom and Germany (Knight, 2013; Antonietti, 2017). In Italy, forest pedagogy is now rising as an alternative to state education and traditional schooling. This approach has spread in the last 8 years in response to a strong need for change felt by parents, educators and teachers unsatisfied with state education and traditional schooling and it has now entered public discourses – together with other outdoor approaches – as a possible route to limit the spreading of COVID-19 (Negro, 2019).

In the last years, in Italy, diversified educational projects inspired by forest pedagogy have emerged and they can be distinguished for:

- being developed by a variety of subjects such as private nurseries and kindergartens, non governmental organizations, and state kindergartens, primary and secondary schools;
- setting different objectives: offering an alternative to state education, integrating traditional forms of schooling, and widening education proposals for families' free time;
- targeting different populations: especially the early years, but also children in primary and secondary education as well as teens;
- choosing different environments – from forests to beaches passing through urban parks;
- and taking multiple reference models such as the Danish Skovbørnehave, the English Forest Schools, and the German Waldkindergartens.

This heterogeneity, together with the young history of forest pedagogy in Italy, make the identity of this pedagogical approach as a work in progress, that should be understood as a socially constructed phenomenon, whose meanings are not fixed, but produced in historically situated exchanges among people and in interaction with wider societal processes (Leather, 2018; 2019).

One key example of the stakes of this work in progress regards the social value of educational experiences inspired by the philosophy of forest pedagogy: what does forest pedagogy offer to children's in today's Italy? What kind of person does forest pedagogy aspire to educate in the current socio-historical context? These queries have been raised in a recent public debate that voiced specific concerns in regard to the interplay between forest pedagogy and neoliberalism. Key points of these critiques have been:

- some representations of forest pedagogy depict this approach as outfitting children with the life skills required to shine as future workers (Raimo, 2021);
- these representations implicitly or explicitly invite parents to choose the best possible education for their children proposing an idea of 'education a la carte' that diminishes the role of universal state education and reifies the current schools crises (Raimo, 2021; Pavesi, Dal Lago, 2021);

– and last, these representations have been seen as constructing forest pedagogy as an educational product that can be marketised and sold on the market to limited cohorts of white middle-class parents with abled bodies and minds (Raimo, 2021; Lorenzoni, 2021).

Responses to these critiques have expanded on:

– the role of forest pedagogy in promoting social processes of transformation that puts at their core the present needs of children, including their ecological needs – instead of their future role in the market (Fagiano, 2021; Donzelli, 2021);

– the role of austerity reforms in producing novel educational inequities in state education as one root cause of the current crisis of state education, of which the rise of alternatives is mainly a symptom (Fagiano, 2021; Casertano, 2021);

– and finally it has been pointed out the key relevance of avoiding the marketization of the philosophy of forest pedagogy, and the related emphasis on performance and outcome, in order to prioritize a transformation of parents and educators' understanding of infancy and learning (Donzelli, 2021).

This debate well indicates the relevance to understand and reflect on the challenges brought by neoliberalism to the spreading of forest pedagogy in Italy. Building on this consideration, this paper examines the construction of forest children's subjectivities in the field of forest pedagogy. This focus of analysis is seen as useful to illuminate what representations of forest children tell us about the function of education in the current context.

3. Neoliberalism as a governmental rationality in the field of education

In order to better understand the interaction between the emerging and spreading of forest pedagogy in Italy and neoliberalism, the latter is here conceptualised through the Foucauldian notion of governmental rationality or mentality, that is «a variety of discursive and non-discursive practices, which often operate disparately, subliminally and diversely' and 'influence the creation of meaningful statements in a particular sector of social government» (Kaš ák, Pupala, 2011, 147). Specifically, what characterise neoliberalism as a governmental rationality is the economization of the social sphere. This is carried on through the «reconfiguration of subjects as productive economic entrepreneurs of their own life» and state's role in creating «the appropriate market by providing the conditions, laws and institutions necessary for its operation» (Davies, Bansel, 2007, 248).

In the sector of education, neoliberalism has brought to frame schooling and instruction as a way to promote national economic competitiveness through the construction of self-reliant workers of the future (Olssen, Peters, 2015). According to the literature, this rationality

has spread pushing for re-designing curricula in advanced capitalist economies so as «to reflect new realities and the need for the highly skilled flexible worker who possesses requisite skills in management, information handling, communication, problem solving, and decision making» (Peters, 2011, 154). Central tenants to the subjectivity of the neoliberal learner are «self-regulation and self-improvement, which works in tandem with drives to measure academic outcome in the name of accountability» (Hall, Pulsford, 2019).

The literature on education and the neoliberal mentality interestingly notes that the latter is a «mosaic of different discourses» that sometime even «links that which cannot be linked» for example when learner-centred are sponsored as effective means for the development of human capital (Kaš ák, Pupala, 2011, 150). As explained by Carter (2009, 59), the democratic values and principles of learner-centred pedagogies can be well co-opted to serve the logic of neoliberalism:

> There is no doubt that many of us would believe our promotion of learner-centred pedagogies as best practice within the humanist and progressive tradition of education [...]. But we need to recognise that there is more to it, and that neoliberal global discourses on education and knowledge economy have co-opted humanistic visions of active learning within democratic and collaborative environments to its own purposes of human capital development.

From these few considerations, it appears that conceptualising neoliberalism as a governmental rationality presents various analytical advantages. Taking in mind the field of forest pedagogy, this theoretical framework serves two main objectives: first, it helps to problematise the construction of learners' subjectivity as a means to promote a specific vision of the function of education in the contemporary context; second, it assists in thinking about how even discourses with a profound democratic orientation can be co-opted in the processes of subjectivation activated by the neoliberal mentality.

4. The emerging notion of forest children as resilient

The heterogeneity of the field of forest pedagogy is well reflected in the discursive construction of different types of learners' subjectivity. Exploring the communicative practices on social media of main forest pedagogy actors[1], diverse constructs of forest children's subjectivities

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[1] Particular attention has been given to the network *Educare nel bosco* organised by the cooperative Canale Scuola, the association *L'Asilo nel bosco di Ostia*, and the working group *Pedagogia nel bosco. Ricerca e Formazione* connected to the Association *Fuori dalla Scuola*. Also the contents posted in Facebook groups connected to forest pedagogy and outdoor education have been examined. Examples of these groups are: *Accompagnat* di pedagogia del bosco, Amici dell'Asilo nel bosco,* and *Outdoor Education Italia – Educazione e Scuola all'Aperto.*

have been identified: the 'competent child', the 'free child', the 'happy child', the 'talented and divergent child', and the 'resilient child'.

This paper specifically focuses on the figure of the 'resilient child' as the concept of resilience has recurrently emerged in recent public discourses on the benefits of forest pedagogy:

- One example is the conference 'Educare nel bosco. Sguardi interdisciplinari' organized by Erickson with Canale Scuola in November 2020, which dedicated one session to discuss the forest as an ideal environment to build resilience.
- Other cases are the workshop 'Una foresta di emozioni' (November and December 2020) and a session of the 'School of forest pedagogy' (April 2021) held by Pedagogia del Bosco | Ricerca e Formazione where meanings and simplifications connected to the use of the concept of resilience in the education discourses have been discussed.
- One further example is the webinar organized by L'Asilo nel Bosco di Ostia with Lucas Malaisi in May 2021, which had resilience as one of the key topic treated in relation to the concept of 'emotional education'.
- Another occasion where resilience has emerged as a key concept in discourses on forest pedagogy is Alessandro Bortolotti's contribution at the online event 'La Scuola Fuori. La Proposta dell'Educazione all'Aperto' organized by FARE RETE Civiche Nord Milano in May 2021. Here, the researcher specifically indicated outdoor education as an opportunity to become resilient.

Furthermore, the concept of resilience is seen as particularly interesting to discuss points of convergence and tension with the neoliberal rationality for various reasons. Indeed, resilience is a term that has a specific history intersecting with the development of the neoliberal rationality in the area of policy. This history is characterised for emphasising the promotion of individual adaptability to a world deemed as behind control as a means to justify systemic inequalities and legitimate individualist policies (Joseph, 2013; Webster, Rivers, 2018). Besides, the concept of resilience has become very present in public debates about the pandemic – almost turning into a buzzword – and its reception and elaboration in the field of forest pedagogy is deemed particularly interesting to understand which type of subject educational projects based on this approach aspire to educate.

One final reason to take a time and space to reason on resilience regards its status as a contested concept. This notion has been initially used in the field of physics and engineering to indicate the ability of materials and infrastructures to absorb energy and assaults without complete failure. Since the 1970s, it has been widely theorised and researched also in the areas of psychology, social psychology and psychopathology to signify 'the ability of the individual to cope, adapt, or mobilize protective resources in the face of adversity' (Hutcheon, Wolbring, 2013; Hutcheon, Lashewicz, 2014; Huctheon, 2015).

Over the course of time, diverse understanding of and orientations to resilience have emerged:

- the ecological approach, rooted in positivism, connects «predictable relationships between risk and protective factors [...] and transactional processes that foster resilience» (Ungar, 2004, 342). It seeks to reveal how some can behave adaptively under conditions of stress in order to assist 'policymakers and professionals in developing and fostering support interventions' for individuals and groups considered at risk (Hutcheon, 2015). Critiques to this orientation problematise the lack of contextualised understanding of the meanings of resilience and its circular reasoning that links resilient individuals to individual, social, and environmental factors that have been come to be associated with resilience (Ungar 2004; Hutcheon, Lashewicz, 2014).
- The constructivist approach defines resilience as «the outcome from negotiations between individuals and their environments for the resources to define themselves as healthy amidst conditions collectively viewed as adverse» (Ungar, 2004, 342). Briefly, it involves «the extent to which an individual has access to a range of resources which allow them to identify as 'living well'» (Hutcheon, 2015, 29). It thus account for differences in cultural contexts and in expression of resilience by individual and groups across, allowing to reframe ideas of normalcy, vulnerability, and risk and develop strength-based approach to people's identity (Hutcheon, Lashewicz, 2014; Hutcheon, 2015). Criticisms contend that the constructionist orientation «misses the materiality of adversities faced by disadvantaged populations» and «reinscribe[s] manifestations of social and cultural relations as individualized personal challenges» (Bottrell, 2015, 30).
- Finally, the resistance approach – influenced by the Disability Studies and Crip Theory literature – views resilience as: «active decision-making, resistance to structural conditions, and survival» on the part of disenfranchised groups (Shaikh, Kauppi, 2010, 166), and is linked to empowerment and self-advocacy (Goodley, 2005; Hutcheon 2015).

By conceiving individuals and groups as agentic within structures of domination, the resistance orientation to resilience does not only focus on the power of meanings, as the constructionist approach does, but it more clearly emphasises the relevance of 'social identities and collective experiences' to bring about changes in the environment that are not the sole responsibility of 'those who are already on the margins' and which produce transformation that aspire to go beyond the individual.

These orientations position themselves very differently in regard to the neoliberal mentality, with the ecological approach as the most compatible with this rationality and the resistance approach as the least compatible. Building on these considerations, the next section reflects on how is resilience conceptualised in the field of forest pedagogy and how

the meanings and uses of the concept of resilience interact with the neoliberal mentality and its construction of learners' subjectivity.

5. The meanings of resilience in the field of forest pedagogy and neoliberal challenges

Within the field of forest pedagogy, resilience is widely framed a very desirable quality to develop in children, adults, and organisations. This is mostly signified as one's capacity to adapt and react to adverse events. Keywords associated to the concept of resilience are 'strength', 'courage', 'tolerance to frustrations' or 'perseverance'[2]. In particular, it is presented as a skill that children can develop and exercise thanks to experiences that are peculiar to forest pedagogy project: 'immersion in wild settings', 'exposure to all weathers', 'possibilities to freerly experiment' or 'making mistakes without judgement'[3]. The possibility for children to 'choose' whether and how to engage this sort of experiences and the presence of 'trusting adults' are often indicated as key resources to support children's resilience.

In order to analyse points of convergence and tension between the discursive construction of forest children and the neoliberal learner, the paper organised the data around three questions:
– what is resilience?
– Resilience for whom?
– Resilience for what?

Focusing on the conceptualization of resilience I identified two implicit tendencies, that sometime may also overlap. On the one side, resilience is framed as a end result, a demonstration of competence or a set of skills. One example might be the framing of the forest as a 'training for life' where the individual learn to overcome physical and social obstacles (Arduini, 2020). This meaning is especially conveyed when resilience is associated to children's performance and it is fundamentally routed in the ecological approach. On the other side, when resilience is linked to children's intrinsic motivation, this is signified more as a a process, an intention, an orientation to the process of learning in absence of pre-established standards. For instance, the child who persists in exploring her areas of interest, like lighting a fire, demonstrates resilience independently from the time it takes to complete the activity (Stefani 2020) and, I would add, independently from the fact that she does not persist with the same concentration in other activities outside of her interests. In this case, the role of the learner in establishing the objectives

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2 Collective brainstorming at the conference 'Educare nel bosco. Sgurdi interdisciplinari' organized by Erickson with Canale Scuola
3 These meanings have been identified through content research in the facebook groups Amici dell'Asilo nel bosco, and Outdoor Education Italia – Educazione and Scuola all'Aperto

and motives of resilient behaviours are clearly connected to the constructionist approach.

Examining the subjects of resilience, most discourses position resilience within the individual, while a minority within communities. In the first case, it is again evident the impact of the ecological approach, yet references to the educating community as a key locus for accessing relational resources to develop children's resilience also indicate the influence of the constructionist approach. This is particularly evident in the emphasis put by many organizations on the role of 'trusting adults' who let children learn from risky experiences without interfering (Rumor, 2020). In the second case, resilience is especially seen as a community responsibility in the sense that thriving is not seen as a concern for the sole individual who needs to acquire the necessary resources to become 'stronger', but rather as a collective effort. On example is the recognition of communities' responsibility to make change in the environment to support the sensory needs of autistic children (Pedagogia del Bosco, 2021). This position, which is clearly linked to the resistance orientation, does not disregard the agency of individuals and their skills, but it affirms that communities can be a privileged locus of transformation to address systemic inequalities that affect the learning processes of singular children.

Finally, resilience for what? It emerged that when learning is not clearly linked to intrinsic motivation, resilience may appear as a positive skill to the development of children and their readiness to future endeavours – including academic and working results (Manes, 2018). Instead, when the building of resilience is explicitly connected to intrinsic motivation, this is signified more as a skill to support processes of self-evaluation and self-determination (Negro, 2019). Furthermore, while most of the discourses analysed do not support resilience as a way to endure inequalities or to 'tough it up', very often structural inequalities are not recognised as key factors in building children's resilience and the discussion on the accessibility and inclusivity of educating environment is still limited. This could result in over-emphasising the significance of processes of self-transformation and the need for adaptability at the individual level, which is precisely the danger encountered in uses of resilience within the neoliberal mentality.

In sum, it appears that the field of forest pedagogy is very diversified also in its approach to resilience. On the one side, there are elements in the meanings and uses of the notion of resilience which promote a convergence between the neoliberal mentality and the field of forest pedagogy: for example, close understanding of what resilience may look like or emphasis on the individual and the dimension of performance well fit with the neoliberal approach to resilience. On the other side, other elements suggest that the field of forest pedagogy has a potential to resist and creatively re-elaborate the neoliberal mentality: attention to intrinsic motivation, open understanding of resilience, and communities' responsibility to provide access to key resources and build accessible and

inclusive education environments surely create disruptions with the neoliberal approach to resilience.

Conclusion

Forest pedagogy is undoubtedly a novel approach in the world of education in Italy and the pandemic has played a role in accelerating its spreading. This contextual factors call for pluralising the spaces and times to discuss its currents strengths and limitations so as to clarify the distinct directions its growth could take and their different implications. In particular, the paper has showed the relevance of thinking critically about the intersection of political, social and pedagogical phenomena that could be of help to improve practice and reflection on the ground. Paying attention to discursive constructions of forest children is one possible entry point to this endeavour. As we have seen reflecting on the approaches to resilience by main forest pedagogy actors, this field is not immune to the effects of the neoliberal mentality, but this is also a locus where significant disruptions to such rationality are raised.

In order to support the growth of a profound and concrete democratic ethos in forest pedagogy, this paper argues for working in the direction of problematising the effects of structural inequalities on the educational projects inspired by this approach so as to work for improving their accessibility and inclusivity. For example, it would be undoubtedly useful to learn more whether and how and why learning experiences inspired by forest pedagogy overcome a 'one size fits all' approach to build resilience and how the variety of individuals and their needs are recognised, contextualised and addressed though changes in the environment. Besides, attention to the material and economic resources needed to work in this direction are other key topics to consider to make possible the sustainable development of the a democratic forest pedagogy.

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Homeschooling and Unschooling

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ABSTRACT: *Homeschooling includes all kinds of education outside school and a lot of possible approaches, as well as parent-led schools. Unschooling is an approach to Homeschooling based on the following ideas: family has a crucial role in education, as well as in the psychological, social and cognitive development of children and young adults; learner-centered education increases student's motivation, creativity and happiness; it allows the young person to reach his/her full potential; it also promotes life-long learning in the young person as well as in his/her living and social environment; informal, non-formal and experiential learning processes offer the opportunity for a full growth and improve cognitive and social skills, soft skills and executive functions better than formal learning; a flexible curriculum can better respond to new challenges; learning in an everyday life context allows cognitive and social development, without the space and time boundaries of the classroom; it also allows a deep relationship and confrontation with other people in real life; technological progress and democratic processes have eased access to knowledge and culture and increased learning opportunities; the pandemic has shown how deep this (r)evolution is. Unschooling is a long-term program where parents support and facilitate their children's learning process participating in it, in order to facilitate it; differently from teachers, they don't organize lessons but they create learning opportunities. Unschooler children and young adults don't stay in a classroom (which is necessarily closed) but they learn in a collaborative process with nature, culture and society. Unschooling parents support free play, exploration, hands-on experiences, learning by doing, and in general informal, non-formal and experiential learning. Formal learning usually starts spontaneously from curiosity and creativity, which have been activated by an informal and experiential approach. In general, Homeschooling shares its educational goals with school in order to give children the opportunity to participate democratically and critically in life for building a better society. North-American studies about Homeschooling and Unschooling have shown that they usually reduce social distances and promote political participation. Homeschooling or Unschooling families sometimes cooperate with the public school. This could also create some opportunities for reinventing education and creating new carriers.*

KEYWORDS: *Homeschooling, Unschooling, Education, Learning*

Introduction

This presentation goals to give some very basic information and a general overview about homeschooling and unschooling.

It will answer some of the most common questions: what is homeschooling? what is unschooling? which are the main ideas supporting homeschooling/unschooling? which are the main critical points of Homeschooling and Unschooling? what about the benefits of Homeschooling and Unschooling?

As there are some common misunderstandings about homeschooling and unschooling, we will first explain what homeschooling/unschooling is not and what it is not only.

What is homeschooling/unschooling not (only)? Homeschooling is not one single method, but rather a plurality of methods, or the absence of a method. Since the beginning of the pandemic many think that homeschooling is the same as distance learning. They are instead two very different approaches. Some people translate home-school to 'school at home' and imagine that this is the only way to homeschool children. But it is not only that. Others understand homeschooling as going to a private school, such as a parent-led school. But this is not the only possibility.

1. What are homeschooling and unschooling?

1.1. What is homeschooling?
Homeschooling (also called home education) is education outside public or state-controlled, equalized school.

It obviously includes a very wide range of educational paths, such as parent-led schools of course and 'school at home', but also unschooling and endless mixed forms.

In Italy all these approaches share the same legal and administrative basis, although the pedagogical and educational differences are relevant: in any sort of school, also in 'school at home', you may have a structured timetable, a sequenced learning plan, a learning group, pre-organized learning tools and also a learning place, which is separate from the not-learning place. In a parent-led school you also have educators to which parents delegate their children's education. In unschooling parents and children are both involved in the learning process, which is flexible, personal and happens in the living context.

1.2. What is unschooling?
Unschooling is a form of homeschooling mostly based on informal learning, learner-centred approaches, such as self-directed or project-based learning and a variety of mixed forms.

It is a long-term program where parents support their children's learning process and participate to it, in order to facilitate it.

Differently from teachers, they do not organize lessons but create learning opportunities.

1.3. The learning process in unschooling

Unschoolers usually learn through everyday activities in their living environment.

The learning process is strictly related to the environment where the learner is living or travelling or spending his/her holiday. The environment is made up of places, their inhabitants (people, animals, plants), things and events happening in them. Unschooling does not mean staying at home all the time and studying school books; it means instead meeting people, cooking, taking care of animals and plants, taking part in things happening around you, going out, e.g. in town, in nature, to a forest or a lake. Everyday activities are e.g. play, social conversation and interaction, music, household tasks, DIY, observation, shopping, exploration, drawing, reading.

Learning through this kind of activities is not the same as studying what you are taught. Instead, it is rather doing different things with different people in different places. In school you meet every day the same group at the same place and do very similar activities all together. In unschooling the learning process is usually social, autonomous, pervasive, creative and democratic.

Social

It is social and situated because it is linked to the living environment. Learning happens through the interaction with the living context, with the people and other beings in it. In particular, unschooling needs social and cognitive complexity, a variety of learning opportunities, community-based interactions.

Autonomous

Unschoolers learn in an autonomous and personal way. The idea that children only learn because they are taught is not true. Children learn because they are curious, because they need to understand the world, the people and what is happening around them. Learning is a vital instinct, a primary and deep human need.

Unschoolers mostly learn without teachers, or trainers, or educators. They are free to learn autonomously, in what is called a learner-centered way. They also learn without an abstractly sequenced or structured learning plan, or a timetable, or structured learning tools. They learn by following the inputs coming from their living environment: «her daughter learnt the 20x table before the 2x table, because she was an enthusiastic collector of 20c pieces from trolleys abandoned in supermarket car parks, especially when it was raining» (Thomas, 1992).

Pervasive

The learning process is also pervasive: it happens anywhere, at any time, in any context. There is no distinction between learning time and not-learning time, between learning space and living space, between learning tools and everyday tools.

A quote by Alan Thomas:

> I was prompted to study home education by an interest in individualized teaching. My introduction to informal learning came when I was invited to spend a week 'living in' with a home educating family.
>
> What impressed me most during that week was that nothing much seemed to happen, on the surface at least, especially when compared with the sense of purposeful industry you get when you look into a typical classroom. There was no timetable or designed programme of sequential learning activities within a planned curriculum. We went for walks. The two children, aged eleven and thirteen, certainly read a lot and spent some time working on their own projects. There were various outside activities, including band practice. One of them was doing a project on infant development and was helping a neighbour with her newborn baby. There were friends around after school and there was a schools' musical Eisteddfod which one of them took part in […] These children certainly were learning, though obviously not through the kind of organized individualized teaching I had expected to see. What struck me most of all during the week was the constant opportunity for informal learning, especially through social, often incidental conversation. Whether they were out walking, sitting around the kitchen table, engaged in some other activity such as drawing, making something, working on a project, eating, out in the car, or even reading, there was an incredible amount of spontaneous incidental talk. One day, for example, we were all sitting around the kitchen table engaged in our separate activities. Topics of conversation, as often as not unrelated to what we were doing, kept cropping up. Among other things, we discussed slavery, Nelson Mandela, saltwater crocodiles and levels of groundwater… and whether to go down the shop for some doughnuts. The children probably saw this as no more than social chat. But I wondered how far this kind of incidental learning might contribute to their overall education. With or without it, they were certainly making progress. Both [went] on to study part time at adult and further education classes and successfully take public examinations. (Thomas, 1998)

Creative

It is the most natural way for children to make the sense of the world and the people around them. Children do the same as scientists developing scientific knowledge:

> Children are born passionately eager to make as much sense as they can of things around them. The process by which children turn experience into knowledge is exactly the same, point for point, as the process by which those whom we call scientists make scientific knowledge. Children observe, they wonder, they speculate, and they ask themselves questions. They think up possible answers, they make theories, they hypothesize, and then they test theories by asking questions or by further observations or experiments or reading. Then they modify the theories as needed, or reject them, and the process

continues. This is what in 'grown-up' life is called the – capital S, capital M – Scientific Method. (Holt, 1989)

Because of that, this learning process is natural: it follows the biological learning laws. It is the way infants learn a basic social interaction, the sense of humor, for example.

Pre-school children learn in this way their mother tongue(s), just by being exposed to it, by being given the opportunity to use it/them freely, by interacting with mother tongue speakers, who are the same as professional users. Children's 'mistakes' are not seen as failures but as learning opportunities and experiences preparing solid language skills. Usually they are not taught, or tested, monitored, punished for their 'mistakes'. They are given the autonomy to try and to fail, to hypothesize how the language system works, to modify their guess or to reject it. Unschoolers learn by the same process. Adults must be aware of this and avoid any interferences.

Democratic

As they learn in a socially complex situation, children have to make respectful decisions, considering the need and points of view of all the others. There is not one authoritarian role, such as the teacher's one, but children are able to recognize in each case the person likely to be trusted, respected and obeyed. Children learn soon to negotiate at any circumstance.

1.4. The role of parents

Homeschooling parents may or may not use a learning plan. In the first case they have school at home; in the second one they practice unschooling and they pioneer informal learning. Of course, there are endless opportunities between these two ones.

Unschooling parents generally facilitate their children's education. Facilitating is not the same as teaching. And it is not even the same as making proposals or suggesting learning activities, such as workshops, readings or trips. Or showing expectations. Any kind of adult's interference in the learning process disturbs and may even block it. And a suggestion is an interference. Facilitating means providing the access to what children see as important for their understanding process. Facilitating parents make the living/learning environment as rich as possible, socially, cognitively and culturally; they provide access to the world, to different communities, beings and events/activities in it.

> As far as learning goes on, the one advantage we have over children – and in some ways it's considerable advantage – is that we have been here longer. We know a lot more. We've had a lot more experience. We know where things are. We have road maps of the world, not just road maps, but various mental road maps of the world around us. What adults can do for children is to make more and more that world and the people in it accessible and transparent to them. The key word is access: to people, places, experiences, the places where we work,

other places we go – cities, countries, streets, buildings. We also make available tools, books, records, toys, and other resources. On the whole, kids are more interested in the things that adults really use that in the little things we buy especially for them'. (Holt, 1989, 127)

Unschooling parents support and take part to e.g.:
- free play, which is much more performing in boosting language and social skills, emotional development, self confidence, executive functions, than adult-centred play
- hands-on activities, exploration, experimentation,
- free exercise and outdoor activities: in town, as well as in nature and with other people
- household tasks and DIY, which are the best in developing the executive functions
- social conversation and interaction with people of different ages and with different social and cultural background.

Social conversation is not the same as teaching, although sharing knowledge during social conversation is natural. The difference consists mostly in the goal, in the speakers' intention. Interaction usually happens not only with peers and not only in one group. Unschoolers rarely meet every day the same group of people at the same time, doing the same things. They rarely meet peers for many hours a day. As they did while learning their mother tongue(s), they usually have access to professionals and to people doing things and to places where things happen.

2. Some of the main ideas supporting homeschooling/unschooling

It is very difficult to summarize in a few words the many philosophical, pedagogical and political thoughts/views, the familiar, religious, social, medical, cultural backgrounds and reasons that support the choice of homeschooling/unschooling.

Usually, each family has more than only one reason for choosing homeschooling/unschooling; it is rare that the main reason is the refusal of school.

2.1. Every child is a born learner
As many neuroscientific researches show, children have the inborn need and capacity to learn.

They are naturally provided with talents and with a very powerful 'learning software', a sort of learning intelligence, which make them capable to know their cognitive, social and cultural needs and to find a creative way to satisfy them. They do it with their imagination and ability even if they do not follow a pre-determined learning plan.

So obligation, structure, as well as the reward/punishment system are not only unnecessary, but they also risk to frustrate the need to learn.

Children do not need our judgment because they are able to understand if something works or not, exactly in the same way as they understood if a sentence was false when they were infants. But they need to be free to pioneer the world and the society, also by trying new solutions and doing experiments, which might be what we call 'mistakes'. Technological progress has eased, at least partially, the access to knowledge, events and culture.

2.2. Learning is a social activity

Learning takes place thanks to interaction with other elements, beings and people (adults and children of all ages and from all sorts of backgrounds), in an empathic context where things happen. School is seen as a limited space, separate from real life and the concrete world, with not enough social complexity.

2.3. Learning is a tool for a balanced person's development

From a certain point of view the ultimate goal of homeschooling/unschooling is not learning itself, but that the young person can reach his/her full potential. Motivation, creativity, happiness, self esteem, executive functions are better boosted by a learner-centred, informal approach. A flexible curriculum may provide a bigger mind openness (problem solving, divergent thinking) for nowadays and future challenges. A balanced personal development and happiness are usually considered more significant than a great amount of knowledge.

2.4. Family has a key role in education, during babyhood, childhood as well as at school age

This theory is enforced by the common practices in most mammal species. Recent studies, also about the risks of 'peer orientation' by children and young adults (Neufeld, Maté, 2006), have shown how relevant the role of parents and family is. In this case family is understood in its most open meaning.

2.5. Parents are responsible for their children's education

This is a natural and legal milestone of education. Parents are the facilitators of the relationship between the child and the world around him/her. They take responsibility for finding the best educational path for each child in that context. So they move between two needs:
- a personalized approach, which has to be respectful of each child's features, talents, hopes, projects
- the common educational goals, which are shared by their society at that moment.

In Italy these goals are summarized in the key competences of the Recommendations of the European Council and the *Indicazioni nazionali per il curricolo*. Parent's choices should happen inside these two main pillars.

3. Some critical points of Homeschooling and Unschooling

Of course, there are some criticisms in homeschooling and unschooling, like in all choices.

3.1. Parents need to get organized in order to spend more time with their children

Homeschooling/unschooling parents have less time for job and career, that means less money.

In general homeschooling/unschooling parents are not wealthy, but education is one of their priorities and so they are determined to take care of their children's education. They sometimes change their lifestyle and find a way to spare something by reducing some outcomes (e.g., holidays, housemaid) in order to balance the lack of income. They sometimes take part in virtual or real sharing or exchanging communities, they use secondhand things. Other parents change their job, or work part time or change shifts, so that at least one of the parents can stay with the children.

3.2. Need of a socially and cognitive learning-rich environment

Parents must work in order to provide access to learning opportunities: they sometimes must look for them, study and go where there are some. If they do not, children risk not to be able to develop all their talents.

3.3. Risk of an unbalanced education

Finding a balance between personalization and standardized goals is already a big challenge. Emancipation from the family by homeschoolers/unschoolers usually happens more flowingly and gradually than by schooled children and it is not conflictual.

3.4. Risk of burnout

You also risk burnout if you send your children to school. But it is true that moving on a new path can be, of course, interesting, amazing, but also energy consuming, hard and even exhausting.

Homeschooling/unschooling parents usually pioneer informal approaches; they have to find out new ways and relationships with the school and other institutions; they study a lot in order to be prepared for collaboration with institutions and to facilitate their children's learning approach; they deal with prejudice, fear, sometimes even discrimination. Being aware of that is already a way to prevent it.

4. Benefits of Homeschooling and Unschooling

Of course, there are several benefits. Here you can find a selection.

4.1. Correspondence to the biological learning laws
Unschooling is the most natural way to learn, also because it keeps children close to their family. Children can go on learning in an informal way, following the laws of their 'learning software' (Vezzola, 2020). They are free to learn e.g.:
  – by asking questions (while at school they are supposed to learn by answering teachers' questions);
  – by exploring and experimenting (and not by studying what others have already discovered like it is done at school);
  – by staying around people who make things happen and use knowledge to change their lives (while at school they stay in a closed up room where nothing much happens, only among peers);
  – by making decisions about their learning process (while at school it is occurred to follow instructions).

4.2. Large flexibility in providing a tailored learning path
Being in society rather than in one group all the time, the child doesn't need to adapt or conform his/her learning times or strategies only to the ones of the group. This way, his/her learning process is his/her own, independently to what his/her peers do and to adults' expectations. The child is the protagonist of the learning process, even if he/she is not always aware of that.

4.3. Relevance in improving personal and social skills, critical thinking, problem solving, creativity, self-esteem, entrepreneurial skills
North-American studies (Ray, 2021; Ray, Valiente, 2020; Admissionly, 2021) have shown that homeschooling/unschooling is the best for improving some personal traits and some skills: openness, inclusivity, empathy, resilience, life skills, soft skills, executive functions. Even 'learning to learn' is much more boosted in homeschooling/unschooling than in schooling. It also seems that adult homeschoolers and unschoolers show a larger social participation and political awareness/activity than their schooled peers. In general homeschoolers and unschoolers also score better in academic tests than their schooled peers.

4.4. Benefits for parents, family and the living environment: more harmony, empathy and lifelong learning
Also parents, siblings and the whole living environment take part to the learning process and benefit from it. The family life becomes more intense and harmonious. Homeschooling and unschooling improve lifelong learning and empathy within the living context. They are also considered the best in reducing social distance, independently from the social and cultural background of the parents.

Conclusion

Homeschooling and Unschooling include a wide range of possible educational paths outside schooling. The choice of homeschooling/unschooling is based on a modern conception of education, family and childhood. Although the learning process may be different than at school, homeschooling and unschooling share with school the same goal: to give the young person the opportunity to live a full life. Many benefits of Homeschooling/Unschooling are proven by researches and statistics. That might be one of the reasons for the recent trend to a larger spread, independently from the pandemic.

Parents' and children's involvement in education is huge; they must continuously find new strategies to improve this process. To do this, they must sometimes work and study or even change their lifestyle. The increase of these new educational approaches may lead to new attitudes and sensibilities, as well as to new carriers within and outside the public school.

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Training a Democratic Teacher: Between Individualized Teaching and Formative Evaluation

Between Well-Being and Poverty in Educational Contexts. What is the Role of Teachers? A Narrative Literature Review

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ABSTRACT: *The contribution proposes an in-depth review of the concepts of poverty and well-being, assumed in their multidimensional character (Sen, 2014; Ghedin, 2017) and seen as two sides of the same coin (Sen, 1987), through a narrative analysis of the literature. The aim here is to reflect on which dimensions of these concepts should be taken into account for the implementation of educational pathways aimed at equity and authentic democratic participation, and to reflect on the role that teachers and educators play in their implementation. From the qualitative analysis, conducted using MAXQDA software, multiple dimensions emerged as significant. These dimensions concern individual and social aspects and involve different socio-ecological systems. Some examples are discussed and finally highlighted the central role of teachers in promoting well-being and counteracting poverty.*

KEYWORDS: *Well-being; poverty; Educational contexts; Teachers; democracy.*

Introduction

Several researches have highlighted how the global pandemic emergency impacted on many dimensions concerning *poverty* and *well-being* of the actors involved in educational and training processes and contexts (Nuzzaci *et al.,* 2020; Save the Children, 2020). These two concepts are becoming increasingly central in the pedagogical debate aimed at understanding the limits, the perspectives and the challenges that education has to face in order to pursue values of equity, sustainability and good quality of life for all in the design and management of educational instances. In this scenario it emerges how important the role of teachers is in fostering equity and well-being not only for pupils but also for the whole educational community. In such a vision, the school is in constant dialogue with the environment through the interdependencies existing between the actors and their connected systems (family, social, recreational, etc.). Thus, allowing the sharing of responsibilities and actions in full continuity and educational integration (Bronfenbrenner, 2010). In Dewey's (1992) vision, the school is at the center of this process, not only as the product of a democratic system,

but also as a producer of democracy and, indeed, able to revive it in its best forms, even becoming a social and political laboratory. In this approach, teachers become guardians of democracy, assuming an active role that requires a specific action of systemic reflexivity (Luhmann, Schorr, 1999), functional to the assumption of specific educational postures (Nuzzaci, 2009) to implement real actions to overcome the educational poverty and to promote well-being.

Keeping these aspects in mind means implementing the possibilities of educators to fulfil their role in promoting social change by breaking the reproduction of inequalities by empowering individual potential in a context of educational equality.

1. Theoretical framework

The theoretical framework that guided our research is based on two main themes: the concept of well-being and the concept of poverty. Recently these themes have entered the public and educational debate even more frequently because of the pandemic emergency that has further exacerbated situations of social inequality (UNESCO, 2020; Gigli, 2021). The pandemic has had an impact on the conditions of poverty and educational poverty, and consequently on welfare conditions (Van Lancker, Parolin, 2020). By limiting the possibility of educational experiences in formal, non-formal and informal contexts, especially for the most vulnerable ones (Nuzzaci *et al.,* 2020; Save the Children, 2020).

To better explain these phenomena, it seemed appropriate to search for the definitions available to us in literature. In the terms of our discourse we understand well-being as the possibility of «realising one's full and unique potential, through physical, emotional, mental and spiritual development, in relation to self, others and the environment» (Ghedin, 2017, 32).

Poverty, which is generally understood as the absence of the resources necessary to sustain a dignified life, has been specified here with the more specific concept of educational poverty, understood as «the deprivation by children and adolescents of the opportunity to learn, experiment, develop and freely flourish their abilities, talents and aspirations» (Save the Children, 2014, 4). The perspective we have used to read these constructs is the one found in the capability approach that sees them as two polarities, as two factors that can be defined as 'inverse', of a phenomenon generated by the unequal distribution of resources (Sen, 1979; Nussbaum, 2012).

Two other concepts closely related to the discourse at hand are democracy (Dewey, 1992) and resilience (Malaguti, 2005; Vaccarelli, 2016) as 'antidotes', as educational perspectives towards which to strive in order to promote well-being and combat poverty. We refer to Dewey's theory that conceives that there is a close link between democracy and education. There can be no democracy without an education for all and

capable of promoting the growth of each individual; at the same time, there can be no education without a genuinely democratic relationship between all the actors involved in an educational process. Democracy is seen by Dewey as a 'way of life' that should characterize the everyday life of every individual (Di Bari, 2020; Spadafora, 2016).

Another characteristic of individuals and systems that plays a decisive role in the successful expression of the maximum educational potential, during emergencies and beyond, is resilience. This is intended as the ability to cope with adverse situations through the search for new balances within which subjects will feel they have acquired new resources and a new future perspective (Vaccarelli, 2016).

The educational horizon that emerges from these assumptions to guarantee paths to promote well-being and combat poverty is the principle of equity (Benvenuto, 2011). In essence, this means removing all those obstacles that stand in the way of people being able to express their full educational potential, regardless of the demographic, social, economic or geographical strata to which they belong (Save the Children, 2014).

This process is possible by building an educationally oriented framework that supports resilience and well-being and in which those who have less are entitled to more.

2. The narrative review

The aim of the research presented here is to offer a critical reflection on which dimensions need to be taken into account for the realization of educational pathways oriented towards equity, resilience and authentic democratic participation, and to reflect on the role that teachers and educators play in their implementation. Therefore, the questions to address are the following:
   – What dimensions should be considered in order to address educational pathways in the direction of equity?
   – What is the role of teachers?
To answer the research questions, it was chosen to conduct a narrative review to elaborate a critical synthesis of the works published in the last two years on the topic. This approach was used to select the most relevant articles, to make a qualitative analysis of the texts and to interpret the contents (Pellegrini, Vivanet, 2018). For the Computer Assisted Qualitative Data Analysis, the software MAXQDA was used (Silver, 2016; 2021).

In the following paragraph the procedures followed to conduct the narrative review are described according to Lazzari (2014).

2.1. Selecting criteria
The process has begun with the development of criteria to determine which studies should be included or excluded from the analysis (Hauari

et al., 2014). The choice was made to include texts published between 2020 and 2021, as we intend to focus on themes that emerged during the pandemic emergency, considering the effects that COVID-19 had on the issues examined. Another selection criterion was the decision to restrict the field of investigation to studies and researches in Italian. For this reason, the words in the search string have not been translated into English.

2.2. Searching

The keywords entered into Google Scholar were chosen on the basis of the theoretical framework. The words translated into English were therefore: 'wellbeing, educational poverty, education, teachers, school, resilience, democracy, emergency, COVID-19'. Below is the search string used in the Italian language:

TAB. 1. *The search string*

benessere AND povertà educativa AND educazione AND insegnanti AND scuola AND resilienza AND democrazia AND emergenza AND COVID-19

Logical operators (AND) were used to get documents containing all the words simultaneously. Thereby, 69 results were obtained. This first database was subjected to further procedures explained hereafter.

2.3. Screening

The articles were then screened on the basis of specific criteria. In fact, it was chosen to exclude off-topic articles, books and dossiers, and only those peer reviewed and available online were selected.

TAB. 2. *The screening criteria*

Inclusion criteria	Exclusion criteria
Available online	Off topic
Peer review	Books
	Dossier and collective reports

2.4. Mapping

Following the screening process a set of 12 articles was created. The final database consists of 9 theoretical contributions and 3 empirical research. Concerning the year of publication, 8 were published in 2020 and 4 in 2021. In this mapping phase, we created a descriptive table (see Table 3) collecting the bibliographic information of the selected documents.

TAB. 3. *The selected articles*

#	Authors	Year	Title	Journal	Type of publication
1	Antonietti, M.; Guerra, M.; Luciano, E.	2020	Transforming the educational relationship in emergency situations: an investigation of early childhood services (0-6) during the time of Covid-19	Pedagogia Oggi	Theoretical contribution
2	Bornatici, S.	2021	Pedagogy, climate change adaptation, educational frailty. A meaning of sustainable development at the time of Covid-19	Formazione & Insegnamento	Theoretical contribution
3	De Blasis, M.C.	2021	The koinè of sustainability for the post-Covid19 education	Formazione & Insegnamento	Theoretical contribution
4	Di Bari, C.	2020	L'emergenza Covid-19 tra comunicazione e formazione	Studi sulla Formazione	Theoretical contribution
5	Ellerani, P.	2021	The Facets of sustainability as a pedagogical proposal	Editors' Note Formazione & Insegnamento	Theoretical contribution
6	Moiso, V. & Rinaldi, E.	2020	Lesson on Uncertainty. A Workshop on Economy and Creativity for Primary Schools	Scuola Democratica	Empirical research
7	Petrella, A.	2020	Distant but connected? Smart Welfare in Socio-educational Services in the Time of COVID-19	Encyclopaideia – Journal of Phenomenology and Education	Theoretical contribution
8	Pignaliberi, C.	2020	Disegnare il futuro della formazione nella direzione della resilienza trasformativa e della sostenibilità	Rivista Italiana di Educazione Familiare	Theoretical contribution
9	Pignaliberi, C.	2021	A New Educational Paradigm during the Pandemic. Human Development between Capability Approach and Digital	Formazione & Insegnamento	Empirical research
10	Riccardi, V.; Donno, S.; Bagnarol, C.	2020	Territorial inequalities and educational poverty in the Covid-19 emergency: a1 study on Italian families and the need to "doing school but not at school"	QTimes	Empirical research
11	Rubini, A.	2020	The powerful and imperfect mechanism of democracy: Democratic politics between crisis and future prospects	Education Sciences & Society	Theoretical contribution
12	Selva, D.	2020	Digital Divides and Inequalities in Italy Before and During the Covid-19	Culture e Studi del Sociale-CuSSoc	Theoretical contribution

3. Analysis

The data analysis was carried out on multiple levels (Lazzari, 2014). From an initial reading of the texts of the articles, 15 most recurrent keywords were identified (see Figure 1). Then, using MaxQDA it was possible to check the actual frequencies of these terms into the texts. Using the 'lexical search' function, recurrences of the selected keywords were found. Furthermore, the automatic lemmatization was performed to extract all the different forms of the extracted words.

FIG. 1. *Keywords list and frequency chart*

Keywords

1) Change
2) Community
3) Rights
4) Economy
5) Policy
6) Relationship
7) Responsibility
8) Sustainability
9) Territory
10) Transformation
11) Quality
12) Environment
13) Creativity
14) Equity
15) Intentionality

Selected Keywords Frequency

Economy 148
Relationship 139
Sustainability 137
Territory 133
Change/Transformation 129
Policy 89
Community 75
Responsibility 64
Rights 40

Afterwards, five less frequent words (quality, environment, creativity, equity, intentionality) were excluded and it was decided to merge the terms change and transformation because they were found to be equivalent.

The bar chart (see Figure 1) shows the selected keywords (economy, relationship, sustainability, territory, change/transformation, policy, community, responsibility, rights) in order of frequency.

In a subsequent step, using the 'auto-coding' option, it was possible to assign a code to each sentence following the recurrence detected by the software. This operation made it possible to verify the coexistence of several codes in the same text extract, leading to the results explained in the next paragraph.

4. Findings

In order to answer the first research question, we can make use of the dimensions that emerged from the correspondence of the keywords identified by the first approach to the textual data and the frequencies verified through the software.

From the codes that emerged from the first analysis, it is possible to deduce that the essential dimensions for orienting educational paths towards equity refer to different fields. Firstly, the economic dimension is certainly significant in determining conditions of poverty or well-being, and this is even more evident following the pandemic crisis. In particular, the authors of the analysed texts highlight the negative impact of the emergency on the job market (Pignaliberi, 2021); on the digital divide and the economic paradigms that foster it (Selva, 2020); on access to resources and their use (Ellerani, 2014 in De Blasis, 2021). The following extracts summarise this view:

> The increase in divides (social, territorial, technological, cultural, economic) has already compromised the rights and options of choice of adolescents and young people. The virus has highlighted all the problems that have already been present for some time in Italian schools and basically in the entire national community, revealing the limits that we ourselves have placed on our democracy (Bianchi, 2020, 127; Ellerani, 2021).

Moreover, the crisis has exacerbated the deprivation of certain services related to citizens' basic rights, for example access to treatment for mental illness and schooling (Van Lancker, Parolin, 2020): families with low incomes and/or more than one child have found it more difficult to cope with distance learning than families with medium-high incomes and only one child. This applies to both pupils and teachers (Selva, 2020).

Equally important are the concepts of sustainability, responsibility, and change/transformation, which appear even more necessary in a context

of emergency such as the one we have just experienced (Bornatici, 2021). Indeed:

> In response to human and environmental emergencies, a transformation of our ways of thinking and acting and a change in lifestyles in the name of responsibility and reciprocity are necessary. It is about rethinking, in a generative key to new learning objectives, new values and behaviors, addressing those 'systemic obstacles' that prevent the construction of more sustainable societies (UNESCO, 2017, 6; Bornatici, 2021).

Finally, thanks to the conducted analysis, it was possible to highlight how the relationships, the community, the territory, the rights, and the policies are equally relevant to shape education and learning:

> The territory, in this methodological dimension, is to be defined as a shared learning space in which practices (agentive, sustainable and resilient), skills (soft, life, social and citizenship skills) and approaches (agile working, co-working) are connected for the urban regeneration and requalification of the local community. Learning, on the other hand, translates into personal and professional practice with which the individual contributes to the cultural, social and inclusive cultivation of his or her community while strengthening the sense of belonging and active participation in the direction of identifying and enhancing the common good (Pignaliberi, 2021, 285).

From this brief overview it is possible to deduce that the dimensions to be referred to in order to direct educational paths towards equity are closely interconnected (see Figure 2). It can be observed, from the map, that five of them are closely linked: the territory, the community, the sustainability, and the change/transformation.

From our narrative analysis it emerges that the pedagogical perspective, expressed by the 12 considered articles, is oriented in the direction of an equitable and sustainable education, resilience and change and is founded on a network made up of the educating community and in close connection with the territories and their actors. Furthermore, all these concepts are oriented towards the individual and collective democratic principles that ensure the full expression of educational potential. In this context, the relational dimension is configured as a connecting element, holding all these aspects together in an equity-oriented educational project (Fig. 2).

The relational dimension also initiates the discourse regarding the role played by the teachers for the implementation of such educational paths. To answer to this second research question, a subsequent analysis by reflecting on the extracts from the texts identified through the codes was conducted.

FIG. 2. *Map of interconnection between codes*[1]
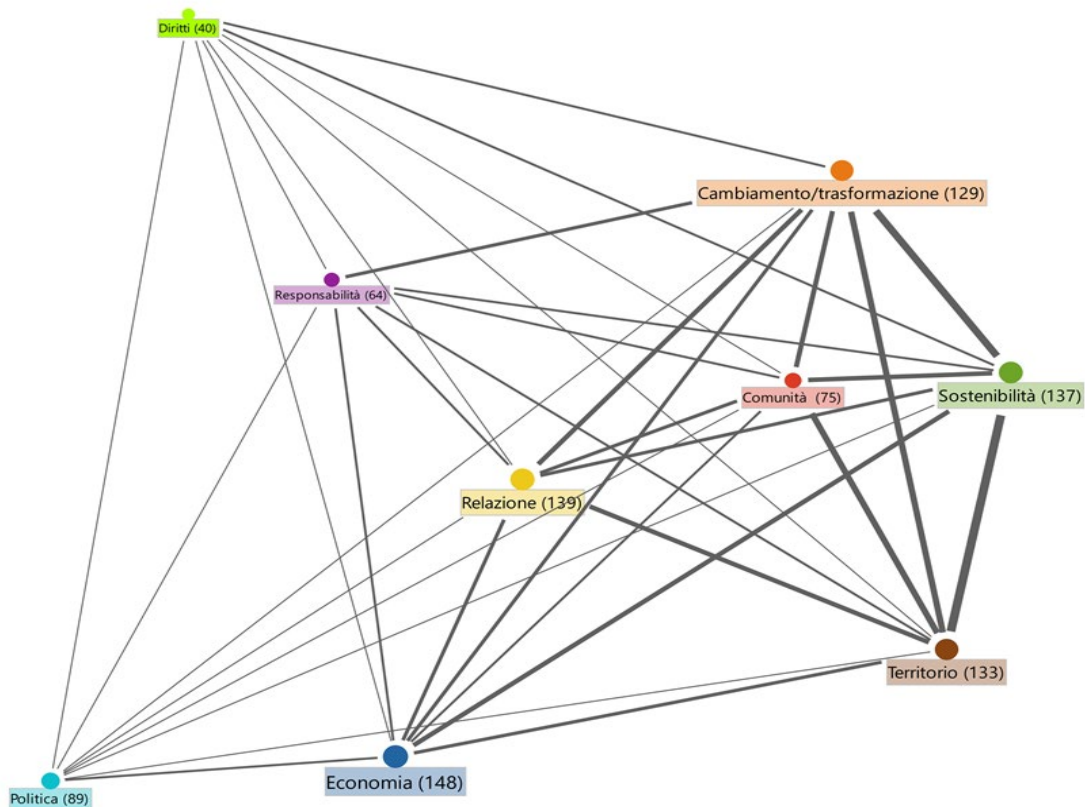
Here are reported two of the most significant excerpts that provide indications on the educational postures that teachers should held to educate according to equity, reflection, dialogue, aiming to reduce educational poverty and enhance well-being. This important aim can be realized in connection with the territory, through cooperative, inclusive and democratic mental attitudes through educational relationships as expressed by the authors:

> This critical posture of educators and teachers on their own responsibility in educational relationships supports cooperative, inclusive, and democratic mental attitudes (Mezirow, 2016) and allows education itself to express – within educational relationships capable of warding off the risk of loneliness, isolation, and educational poverty – its power in terms of change, inclusion, and development of children and adults, together (Antonietti et al. 2020, 74).

Bertolini «defined the educational relationship as an acted and capacitating practice founded on the intentionality and thinkability of collaborative and cooperative learning procedures and pathways in

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[1] Translation of the codes from left-up to right-down: Rights (40), Change/transformation (129), Responsibility (64), Community (75), Sustainability (137), Relationship (139), Territory (133), Economy (148), Policy (89).

which the territory becomes a community of practice (Wenger, 2006)» (Pignaliberi, 2020, 336).

In addition to the horizons towards which to strive just described, the pedagogical reflections, originated in the emergency context mentioned here, show how teachers and educators play an essential role since they can enhance the relational resources of each one, by activating empowerment dynamics capable of putting the families' strengths into circulation in order to respond to the children's needs (Petrella, 2020), by implementing their own creativity, «discovering or rediscovering their own competences, taking up the challenges of the emergency situation and recognizing their decisive role in helping relationships» (Petrella, 2020, 64). In such a context, the challenge for teachers is therefore expressed in their ability to transform the difficult situation into a learning opportunity for all those involved in the educational relationship, towards a horizon of social and environmental sustainability (Ellerani, 2021). To achieve this, it is necessary to form learners to develop «capacities for critical discourse, creative thinking, involvement in learning, commitment to a democratic feeling and a rich and active public life in the twenty-first century» (Ellerani, 2014, 135).

Conclusion

As can be seen from the data exposed and also according to Bronfenbrenner's ecological view (2010), two interpretative levels of the dimensions to consider orienting the educational path toward equity by promoting well-being can be identified. The first one can be seen as 'external' concerning general aspects and principles such as economy, policies and rights and constitutes the 'macro' level; and a second one 'internal' that can be defined as 'micro'. In this level the actors involved in the educational processes act out the relationships and use the experiences in connection with the territory and the community to bring about changes and transformations. The concept of responsibility, which also graphically connects the two levels, is to be understood as the prerogative of both individuals and so-called policies. This is even more relevant in an emergency context in which these strong interconnections have to be taken into account.

Finally, the pandemic has further highlighted the crucial role of teachers. Being at the center of relationships between school, family, territory and the communities (Dewey, 2014), they were (and are) able to sustain children and families resilience, to find creative solutions continuing the important task of ensuring quality education for all, especially the most vulnerable ones (Vaccarelli, 2016; Garista, 2018). In fact, because of the differences highlighted by the pandemic, it's even more relevant to consider the existing differences and inequalities that can be an obstacle in guaranteeing an equitable education for promoting self-realization and well-being for all.

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Teaching Practices and Use of Digital in the DADA Model (Didactics for Learning Environments)

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ABSTRACT: *The paper presents the results of the monitoring of digital augmented teaching, in a lower secondary school in Rome, which adopts the DADA model (Didattiche per Ambienti Di Apprendimento – Didactics for Learning Environments). Based on a radical pedagogical-didactic and organizational innovation, the DADA model is characterized by the presence of 'classrooms – learning environments': each space is assigned to one or two teachers of the same subject and the students move from one classroom to another, during school hours. The monitoring study included one hundred and twenty hours (one week in December 2019) of systematic non-participant observation of the four 'experimental' classrooms. During the observation, designed according to the principles of 'Research-Training' (Asquini, 2018), particular attention was paid to the use of digital devices (iPads) by teachers and students. A grid was used to collect the data, designed to identify the time dedicated to three moments of teaching: the activities carried out (e.g., construction or transmission of meanings, consolidation, planning), the functions of these activities (e.g., introducing new knowledge, monitoring, and verify learning or manage the organization) and actions (e.g., frontal lesson or discussion). The research questions investigate the use of the digital, and what are the educational activities, which involve greater use of the digital device for the functions more closely related to teaching. Differences between the classrooms in the use of time were found, based on the different actions carried out with digital devices. The 2018 European Parliament Recommendation establishes the role of digital skills as key competences for lifelong learning: they have an impact on education, training and learning and lead to the development of more flexible environments. The potential of digital becomes propulsive for a democratic attitude, oriented towards the construction of active citizenship and social justice. Bringing a non-linear logic into the school of organized knowledge could lead to dedicating more time to learning.*

KEYWORDS: *DADA model (Didactics for Learning Environments), Digital skills, Observation grid, Learning context, Democratic attitude.*

Introduction

The opportunities and changes that digital technologies bring to learning and teaching contexts are at the centre of the reflection of several

international studies (OECD, 2015; 2016; 2018). Over the past decades, school systems are exploring effective ways to integrate ICT (Information and Communication Technologies) into the learning environment to improve student's achievement and the development of 21st Century Skills (OECD, 2018). With the use of digital technologies, teaching in several classroom has changed from 'blackboard and chalk' mode to the 'computer and projection' mode (Yang *et al.,* 2018). Although technologies use in classroom had enhanced teaching to some extent, many difficulties still exist in today's classroom. The innovative school, able to educate to citizenship and digital culture is possible and is concretely feasible and digital has the potential to improve learning, to provided that the use of the tools is linked to an effective pedagogy (OECD, 2016). But to allow this innovation it is necessary to systematise and make school a vital and satisfying experience for everyone (Di Donato, 2019). «Technology will make a positive difference in education only if teachers are ready and able to use it effectively, and if schools and school systems sustain an atmosphere that promotes innovation» (OECD, 2018, 80).

A digital environment improves connectivity and feedback assisting teachers in making more timely formative interpretations and supporting knowledge construction through connectivity in the classroom (Panero, Aldon, 2016). The effectiveness of technologies depends on the ability of teachers to integrate ICT into their teaching practices (Comi *et al.,* 2017) and the recent *Digital Education Action Plan* (European Commission, 2020) confirms the need for new pedagogical approaches in digital teaching. In particular, it confirms the need for all teachers to have the skills to effectively use digital technologies in their teaching and training process and for all students to have access to digital education. The use of digital involves teachers and school systems to rethink how they design the learning environment and how to use ICT in classrooms in an inclusive and effective way.

The paper presents the results of the observation of 'digital teaching', in particular the use of the iPad, in a lower secondary school in Rome, which adopts an innovative organization of learning environments and teaching time, the DADA (Didattiche per Ambienti Di Apprendimento – Teaching for Learning Environments) model.

In the same year in which the DADA model was launched, the monitoring study by the Department of Social and Developmental Psychology of Sapienza University of Rome also began (Asquini *et al.,* 2017; Bordini *et al.,* 2017; Cangemi, Fattorini, 2015; 2018; De Santis, Asquini, 2020).

1. DADA Model

DADA stands for Didattiche per Ambienti Di Apprendimento, or 'Didactics for Learning Environments'. In 2014-2015, the model was founded by two

upper secondary schools of Rome: Kennedy and Labriola. It based on a pedagogical-didactic and organizational innovation, and it is characterized by the presence of 'classrooms – learning environments', id est, each space is assigned to one or two teachers of the same subject and the students move from one classroom to another, during school hours.

DADA model allows schools to design and create transformative educational paths, to respond to the new educational needs of the students. The centrality of collaborative learning promotes the social dimension of learning, interaction and collaboration and the use of technologies allow students to work together to build new knowledge (Asquini *et al.,* 2017).

Teachers can adapt the classroom, with the participation of students, in the manner deemed most appropriate according to the activities to be carried out; this creates an enhancement of the teachers' professionalism and a process of reactivating the concentration of students, promoted by the change of classroom (Asquini, 2018a; Asquini *et al.,* 2017). The organizational transformation represents an invitation to the movement not only physical by the students, but also to the reorganizational and collaborative movement of the teachers, prompting them to rethink the classroom space as a laboratory space, taking up the idea that learning is the result of a complex social construction and that the school must set up stimulating and laboratory environments, to offer opportunities for growth, motivation to knowledge, as well as significant and socializing experiences. Compared to other innovations promoted by the *Avanguardie Educative* project, created by INDIRE (National Institute for Documentation, Innovation and Educational Research), the DADA model is characterized by a 'choral' involvement of the educational community (students, teachers, parents, managers, etc.).

The innovations that schools are designing, and implementing have required sharing and monitoring processes, to ensure a real positive impact on teaching practices. With a view to monitoring the transformation and innovation processes of learning environments, a collaborative relationship between school and university has been established according to the Teachers Professional Development Research (Asquini, 2018a; Vannini, 2018).

In the last year, the DADA Model has seen a further declination in the 'Digital DADA' which proposes a change in the teaching planning paradigm with which the teacher works, which changes his or her work perspective using the 'enabling teaching' approach. The teacher becomes an 'enabler' of spaces, tools, and resources, easily available even in contexts not specifically dedicated to training, but to which they can be traced. The teacher activates, even remotely, settings or contexts intended for students to carry out educational activities and deliveries. Therefore, no longer only inside school spaces but potentially everywhere: parks, theatres, cafes, woods and also of course, more often

in the case of forced school closures, at the students' homes (Fattorini, 2020).

1.1. Use of Digital Technologies in Teaching and Learning

We know from several national and international studies that digital technologies have the potential to improve learning if the use of tools is linked to an effective pedagogy (Di Donato, 2019; OECD, 2015). Digital technologies facilitate learning through interaction and participation in the classroom more than passive consumption of information or knowledge (Ananiadou, Claro, 2009) and must be accompanied by the development of the necessary skills for their effective use and to create new learning opportunities favoured by digital environments. The digital device is no longer just a tool, but it can amplify the possibilities of the mind and human corporeality (Rivoltella, Rossi, 2019). The Digital develops if we transform the learning environment: classrooms, desks and blackboard were built to a transmission model (Di Donato, 2019). Digital learning environments are important to endeavour to design, develop, and deliver digital learning opportunities (Veletsianos, 2016).

New technologies help children learn, socialize, and relax, and more educated parents are increasingly playing an active role in their children's education. In addition to the endless online opportunities, the ubiquitous nature of the digital world brings new risks, such as cyberbullying, that follow kids from school to their homes. Education must evolve with society, anticipating changes and finding solutions rather than simply chasing problems (Burns, Gottschalk, 2019).

Internet plays a central role in the lives of children and young people. Access to information and online services has become so important that several national governments, such as Finland, France, Greece, and Spain, have recognized internet access as a right. But there is a need to bridge some digital gaps, such as access to technology, inequalities in skills and use and avoid digital risks, such as cyberbullying, sexting, and harmful user-generated content (Burns, Gottschalk, 2019).

For education and policy, implications include understanding how to promote digital literacy and resilience to help strengthen student well-being. It means thinking about the competencies required of teachers in a digital world and providing the tools and support needed to build those skills.

Teachers are increasingly confronted with the integration of ICT (Information and Communication Technology) into their pedagogical practices in response to requests for innovation (Ottestad, Gudmundsdottir, 2018)

The teachers can be mediators, who prepare a stimulating environment ready to welcome learning paths, in a positive atmosphere.

In digital learning environments, students can work together (in groups) and interact with each other to enhance their learning, often with the facilitation of the teacher (OECD, 2015; 2016).

2. Methods

In our research we present the monitoring study of a lower secondary school, which adopted the DADA model from 2016-2017 and that from 2019-2020 started a digital experimentation, using the iPad as a teaching and didactics tool in four experimental classrooms.

The research question investigates the use of the digital device, and which are the educational activities in which there is a greater use of the digital device. The study included 120 hours (i.e., one week in December 2019) of systematic non-participant observation of the four classrooms (Trinchero, 2002). During the observation, designed according to the principles of Teachers Professional Development Research (Ricerca-Formazione; Asquini, 2018a; Vannini, 2018), particular attention was paid to the use of digital devices (iPads) by teachers and students.

2.1. Participants and Tools

The period of observations in the classroom saw the involvement of the students of the research exercise 'Construction of tests for compulsory schooling' of the Sapienza University of Rome. Students received specific training before starting the observing cycle. The school participating in the monitoring study is a lower secondary school in Rome.

In December (2019), during the field study, four experimental classrooms were observed for one hundred and twenty hours in a week, which in September (2019) began teaching activities using the iPad, therefore, after three months of using the digital device in the classroom, both by students and by teachers.

To observe the teaching practices an observation grid was used, already experimented in previous researches (Asquini, 2018b; Cesareni, Rossi, 2013), and which was implemented to observe the use of the digital device. It can see the categories used for observations in figure 1. The categories are divided into Functions, Activities and Actions and are useful for understanding how much time is dedicated to the three teaching moments: the Activities carried out (such as, Transmission of contents and Active construction of meanings), the Functions of the activities (for example, Introducing new knowledge) and Actions (for example, Recitation or Collaborative learning). The five Functions, represented in the grid, are: Introducing new knowledge, Monitoring learning, Empowering students towards study activities, Managing the organization and relationships within the classroom, Managing the organization and relationships in the school. Activities and Actions are associated with each Function as can be seen in figure 1. The collected data were processed through Pivot Tables to describe the use of school time according to the categories of the grid.

FIG. 1. *Observation grid*

Functions	Activities	Actions
Introduce new knowledge	Transmission of meanings	Frontal lesson
		Recitation
		Reading aloud
		Reading in dialogue
		Dictate and have notes copied
		Demonstration
		Audiovisual material view
	Construction of meanings	Collaborative learning
		Problem solving
		Discussion
		Artifact construction
Monitor learning	Consolidation of knowledge	Request for summary by students
		Collective revision
		Clarifications
		Homework correction
		Artifact sharing
		Teacher-led exercises
		Autonomous exercises
		Exercises correction
		Individual study
	verification of knowledge	Written test
		Oral question
		Feedback
		Collective assessment
Empower students towards study activities	Planning	Plan test and activities
		Explain and plan the learnings that will
	Work on strategies	be realized or have been realized
		Provide study strategies or tools
		Discuss strategies
Manage the organization and relationships within the classroom	Routine tasks	Register attendances
		Reception of students
		Assigning homework
		Organizational activities
		Preparing and closing activities (transitions)
		Recreation
	Management of classroom and discipline climate	Telling-off
		Rebuke
		Disciplinary notes
		Monitoring the execution of work
		Allocation of seats in the classroom
		Relaxation break
		Dialogue and comparison
		Observer presentation
Manage organization and relationships within the Institution	Non-frontal ("expected" time)	Talks with parents
		Time available
		Meetings with colleagues/managers
		No presence (enter late/exit the classroom)
	Interruptions ("subtracted" time)	Meetings with colleagues/managers
		Talks with parents
		Time change
		Someone enters the classroom
	Other	Assemblies
		School trips

3. Results

The analysis of the observations revealed the distribution of time on five Functions indicated in the grid. In the figure 2 we can see that 56,39% of the weekly time is finalized to Introducing new knowledge (in blue colour) and Monitoring learning (in green colour), which are mainly didactic aspects; of this time, the 22,15% is occupied by the use of digital devices. We see that Monitoring Learning occupies 25,02% of the weekly school time, and 8,23% of this time was characterized by the use of iPad.

FIG. 2. *Use of school time: Didactic functions and iPad.*
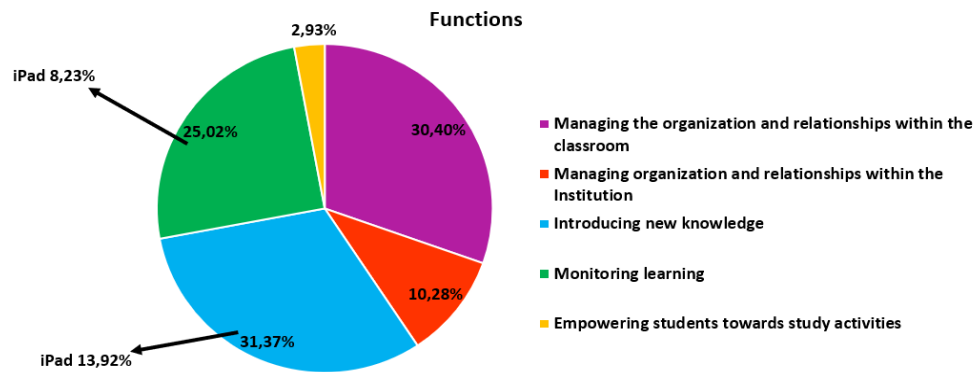
As for Introducing New Knowledge which occupies 31,37% of the weekly time, the 13,92% is characterized by the use of the digital device. When we talk about one percent, this corresponds to about twenty minutes of time.

3.1. Using the digital device to the different classrooms: Introducing New Knowledge

Regarding Introducing new knowledge, we can see, in the figure 3, that the trend between classrooms is similar whether the digital device is used or not. The classroom three is the one that carries out the Function of Introducing new knowledge for the longest time (37,25%), and in the same way it is the classroom that uses the digital device for this Function for the longest time (21,01%).

If we look, in the Figure 4, at the Collaborative learning action, which is one of the actions that take more time in Introducing New Knowledge, we see that there are more differences between classrooms. For example, we see that classroom three is the one that spends the most time on Collaborative learning (6,68%), but classroom four uses the iPad the most in Collaborative learning actions (3,33%).

So, we see a different use of the digital device in terms of time, between the different classrooms and this indicates a different planning of the activities by the teachers.

FIG. 3. *Introducing New Knowledge*
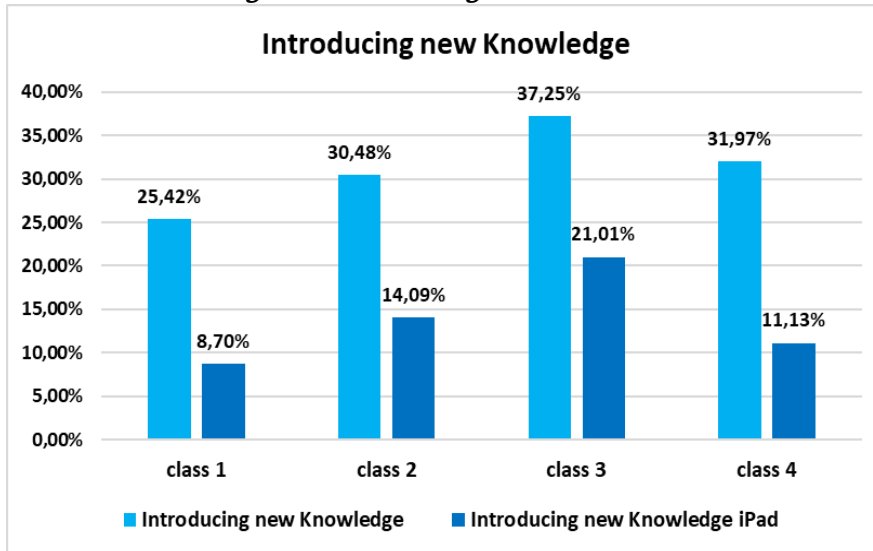
FIG. 4. *Collaborative learning*
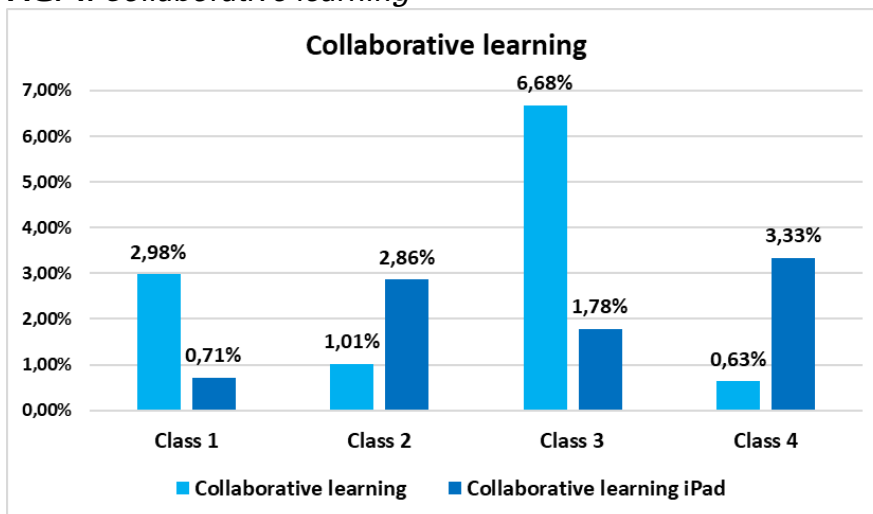
3.2. Using the digital device to the different classrooms: Monitoring and learning

The situation we have seen for the Introducing new knowledge Function is also very similar for the Monitoring learning Function. In the figure 5, we see that the trend between the classrooms is quite similar. Classroom three is still the one that carries out the longest time Monitoring learning, both without (27,73%) and with (9,25%) the support of the digital device. If we observe a specific action of this Function, and which takes up more time, that is the Collective assessment, we see that there are differences between the classrooms. In the figure 6, in the Collective assessment action (when the teacher asks questions to the whole classroom) we see that in the case of classrooms three and four, this action is carried out only with the use of the digital device, while classroom two does not use the digital device at all. Again, we can see a different way of using the digital device by teachers.

FIG. 5. *Monitoring and learning*
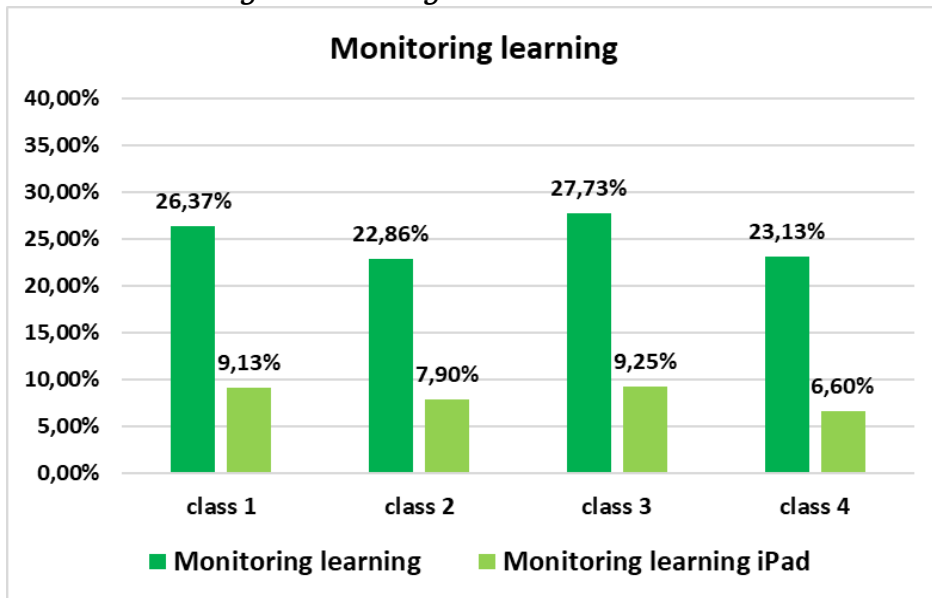
FIG. 6. *Collective assessment*
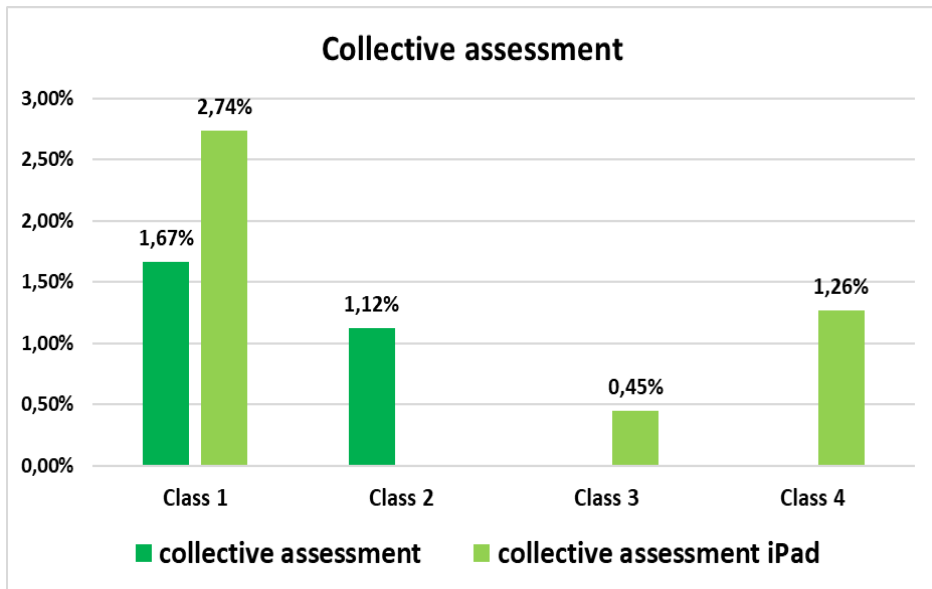
4. Discussion

Data analysis shows that there are actions (such as collective assessment) carried out solely with the support of the digital device, while others (such as collaborative learning) maintain a 'double modality', i.e., they are carried out both with and without a device. «Tablets support, accompany and sometimes replace students' notebooks and the paper-and-pencil environment. On the technical side, several competences are needed by the teacher to make the lesson develop in a natural way for students» (Panero, Aldon, 2016, 72).

A central role is played by pioneering teachers in the use of digital who play a key role in school innovation (Fabiano, 2019).

The school is at the centre of the democratic process as a producer of democracy, also capable of relaunching it in its best forms, showing itself as a social and digital laboratory. In this context, teachers take on an active role that requires a specific reflexive action (Luhmann, Schorr, 1999).

There is a need for new pedagogies that use technologies to address the challenges of the 21st century, promote learning and catalyze the development of soft skills, such as problem solving, collaboration and creativity. It is the responsibility of teachers to create environments and opportunities for deep learning experiences that can discover and enhance pupils' abilities (Caena, Redecker, 2019). This goal is achieved with the DADA model which creates learning environments in which both teachers and students are active subjects. «Teachers are called to be activators of meaningful learning, not just facilitators, being creative in choosing a wide range of strategies to adapt to the context and the learner» (Caena, Redecker, 2019, 357). It is important to help students take responsibility for their learning through continuous assessment and through reflection on their progress. We have seen, from the analysis of the observations, that although in different ways, the collective assessment is carried out by all the experimental classrooms of the research. Learning enhanced by the use of digital technologies has the potential to develop creative and collaborative learning in students in an interdependent world (National Research Council, 2012). The learning outcomes that become fundamental are not only students' abilities to build new knowledge, but also the ability to become citizens who learn throughout their lives, a life that is increasingly connected and digitized. This is why it is necessary to invest in the professional training of teachers, so that they can implement inclusive pedagogical practices and can reflect 'in the course of action' (Schön, 1993) to understand in which direction their teaching is going and if it is meeting the learning needs of each student. Education systems and teachers with them must prepare students to live in the digital age and thus help them develop the necessary skills. Digital skills are essential for all citizens to engage in lifelong learning, to facilitate personal fulfillment and development, employability, social inclusion, and active citizenship (European Council, 2018).

The European Commission, in 2017, developed the latest version of the Digital Competence Framework for Educators (DigCompEdu) (Carretero *et al.*, 2017), that presents six professional profiles; in each profile there is a focus on pedagogical choices, critical reflection on the use of digital and the relationship with the context, which includes both students and colleagues. This indicates that the focus on the correct use and learning of digital and the development of digital skills is a priority for the whole of Europe, recognizing that citizenship competence is also increasingly

being characterized as 'digital citizenship' (Isman and Canan Gungoren, 2014).

Conclusion

The results concern the initial phase of the experimentation, therefore the use of the iPad after three months of starting school activities. We were supposed to conduct a second round of observations in May 2020, but the pandemic did not allow it.

The research team continued to maintain relationships with the school. The teachers have shown interest in continuing the collaboration, so we will plan to continue the research for the new school year, continuing the Teachers Professional Development Research approach (Ricerca-Formazione; Asquini, 2018a). In the emerging world of a tablet classroom the teacher is a principal learning designer and in an ideal educational environment teachers would have adequate training prior to teach into a tablet classroom. Most often this is not realized, and training is sketchy at best (Walling, 2014).

The COVID-19 crisis has brought greater awareness of the need to improve the use of technology in education and training adapting pedagogies and developing digital skills. The learning environment is changing rapidly and students that are involved in a digital augmented teaching could improve their level of motivation using mobile devices in learning. Learning strategies using technology are important to create a learning environment that can provide students with new methods for interactions, such as collaboration opportunities among students and also between students and teachers which can enhance their learning motivation (Garzón *et al.,* 2019). The crisis requires school systems to rethink how education and training are designed and provided to meet the demands of a rapidly changing and increasingly digital world. It is necessary to consider how all phases and stages of education and training can purposefully and strategically embed digital technologies into educational practices (European Commission, 2020).

There is an understanding that education, like all public sectors, needs to work from a more holistic perspective that spans government departments and research disciplines. It also needs to evolve and grow as our societies and citizens find each other, anticipating change and finding preventative solutions rather than just responding to problems (Burns, Gottschalk, 2019).

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The Epistemological Question of Digital Citizenship at the Time of the Pandemic

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ABSTRACT: *The last few months have been marked by profound changes. In fact, fear and risk have found their place more and more in the individual and collective imagination in people who have changed their lifestyle due to the Pandemic. The education system has suffered the impact of the Pandemic facing a new educational challenge called Dad (Distance Learning) and Did (Integrated Didactics). Was the school system organized to deal with this unexpected emergency situation? It is too early to state this clearly, even if for years we talked about the school's technological and educational innovation processes. One question is clear: the school has the task of accepting the educational challenges of contemporary society paying particular attention to the crisis of the educational systems. The global, European and national political system has devoted much attention to the crisis of the educational systems and the relaunching of the school as a laboratory of democracy, against the idea of a school which reproduces the social divisions and inequalities and does not educate to students to the citizenship and the solidarity. It is therefore necessary to bring out a new image of the school which is the point of reference for a new dimension of democratic citizenship. Being a citizen and, even more so, exercising citizenship means acquiring values, skills, a sense of responsibility, referring to specific categories of pedagogical thought. Therefore, the challenge of pedagogy lies in the possibility of finding values, so that the loneliness of the global citizen, the new social emergencies become a stimulus to build an educational to consider the person to the centre of educational relationships. This condition can only occur if the subject – person who feels part of a community, cooperates for the construction of a new shared paideia, capable of supporting and nourishing horizons of humanization and educational and political choices. What educational challenge does the teacher of the 21st century face in this new situation? In this short contribution I will try to reflect on the importance of digital citizenship expressed by the concept of human development and democracy to define the teacher training in the context of the contemporary pandemic situation that is fundamental for a democratic school and an inclusive society.*

KEYWORDS: *Democracy, Digital citizenship, Didactics, Competence, Civic education*

Introduction

We live in a reality in which digital technologies have radically changed attitudes, practices, habits and the way we communicate and relate. Today we speak of a knowledge society, a complex society which is

always subject to rapid and continuous changes. All this has repercussions not only on a social and cultural level, but also on an economic one. Therefore, in order to govern this change it is necessary to develop creative thinking and acquire specific skills, so that all citizens can develop an ability to adapt to different life situations. It is therefore a question of giving life to a process of continuous learning throughout life, the so-called 'lifelong learning' which in this digital age cannot ignore the development of digital skills. Without these competences, it is not possible to fully exercise one's rights or participate actively in democratic life. Certainly the development of these skills is not merely instrumental but also and above all conceptual. Knowing how to use technologies with confidence does not imply any competence, but it is the way we use them that makes the difference. An individual becomes a competent digital citizen when he or she uses technologies with awareness, critical thinking and responsibility. This short work focuses on the concept of citizenship extended to the digital dimension and on the need to start a digital literacy process from the very first schooling.

In this process, the fundamental role of the school is reaffirmed, as an educational institution that has the task of educating the citizens of the future. We will try to illustrate the school of skills, which has as a reference horizon the 8 key competences for lifelong learning, including digital, in the European Recommendations 2006 – 2008 – 2018. Finally, the DigComp model will be proposed by European Digital Competence Framework for Citizens, aimed at improving citizens' digital competence and a tool that can also be used by education managers for planning education and training initiatives. The idea is to develop a new digital civic education syllabus aimed at educating young people in a responsible and conscious use of new media for a new digital citizenship.

Exercising actively citizenship within the new educational dimensions in the digital world, enhances the importance for a flexible training which considers the complexity of the social, economic and digital systems. Educating for citizenship means improving human consciousness in relation to the new forms of social participation and interest in the digital context. For this reason the concept of citizenship has been transformed into digital citizenship, considered as the competence of the citizens to actively participate in society through Internet. Such participation requires not only specific digital competences, but above all a sense of responsibility in order to practice the digital competence as 'digital wisdom'.

1. Digital literacy

Citizenship today is a very broad concept. In the classical tradition it defines the legal status of the citizen, but from a sociological point of view it no longer indicates just a reality, but also, «the ideal to strive to make it and more just and supportive human coexistence» (Santerini, 2010).

The concept of citizenship is often associated with the terms: active and democratic. Citizenship consists in building coexistence, behaving according to the rules, respecting the environment, diversity; it means acting for the good of society, becoming responsible for themselves and other members of their own community. Moreover, with globalization the borders have widened. Today we can not think about a person confined to a nation-state, but in a larger space in which the boundaries between real and virtual have become more and more labile.

Today we have become digital citizens without, however, having been prepared to manage risks and know how to make the most of the opportunities they offer us. The boundaries between virtual and real are decaying, therefore we must offer to the new generations a concept of (digital) citizenship, considered as 'knowing how to be', through direct experience, but also as a way of learning within the community and using the technologies which can be advantageous for citizen participation (Cameron-Curry *et al.,* 2014).

Therefore, it is fundamental, not only to study the media but also learn how to use them, through direct practice, carrying out a process of literacy especially for young people and teachers.

Why is it important to start a digital literacy process? While in the past the illiterate was someone who did not know how to read or write, and consequently could not exercise citizenship. Today the illiterate are those who do not have digital competence. Without these skills the possibility of fully exercising rights and duties is precluded. Furthermore, the risk is that of running into social exclusion. The current way we communicate, work, study and exercise citizenship is different from previous generations. Today we are always connected thanks to technological tools that allow us to get in touch with a large amount of information or people in a short and immediate time frame. This refers to the concept of digital divide, of 'digital inequality' (Di Maggio, Hargittai, 2001) which is always about citizens who don't have the ability to access the network, and consequently don't have 'digital wisdom'.

From a study conducted on young adults, it emerges that digital skills can influence the way you use the Net, improving their living conditions and their socio-economic role, allowing full civil participation.

Therefore, citizenship education in the digital society, cannot ignore adequate digital literacy. Furthermore, if we take a look at the European context, the data obtained from the Pisa OECD surveys, show that 44% of the population have insufficient digital skills and 17% extremely deficient (European Commission, 2017).

Today we talk about digital literacy considered a key process of digital competence at school, so that the Commission European Union of 2008 defines it as the set of skills necessary to achieve digital competence, considering it «Prerequisite for creativity, innovation and entrepreneurship; without it, citizens would neither be able to participate fully in society nor to acquire the knowledge necessary to live in the 21st century» (European Commission, 2003, 3).

The first author who used the expression 'digital literacy' was Gilster (1997, 1) who states that: «digital competence is about mastering ideas, not the keyboard».

The author talks about digital literacy referring to the ability to critically evaluate the information found online, therefore, refers to something that goes beyond the simple ability to use technologies but refers to a set of skills and competences related to the digital context.

Today, literacy also passes through acquisition of a digital competence, it is no longer enough to know how to read and write. It is necessary to become a digital literate in order to consciously use technologies, produce and use digital content responsibly. From the moment ICT constantly changing, the digital literate must coexist with technological innovation and be a lifelong learner.

From the characteristics of digital objects, we can derive an indicative profile of the digital literate. Among the features can be identified:

– multimedia: a digital object is presented in different formats, which can be text, sound, image or video and, of course, correspond to different communication channels. The skill required of digital literate will be to master the media world, instrumentally, referring to knowing how to use technologies to produce and use digital objects, which linked to that universe called media literacy. Therefore the literate of the knowledge society knows how to use and produce multimedia objects, therefore he is a media literate and a prosumer (Toffler, 1980).

– Opening: a digital object can be linked to another digital object or part of it. From an instrumental point of view, the digital literate must know how to use the tools navigation and research on the net as well as tools for creation of hypermedia objects. As for the conceptual aspects, he must know how to organize his own thinking in a reticular way and must know how to move on the net and navigate through the links of a digital item without getting lost and be able to solve problems related to research and information evaluation.

– Interactivity and computability: the individual, in his actions, interacts with three main dimensions of the environment in which lives; the biophysical, social and individual one. Digital objects express the possibility of interaction of the individual with these three dimensions.

The development of a digital competence is not enough to experiment the change. It is necessary to develop others skills, related to the cognitive, affective and ethical sphere. The educators are entrusted with the task and responsibility of knowing the new media to understand the cognitive, social, cultural implications of change we are experiencing, so that young people may live in this society.

2. From digital competence to digital citizenship

Today, the exercise of the rights and duties of an enlarged citizenship digital, requires new skills to promote inclusion and active participation in social, cultural and economic life and this goal can be achieved through education. In this perspective, the school becomes the privileged place to acquire these skills to be continuously developed in the course of life, to live and manage change, becoming competent and aware citizens. From a lifelong learning perspective, teaching these skills should be guaranteed «at all levels of education and training and learning paths» (eur-lex.europa.eu, 2006).

In a rapidly changing world, it is necessary to teach students to be proactive, develop the ability to anticipate future problems, needs and changes to guide effective solutions during the time. Today, the Italian school is also a school of skills.

Indeed, in the Recommendation of the Council and Parliament European entitled *Key competences for learning permanent of 18 December 2006* '(eur-lex.europa.eu, 2006), competences are defined as a set of useful knowledge, skills and attitudes to the subject for his own realization and development personal.

Eight key competences are indicated:
1. Ability to communicate in the mother tongue;
2. Ability to communicate in foreign languages;
3. Mathematical ability and basic competence in science and technology;
4. Digital competence;
5. Learning to learn;
6. Social and civic competences;
7. Sense of initiative and entrepreneurship;
8. Cultural awareness and expression.

Specifically, digital competence is indicated between eight key competences for lifelong learning and in new Recommendation of 22 May 2018 (eur-lex.europa.eu, 2018), is thus defined:

> Digital competence presupposes an interest in digital technologies and their use with familiarity and a critical and responsible thinking for learning, working and participating in society. It includes computer and digital literacy, the communication and cooperation, media literacy, digital content creation (including programming), the security (including being at ease in the digital world and possess cybersecurity skills), issues related to intellectual property, problem solving and the critical thinking (European Parliament, 2018).

Digital skills, therefore, are skills for citizenship, which must be learned and acted on integrating them at 8 key competences for lifelong learning. The same Recommendation of 2018 states that the key competences are all equally important. They are interconnected and are combined in various ways depending on the context or situation that arises. Skills

development guarantees a fruitful and sustainable life, through inclusion social security and the exercise of active and responsible citizenship. All the educational interventions provided by the school are strictly related to a developed ten-year digital growth strategy from the European Union, *Europe 2020* (eur-lex.europa.eu, 2020), which promotes a project of 'smart growth' based on two key and integrated elements among them: education expresses learning throughout everything the life and the digital society span, as an enhancement of the use of Information Society Technologies.

One of the seven initiatives promoted by the 'Europe 2020 'is represented by the European Digital Agenda which suggests the most of the potential of Information Society to foster innovation and economic growth. The aim is to lead Europe towards smart, sustainable and inclusive growth and the school could start a digital literacy process (understood as competence in the use of ICT and as digital competence) in students/citizens, to overcome one of the obstacles that undermine the digital agenda: the lack of digital literacy and skills. Even in the world of work there is a great demand for digital skills. Therefore, educational and training agencies have the task of training young people on the one hand, and retraining them adults on the other, so that they can continue to work. In this new ever changing scenario knowledge is not enough. As we learn from the *Recommendation* of 2018, the memorization of facts and procedures is not sufficient for the achievement of success and progress, but it is necessary to develop and strengthen resilience, internal motivation, alongside skills. We need all tools that give life to 'new ideas, new theories, new products and new knowledge'.

Therefore, the motivation of the learner is fundamental because it allows to set goals and pursue goals, to improve and enrich the students experience. With the spread of technologies, the way has changed to be in the world, to live, to communicate and consequently the needs of the new generations have changed and to be adapted to new needs of 21st century students.

This innovation will also affect learning environments. In fact, in December 2017 they were published by the *European Schoolnet* and translated in Italian by INDIRE (2017), the *Guideline for rethinking and adapting learning environments at school*.

It is not only a question of equipping schools with technological devices, but also of rethinking the traditional teaching methodologies which don't fit to the needs of the 'new learner', and which must be more adapted to the teachers professionality. «Only the combination of quality of teaching, learning and technological resources can guarantee that improvement is necessary to develop not only students' learning, but also and above all, their metacognitive skills» (INDIRE, 2017).

Innovation must affect school environments, the training of teachers and the students' learning and must refer to the new skills that are constantly updated, because needs change continuously, as well as the forms of communication.

With the adoption of the 2006 *European Recommendation*, a teaching/learning approach is based on the competence methodology, and has encountered resistance linked to the difficulty of applying transversal skills in the school context.

In fact, there have been positive developments regarding the key competences that can be easily related to the traditional school subjects (communication in the mother tongue, communication in foreign languages, competence mathematics, awareness and cultural expression). The same cannot be said for transversal skills, in particular the same digital competence.

Transversal skills are linked to the subject's ability to use their knowledge to solve problems and face new and ever more complex situations.

In fact, the electronic archives of the MIUR report a definition of transversal competence considered as a 'set of skills of the person, involved in different types of work tasks, from the most elementary to the most complex, and explained in operational situations

> different from each other. […] relating to the processes of thought and cognition, to the behaviour methods in social and work contexts, to the ways and abilities of reconsidering and using learning and self-correcting strategies of conduct (archivio.pubblica.istruzione.it).

Among these skills there are also digital ones that allow the individual to use them critically, consciously and responsibly in all contexts of daily school and work life, encouraging participation and collaboration and allowing the individual to fully exercise digital citizenship, i.e. to participate in the online/digital society through the exercise of his/her rights and duties.

In this new cultural paradigm, it is essential to develop a profile of skills, especially digital, by learning how to use new media from an instrumental point of view. On the other hand, by developing a critical, conscious and responsible behaviour which means to learn the languages of media not only from a theoretical but also from an operational point of view, to use them meaningfully and effectively.

According to Rivoltella (2019) *Media Education* is a fundamental element to develop critical thinking and a sense of responsibility through the awareness of the media main environments and of the relation between virtual and real effects.

Consequently, the use of new technological tools must be considered a practice in the school contexts, and should be understood as a 'mindset to share', just as media education should be interpreted as a new 'mindset' with which to understand the procedure.

Conclusion

From this work it emerges the key competences for lifelong learning as considered in the European Recommendations from 2006 until 2018, which must become an integral part of teaching/learning strategies. They are very important and allows the future citizen to live «a positive life in the knowledge society» (Recommendation of 2018), defining a profile of a competent person and a responsible citizen. Some of these competencies are geared more towards learning the disciplines while the transversal disciplines are indispensable to build the life project of the student. They are all interconnected and must ensure the full exercise of citizenship.

The new society is constantly changing, Bauman deals with of a 'fluid', 'liquid' society, under the banner of uncertainty. Therefore, the acquisition of skills must be considered in a perspective of continuous updating. In this perspective young people must implement and train that resilience, of which Goleman (1995) speaks extensively, strengthening the ability to manage the difficulties, coping with sudden changes, getting out of complex and critical situations, considered not as limits, but as opportunities.

The School represents one of the main environments to cultivate resilience, which becomes fundamental for the well-being of a person who lives in a society.

The situation we are experimenting is an evidence of this: between fake news and unleashed users who insult and offend through social network platforms. It seems that respect and good education are not at home in virtual environments. Therefore, it is important to understand that on the net, as well as in 'real' life, we must have rights and duties. Respect for the other, tolerance, the sense of legality and civil coexistence cannot be learned in books but through the experiences of daily life (DigComp, 2017)

Therefore, the school and the family become the primary contests in which to cultivate these values and develop good practices.

In this perspective it is necessary to create a new alliance between school and family, which makes it possible to find a point of meeting between what you learn at school and outside.

The solution is not to ignore the digital universe, or suggest fear. The school, the teachers, the parents cannot ignore these tools.

One question is clear: the school has the task of accepting the educational challenges of the contemporary society and the cultural and institutional duty to reflect on the transformations of the life. The global, European and national political system has focalized much attention to the crisis of the educational systems and the relaunching of the school as a laboratory of democracy (Spadafora, 2018).

In fact the predominant idea is based on the epistemological paradigm of a pervasive assessment regime of the school, developing different criticisms that identify in this school model, a school linked to the trade's ideology, which reproduces social divisions and inequalities and does not educate to the citizenship and solidarity.

This project must consider the individual to the centre of educational relationships, for the expression of a new educational humanism.

This can happen only if the individual, who feels part of a community, cooperates for the construction of a new shared paideia, to nourish horizons of humanization and educational and political choices characterized by a human responsibility.

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The Influence of Training on Teachers' Teaching Strategies: Study of a Sample of Secondary School Teachers

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ABSTRACT: *In recent years we have witnessed the evolution of society which has affected not only the world of schools but also the teaching staff. Teachers are no longer required to simply transmit knowledge, but to have a style of teaching capable of stimulating students' participation in learning through discovery, group work and use of technology. Initial and in-service training, therefore, not only become the basis for professional development, but are also fundamental practices as they allow the acquisition of didactic-pedagogical techniques and strategies necessary to train a reflective professional who knows how to relate to the heterogeneity of classes, with special educational needs and with the need for an inclusive school. Nowadays, professional updating is foundamental to acquire relevant transversal skills to face daily educational challenges and it is considered as an openness to change and an interest in innovative aspects that should increase with the growth of knowledge acquired throughout life (Vieluf et al., 2012; OECD, 2019). Starting from these assumptions, this paper analyzes the results obtained thanks to the implementation of a field research conducted by DPSS at Sapienza University of Rome which involved 701 lower secondary and high school teachers. Through a self-administered questionnaire with five-point Likert scale the objective was to evaluate how often teachers use some teaching practices that were grouped into four strategies: consolidation, work on strategies, transfer of meanings and active construction of meanings (Cesareni, Rossi, 2013). The first results show on one hand the relationship between some aspects concerning the ongoing training received by teachers and the teaching strategies, on the other hand the correlation between the interest in innovation, the predisposition to change and the amount of training hours received in the year preceding the administration of the questionnaire. In an increasingly complex and diversified society where educational institutions are required to provide the tools to be able to understand the present and future reality and to help train the proactive citizens of tomorrow, the relevance of this contribution is to stimulate reflection on importance of teacher training, as it can influence teaching practices which in turn affect the quality of education and students' school performance (Helms-Lorenz et al., 2013; Baldacci et al., 2020).*

KEYWORDS: *Teacher training; Didactic strategies; Openness to change.*

Introduction

Over the years, various researches have focused on the topic of student's learning strategies and on the study method most suited to the individual's abilities (Cornol *et al.,* 2000; Pazzaglia *et al.,* 2002), while little has been said about best teaching strategies that teachers should use in the classroom. As well as the student owns his own learning method that over time succeeds in adopting, so the teacher also has some preferred didactic strategies that go to build a teaching method that has its own character and that reflects personal characteristics but also the context and the discipline taught (Le Donné *et al.,* 2016).

It is important to underline that there are no more effective strategies than others, since functionality depends a lot on how well the teacher is capable to use the variety of tools and, aware of the advantages and limitations they entail, is capable to apply them effectively according to the situation and the class context (Borkowski, Muthukrishna, 1994). It therefore becomes essential that the teacher is aware of the strategies used, but above all is able to know how to use them at their best.

This is how teacher training is important in this context. In a historical period of rapid changes, which require a great adaptive effort on the part of teachers, it is important to maintain a high level of motivation at work through training experiences, both initial and ongoing, which contribute to helping teachers to cope with the job challenges. While providing teachers with adequate early career training is a highly sought-after goal for several countries around the world, maintaining participation during their teaching years is a crucial component of the professionalism of both teachers and school principals (Guerriero, 2017).

Various researchers in the world have taken care of the work carried out by teachers and school principals. Among the international surveys that see several countries involved there is the TALIS study, Teaching and Learning International Survey, of the OECD, Organization for Development and Economic Cooperation, which since its first edition investigates the professionalism of the teacher and the school principal with five-year cyclicality on the learning and teaching context that the latter experience on a daily basis. Living in an increasingly complex and heterogeneous society means not only having to prepare students for the challenges of the future, but also stimulating them to critically reflect on phenomena and to be able to work both individually and in a team (OECD, 2019). Teachers today are undoubtedly called to be profound connoisseurs of the discipline they teach, but also to know who they are in front of in order to find the best teaching strategy for those students who have a specific background behind them. It is no longer enough to be academically prepared on a given discipline but it is essential to have an overview of the specific curriculum, reflect on how students learn and know the professional practices that can contribute to the creation of the best learning environments for students (OECD, 2019). To keep all these variables in mind and to keep up with the times, teachers must not only

receive good initial training, but must also continue to update themselves professionally throughout their professional career. According to the results of TALIS 2018 (OECD, 2019), in fact, it is clear that on average across the OECD, 94% of teachers and almost 100% of school principals have participated in at least one type of professional development training in the twelve months preceding the investigation. About 80% of teachers in OECD countries report that the training included content and concepts, elements of pedagogy and classroom practices in some or all of the subjects taught. Training in knowledge and understanding of one's discipline and training in pedagogical skills are the most frequent types of professional development attended by teachers.

This reinforces the conviction that the use of some practices compared to others is also influenced by the initial and continuous training carried out by teachers, who, trained in the use of certain strategies, become aware of their importance, are able to feel able to use them and therefore to enjoy the conditions to effectively implement them in daily practice (Cheng *et al.,* 2010).

Italian teachers of lower secondary school, for example, report in 64% of cases that they were initially trained on the contents of the subjects, teaching practices and pedagogy, although only a quarter of them followed a path of professional integration upon entering the school where she/he teaches. In fact, the percentage of teachers in Italy who enjoy the presence of a professional tutor when entering a new teaching environment is 5% compared to 22% of the OECD average, even if those who have just obtained the degree and teaching qualification must be compulsorily accompanied for one year. In our country, however, the percentage of teachers who have participated in in-service learning and professional development opportunities is 93% (versus 94% of the OECD average). Many Italian secondary school teachers are satisfied with the update in service received, in fact 84% say that the training has had a positive impact on the teaching strategies used in the classroom (OECD, 2019).

Being able to introduce new teaching methodologies within the lesson requires a great adaptive effort on the part of teachers. In fact, teaching innovations often clash with the difficulties of wanting to accept the new on the part of teachers, who are asked to radically change working habits that have been their own for decades. This is how the predisposition to change and the willingness to try something different become fundamental characteristics for the success of less traditional and more innovative practices, such as the use of technologies, which have now become a support to the didactics.

According to the TALIS 2018 results (OECD, 2019), regarding the interest in innovation and the adoption of innovative practices by teachers and schools in general, on average about 70-80% of teachers and over 80% of the school leaders in the countries that took part in the survey consider their colleagues open to change and their schools as places that have the capacity to adopt innovative practices. Notably, on

average across the OECD, 74% of teachers agree or strongly agree that the majority of teachers in their school are open to change, with a slightly below average figure for how much it concerns Italy (about 70% of teachers), while 77% agree or strongly agree that most teachers in their school are looking for new ways to solve problems. Cooperation between teachers in the development of innovative ideas is one of the themes investigated by the TALIS survey (OECD, 2019).

This data makes us reflect on the importance of a choral training on the use of innovative practices, which stimulates and leads the entire community of teachers towards a greater predisposition to change and innovation, consequently facilitating the diffusion and promoting innovative practices and also positively influencing the quality of education and academic performance. Among the most common innovative practices, Information and Communication Technologies (ICT) cannot be ignored. Italian teachers who use and have their students use technological devices during lessons or for group work is clearly below the OECD average (47% versus 53%). This is another fact that, again according to what was collected by the OECD, could depend on the preparation of teachers in the use of innovative practices and/or on the training they have received as 17% of them report that they need be more educated in technology (OECD, 2019).

Thinking of teachers and school principals as lifelong students with different training needs throughout their career becomes paramount at this point. In the globalized and increasingly multifaceted world that we find ourselves living, being resilient in the face of change, being open to novelty and being ready to welcome the heterogeneity of innovations become key elements for today's and tomorrow's schools.

1. The study on lower and upper secondary school teachers

This contribution aims to encourage reflection on the theme of professional training by analyzing the data that emerged from a study carried out in the 2019-2020 academic year at the Department of Social and Developmental Psychology of the University of Rome Sapienza, by examining a part of the data that emerged from the questionnaire administered to a group of lower and upper secondary school teachers whose objective was to investigate issues such as perceived self-efficacy, the didactic strategies used, the sense of job satisfaction, by relating these constructs with the socio-demographic variables identified through the tool, with particular focus on the theme of professional training and teaching practices.

As regards the sample, this is made up of 701 secondary school teachers of lower secondary level (236 teachers) and upper secondary level (465 teachers) belonging to the whole national territory, recruited both on paper and online. The teachers are mostly women (78.6%) and with an age in line with the results of the TALIS 2018 survey (OECD, 2019)

where the highest percentage belongs to the over 50s (47.2%). Most of the teachers participating in the questionnaire are tenured (85%) and are divided mainly between the linguistic area (49.6%) and the scientific area (34.1%).

The questions relating to the training received concerned: the hours carried out for courses or professional development activities, the type of such courses (disciplinary, methodological or mixed) and the content of these activities. With regard to this last point, teachers were given the opportunity to choose between some contents (OECD, 2019), indicating up to a maximum of three answers. The results that emerged are in line with those highlighted by the TALIS 2018 survey (OECD, 2019), where the most popular training courses mainly concerned aspects related to the subject taught, with particular reference to the didactic use of technologies. Another aspect that was similar to what emerged in the international survey referred to above concerns the hours of training received. In the sample of teachers participating in the research, the majority (about 87%) says they have completed at least one hour of professional development training in the twelve months preceding the survey, compared with 3% who did not follow no course. Specifically, 47% say they have attended from 1 to 30 hours of training courses in the last year, while only 18% say they have completed more than 60 hours of professional development courses. Item A. 17 of the questionnaire administered to the sample of 701 teachers, in fact, asked teachers how many hours of training and professional updating they attended during the twelve months prior to the survey. The four response alternatives proposed to teachers included a range of 0 hours, 1 to 30 hours, 31 to 60 hours and more than 60 hours.

Like the OECD study, the research carried out also focused on analyzing the impact that teacher training has on teaching practices and the repercussions that professional development can have on work performance, in particular on the predisposition to change, a characteristic which is at the basis of the desire to use a less traditional and more innovative teaching method.

2. Results

To better understand the link between the hours of training received in the calendar year prior to the survey, the openness to change and the didactic strategies used, the latter two issues and the related results will be explored in the following paragraphs.

2.1. The training and openness to change

Nowadays there is an air of innovation and change in Italian schools, precisely because there is a need to adapt to a constantly evolving society. Teachers, who have the task of educating the new generations, are constantly asked to adapt and sometimes even radically change the

working habits used by years of experience. Faced with these demands, the individual can choose to resist change, adapt to it or try to promote it. Resistance to change, however, can lead to not seeing new ideas as opportunities but only as further problems.

The ability to grasp the new as an opportunity, enhancing the positive aspects has now become a required feature in the world of work as an index of professional quality. In the school environment, this ability also resides in the tendency to create organizational conditions with one's colleagues so that the change can take place and the aptitude to promote the latter also through the search for new teaching strategies and management of activities.

Given the importance of the topic, it was decided to introduce in the questionnaire administered to the teachers some questions relating to the predisposition to change and relating to the hours of training received in the last calendar year. The construct 'openness to change' was investigated through some questions readapted from the Socially Responsible Leadership Scale of Dugan (SRLS – Dugan, 2006; Rubat Du Merac, 2017).

As might be expected, teachers who have not completed any training course in the last calendar year are also those who express the most negative judgments in the scale of openness to change, unlike those who say they have attended a range of about 31-60 hours in the last calendar year. This is in line with the fact that the teachers most predisposed to change their habits and their consolidated teaching practices are also those most stimulated to want to attend refresh and training courses.

2.2. The training and teaching strategies used

In the questionnaire administered to teachers, it was decided to insert a scale relating to the didactic strategies used in practice, which represents an adapted version of a tool by Moé and colleagues (Moé *et al.,* 2010), to which the teachers responded by indicating the frequency of use on a five-point Likert scale (never, rarely, sometimes, often and always). The 30 items on the scale investigate different didactic practices that have been grouped under four macro-areas (Cesareni, Rossi, 2013): strengthening activities, that is, those concerning the different practices aimed at making students work and reflect on knowledge acquired (e.g. request for student summary, clarifications on certain topics, etc.), the activities of transfer of meanings, which are characterized by an asymmetrical student/teacher interaction, with a strong dominance of the teacher and where the interaction between students is not strong, the activities of active knowledge building, which require an active involvement of the students, and finally the activities concerning the reflection on strategies, where the teacher provides study tools or strategies (provide strategies) or activities that stimulate discussion on the strategies used to identify the most effective ones (discuss strategies).

The first results showed the relationship between some aspects concerning the ongoing training received by teachers and the teaching

strategies connected both with the cognitive activation of students through different ways of stimulating creativity and critical thinking, and with traditional methods of lecture. In particular, as can also be seen from the table (Tab. 1), the strategies linked to strengthening, the transfer of meanings and the active knowledge building turned out to be significant.

TAB. 1. *Table ANOVA Didactic Strategies*Training received*

	SIGN.
STRENGTHENING	,017
TRANSFER OF MEANINGS	,004
ACTIVE KNOWLEDGE BUILDING	,000
REFLECT ON STRATEGIES	,342

Source: elaboration by the authors

In particular, the strategies aimed at cognitively activating the students were found to be the most significantly correlated (Sign., 000) with the training received. As can also be seen from the figures below (FIG. 1 and Fig. 2), the greatest differences are found between teachers who have attended more than 60 hours of training in the last calendar year and those who have not completed any hours.

FIG. 1. *Item E19*
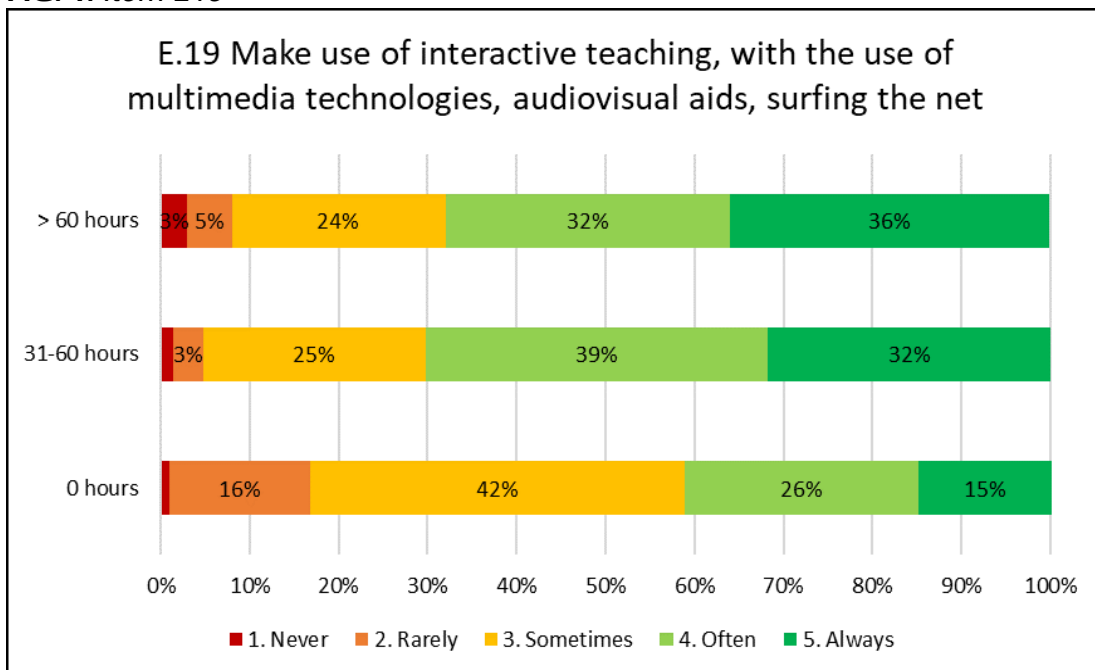
Source: elaboration by the authors

Specifically, Figure 1 highlights how the most professionally up-to-date teachers are those who in 36% of cases claim to have recourse to interactive teaching and technological devices, while among those who have not attended training courses in the previous twelve months the most half (58%) admit that they leave little space for multimedia technologies in the classroom. The central band relating to the responses of teachers who attended 31 to 60 hours of training courses is the one

that balances more or less between a more or less frequent use of the Internet or audiovisual media for teaching.

FIG. 2. *Item E21*

E.21 Organize group work to be done during class time
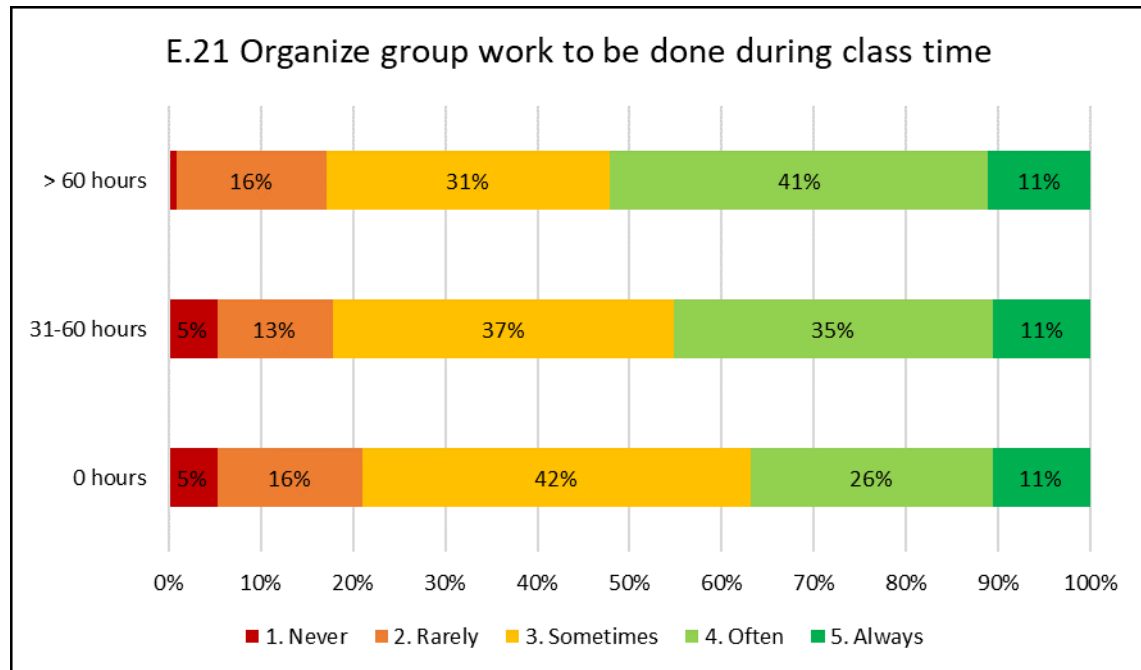
Source: elaboration by the authors

Figure 2 relating to the presence or absence of group work in the classroom, on the other hand, underlines that there is no substantial difference in not resorting to group work between those who have attended training hours or have attended 31 to 60 hours, although those who are more professionally updated in 35% of cases often let their students work in a team. Massive on-going training that exceeds 60 hours correlated with the organization of group work to be done in the classroom is instead evident: the more a teacher has followed moments of reflection and professional development, the more she/he is inclined to organize group work to be done together in class (1% never, 16% rarely, 31% sometimes, 41% often, 11% always).

Conclusion

From the first data that emerged from the analysis of the questionnaire presented here it is clear that in the sample of 701 teachers involved and redistributed between lower and upper secondary schools, in-progress training in general and the hours of professional updating received in the previous calendar year to the survey specifically, they have a considerable importance on the use that the latter make of the didactic strategies. In particular, as discussed in the previous paragraphs, the strategies that aim to cognitively activate the student during classroom

work are significantly correlated (Sign., 000) with the in-service training received.

One of the goals of school policy reforms should be to foster effective teaching practices. In fact, both initial and continuing training should include training, use and reflection on these types of strategies capable of cognitively activating students. Teachers should be trained in the use of these practices, they should be aware of their importance, they should feel able to use them and they should be able to effectively implement them (Cheng *et al.,* 2010).

Reflecting on the teaching strategies used in the classroom today is more than ever of fundamental importance. The study presented here was conducted before the pandemic, before teaching in an emergency and before the challenges that the latter posed to both students and teachers not only from the point of view of adaptation to changed teaching conditions, but also of individual and community resilience (Vaccarelli, 2016). In light of the contingent situation, future research lines provide for an in-depth study of the subject of training and didactic strategies, together with the possibility of being able to contact schools and participating teachers again to analyze if and how the latter were trained in the use of didactic technologies in a moment as complex and delicate as the one we have experienced in the last months when the teaching and learning processes have moved like never before in digital environments (OECD, 2021; Schleicher, 2020; OECD, 2020).

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The Schoolyard as a Teachable Space: A Research-Training Project with Teachers and Parents

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ABSTRACT: *The COVID-19 pandemic forced schools to reorganize. By and large Italian schools were not ready for online didactic. Teachers had to learn tools and reinvent their teaching rapidly and without a clear institutional mandate. While this process proved to be extremely stressful, it also fostered a greater sense of agency, independency, empowerment in teachers (Jones, Harris, 2014). It also consolidated informal professional learning communities (Watkins, 2005). These gains are proving to be lasting and are bridging across different sectors. In summer 2020 teachers at a primary school in Reggio Emilia (Italy), started a deep reflection on the new school year and how to make the best of the difficult and uncertain situation ahead of them. More specifically, the schoolyard was identified as a 'teachable space' that is a healthy environment, given the pandemic, where teachers can extend classroom learning to natural and authentic environments (Feille, 2019). Teachers had no lasting experience on outdoor education (Humbestone et al., 2016), so they reached out to outside experts (environmental educators and researchers). A research-training project (Asquini, 2018) has been structured and is currently on the way to redesign the schoolyard on the basis of the educational potentials highlighted in the literature and in the training path itself. This study refers a preliminary account of this process that involved both the teachers and the parents of the school. It will present: the documentation of the process of co-designing; the results of a survey, analyzing teachers' perceived self-efficacy (Glackin, Hohenstein, 2018) and believes regarding outdoor education before the project started; the presentation of the reflective notebooks that accompany the teachers throughout the training meetings (Moon, 2003).*

KEYWORDS: *Outdoor education, Schoolyard, Research-training, Professional development*

Introduction: Teaching out-of-doors during and after the COVID-19 pandemic

The COVID-19 pandemic forced schools to reorganize. Especially in the first phase of the health emergency (March-June 2020) it required new distancing rules and activated a fast search for new spaces and

technological solutions. Teachers had to reinvent their way of teaching rapidly. Since this scenario proved to be extremely stressful, it also can be considered as a period of intense professional growth, that fostered a greater sense of agency and empowerment in teachers (Nigris *et al.,* 2020).

An example of this process of both organizational change and professional development (Jones, Harris, 2014), is the project presented in this paper.

In the summer of 2020 teachers at the primary school Renzo Pezzani in Reggio Emilia (Italy), started a deep reflection on how to make the best of the difficult and uncertain situation they had ahead of them.

As in many other schools, they focused on so called 'outdoor education' (OE) (Humberstone *et al.,* 2015); more specifically the outdoor environment immediately surrounding the school: the schoolyard and the nearby public parks, considered as accessible and healthy 'teachable spaces', where they could extend classroom activities (Feille, 2019).

Priest (1986, 13-14) suggest that OE is to be defined as «an experiential process of learning by doing, which takes place primarily through exposure to the out-of-doors. In OE the emphasis for the subject of learning is placed on relationships, relationships concerning people and natural resources».

Donaldson and Donaldson (1958, 17) defined outdoor education (OE) as «education in, about, and for the outdoors». This idea allows to identify the large number of 'settings' of OE (e.g. school yard, parks in the city, forest in the wilderness), the necessity to put learning processes 'outside' and the purpose of sustaining learning processes for the sake of the ecosystem (Pintus *et al.,* 2019).

1. A teacher research for professional development

Since teachers in the school had no lasting experience of OE they reached out to outside experts, environmental educators and university researchers.

Acknowledging that the teachers' professional development is better realized within a community of practice (Wenger, 1998), instead of providing theoretical seminars on outdoor education or environmental education, a project group was established, consisting of both teachers and researchers. The group co-designed a training path through shared theoretical and practical knowledge along with guidance for research, reflection, and collaboration. The main goals of the program were:
1. to develop instructional competencies regarding the outdoor spaces;
2. to re-design the schoolyard, together with all stakeholders, based on the educational potentials highlighted in the literature (Canning, 2010; Chawla, 2015) and discovered through the training path itself.

The program has a teacher research for professional development informed by the 'Ricerca-Formazione' (*Research-Training*) approach (R-F) developed by Centre for Educational Research on Teachers as Professionals (CERTP)[1]. R-F is an approach to enquiry that resembles closely the better-known Participatory Action Research (PAR) (Reason, Bradbury, 2008), namely an empirical research that takes place in the field of teachers' professional development, and where researchers and teachers share the same goals of institutional changes through the research itself (Asquini, 2018).

2. Methods

Approximately 50% of the schoolteachers (N = 19) participated in the whole program (seniority = 1-38 years, M = 17,44; SD = 12,06).

A first open seminar for teachers and parents was organized in order to define some keywords and topics concerning OE; then, in each of the planned encounters with the teachers, some tools, both quantitative (questionnaire) and qualitative (logbooks, self-training/focus group), were administered to collect information about their practices and beliefs.

More specifically, at the beginning of the 1st and at the end of the last encounter a questionnaire was administered. Teachers had to rank their 'confidence' or 'perceived self-efficacy' on a 10point scale (1 being the lowest), to carry out educational activities in 3 specific spaces/environments: the schoolyard, the surrounding parks and the urban public spaces. In the 1st questionnaire the frequency with which teachers carried out activities in these particular learning environments was also collected[2].

Self-efficacy, defined as a judgment or an individual belief in one's own capabilities to perform a specific task (Bandura, 1997), has been affirmed as an important construct for analysing the quality of professionals, including teachers (Pintus et al. 2021). Self-efficacy plays an important role in human functioning because an individual's self-referential thoughts greatly affect their behaviour.

Similarly to the method suggested by Glackin and Hohenstein (2018), at the end of each of the professional development sessions, teachers were asked to reflect on ideas and practices experienced/suggested, and to answer two open questions concerning their future development/teaching, in terms of both strengths/opportunities and weaknesses/threats.

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[1] Centro di Ricerca Educativa Sulla Professionalità dell'Insegnante (CRESPI): https://centri.unibo.it/crespi/it

[2] Teachers had to answer: «How often have you performed these tasks in the following spaces/environments?». Alternative choices: 'Never', 'Sometimes', 'Almost all the time'; 'Always'.

3. Practices and beliefs

3.1. Practices

Overall, most of the teachers did not have the habit to use the outdoor environment for learning activities[3]: the 32% experience the outdoor mainly during school trips and the 37% approximately once a month. Some interesting difference emerged comparing specific nearby outdoor spaces (Tab. 1)

TAB. 1. *How often teachers perform learning activities in outdoor spaces: N (%)*

	Schoolyard	Nearby parks	Neighbourhood	City centre
Never	7 (37)	12 (63)	11 (58)	15 (79)
Sometimes	8 (41)	7 (37)	7 (37)	4 (21)
Almost all the time	2 (11)		1 (5)	
Always	2 (11)			

3.2. Beliefs

Initially, teachers reported to be moderately more confident regarding the schoolyard (M = 6,42; SD = 2,29) than the surrounding public parks (M = 5,11; SD = 2,05), and barely confident at all regarding other urban public spaces (M = 4,68; SD = 2,21).

At the end of the research-training, the teachers perceived self-esteem increased concerning all the three kinds of environment, even if this improvement resulted statistically significant only regarding the surrounding parks ($F_{(1, 31)} = 5,97$; $p < 0,05$) (Tab. 2)

TAB. 2. *Perceived self-efficacy: M (SD)*

	At the beginning	At the end of the training path
Schoolyard	6,42 (2,29)	7,57 (1,47)
Surrounding parks	5,11 (2,05)	6,79 (1,80)
Urban public spaces	4,68 (2,21)	5,86 (2,28)

4. Project roadmap

4.1. Teachers' training

After the first open seminar in December 2020, involving parents, teachers and educators, the training took two different paths. Teachers had 2 outdoor training sessions in February 2021, planning to carry out outdoor activities in their classes in March. Aims of the training were:
1. to support teachers' decision to implement non-standardized outdoor activities by presenting opportunities, analysing risks, and putting them into perspective

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[3] Teachers had to answer: «How often do you propose outdoor activities to your classes/groups?». Alternative choices: «Never», «Mainly during school trips», «About (Roughly?) once a month», «Several times a month», «Several times a week».

2. to define some of the characteristics of effective OE: regular, long-term projects; multiple languages; creativity; value of routines and reflective moments (e.g., circle-time); embodied learning.

Yet, schools closed for a month due to the COVID-19 pandemic and this caused a delay of the whole process. Nonetheless 15 out of 19 teachers implemented various types of activities with 7 class-groups. The self-training session, to discuss class experiences, originally scheduled for April, took place on May 26th, thus postponing the rest of the project to next year.

4.2. Parents' and children's outings

In its preparatory work the R-F group had identified parents' training as a key part of the collective schoolyard designing process. Teachers considered parents' training instrumental to promote OE opportunities and potentials and increase perception of each family as part of a school and a learning community. This idea matches the findings of different research (Flecha, 2014; Bartee, George, 2019). Flecha qualifies community involvement in school through 5 different categories. We focus here on what he defines as 'decisive', where parents are involved in school's decision-making processes and 'educative', where there is the creation of common cultural awareness through educational programs involving the whole community at different levels. These two approaches, that we are applying in this project, have shown to be more effective in promoting social cohesion and pupils' academic success (Flecha, 2014; Scanagatta, Maccarini, 2009; Bartee, George, 2019). Being part of a common educational process and being involved in decision making helps reflectiveness and awareness in parents' school participation, supports collaborative and reciprocal versus individual and single child-focused actions and promotes a more cohesive and collaborative school environment (Flecha, 2014).

60 families participated to a 2-hours long outing in different public parks, divided into groups of 20 to 25 participants. These experiences were led by an environmental educator and teachers were also able to attend. These families could experience hands-on outdoor activities, within a community of learners. They could also witness children's engagement.

5. Reflections and changes triggered by the project

5.1 Parents' involvement

The considerations presented in this paragraph were collected through observation, informal interactions with parents and teachers' reflections during the focus group.

Parents, by and large, let themselves be practically involved, expressed great appreciation for the opportunity and tried to enrol to more than one session. 14 participated actively to the first schoolyard co-designing

meeting, 10 more have given their availability for the co-designing phase, while many others intend to actively work in the schoolyard.

Teachers report great both active and passive support by parents on OE with their class group. First of all, there have been none of the usual complaints for dirty or damaged clothing, for scratches or bruises, for outings in wet or cold weather. According to the educators, the COVID-19 pandemic has fostered this great shift in parents' attitude. Yet there is probably more. The widespread training organized by the school, has certainly helped. Parents were surprised of their children involvement in the activities and the level of attention and engagement shown, also by children with learning disabilities. Moreover, pupils bringing home enthusiasm, new ideas, tails of new experiences, has had a great influence on parents' mentality. In most teachers' mind, it is key not to lose momentum. Parents have also reported great appreciation of teachers' new didactical approach also during parents-teachers' meetings. Complaints have come from those parents, whose children have done less outdoor activities.

5.2. Teachers' reactions and changes in didactic
We will here a qualitative analysis based on teachers' response to the questionnaires[4], their logbooks[5], and their contribution to training and during the focus group[6].

Teachers engaged in the process had already opinions on opportunities and threats OE offered. In the logbooks written after the first meeting they shared them. Here a summary of the opportunities that emerged: engaging pupils in pleasant, learning fostering activities (5 responses out of 19 participating teachers), providing opportunities for interdisciplinary discourse (N=5), providing a learning environment that fostered moving from real life experience to abstraction (N=3) and offering relational, emotional, cognitive experiences (N=3). As for the potential threats teachers emphasized: outdoor activities as potentially distractive and lacking focus (N=5), possibility of loosing control of class behavior (N=2), difficulties in reaching learning objectives with outdoor activities (N=2), organizational problems such as need for teacher pairing to grant safety (N==2).

Experimenting different outdoor activities in their classes offered teachers the opportunity to reflect and modulate their actions,

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[4] Initial and final questionnaires included two open-ended questions: 1. which potentialities and possibilities do you see for your daily didactical approach? 2. And which threats and obstacles?

[5] The logbook structure comprised 2 questions: 1. Thinking of today's training/the outdoor activity you have carried out in class; which potentialities and possibilities do you see for your daily didactical approach? 2. And which threats and obstacles?

[6] The self-training /focus group dealt with 3 different questions: 1. How can teachers share the meanings of an OE project? How can they involve actors external to the class (parents, other colleagues, the principal) in a OE project? Which actions and narratives are more effective? 2. How does the class get ready for outdoor activities? What kind of tools and routines should be put in place? 3. What are my needs for future training?

reconsidering threats and opportunities of outdoor education. During the focus group/self-training session at the end of May, many of their original ideas, especially concerning threats, had changed.

The role of routine and slower passed activities in helping students staying focused, emerged. These elements, valued by literature (Zavalloni, 2009) are often overseen by teachers. Teachers used them consciously, remodelling activities based on the observation of what worked and what did not. For example, activities such as preparing an outdoor kit for every student, refreshing memory on the task at hand and the rules to be respected outdoor, a circle time as first outdoor moment, proved to be effective allies, triggering pupils' attention and engagement. Promising to give time for outside playing after completing the task, not so much. For most teachers it only led to pupils' speeding up activities to have more time for free playing.

Teachers made other discoveries. In the words of one teacher: «Changing environment brings new stimuli to creativity»[7]. This result came with little surprise. Yet the repetition of activities during multiple outings focusing on a creative production (poetry, drawing) had the beneficial and unforeseen side effect to foster students' observation of seasonal changes. Most teachers had tried before to engage students on this type of observation with very little results. They were surprised to realize how much providing a strong creative focus to students would allow them to observe and not just see and to put seasonal changes into perspective.

Teachers were also surprised because the richness of outdoor stimulus, when intentionally used and included in the didactical action, would help rather than inhibit inclusion and focus. The continuous connection to the real world would foster divergent thinking and offer to less prone to traditional class work students the opportunity to emerge. «Changing setting, namely the environment and slowing activities pace, and requesting students to do things, such as drawing a tree, that they give for granted, students can relax and allow hidden abilities, to emerge. Often to their own surprise»[8].

Many teachers continued engaged students in OE for the benefit they saw in the relationships. Pupils could work in group while they could not do it in class due to pandemic restrictions. The quality of this work was also different. Outdoor there were no bystanders because everybody had a task. Every student could contribute with his/her different competences, allowing for a richer exchange than the one usually witnessed in class.

When considering threats, teachers still mentioned safety and organizational procedures, but new consideration emerged. «It is a different didactic, that uses less notebooks, that leads to formalization after a longer and richer experiential process».[9] While teachers are aware

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[7] Focus group discussion.
[8] Teachers S. and L. logbook after class activity.
[9] Focus group discussion.

that this longer process grants deeper learning, they also realize the need to share these considerations with parents, who might be concerned looking for students progresses on notebooks and not seeing any.

During the last meeting we collected teachers' ideas of their professional development needs Not surprisingly all participants want more practical activities to experience in class. Yet only 3 of them requested to be presented with ideas. There were: 4 requests for a wide bibliography as a base for self-training; 7 asked for further experiencing outdoor praxis, even co-designed by the teachers' group; 2 wanted to deepen knowledge of OE tools; while 1 specifically asked for broadening knowledge of opportunities offered by the neighborhood.

Conclusion

By and large we could collect signs of a shift in teachers' mentality: moving away from the need of a perfectly controllable environment to the opportunities and risks offered by the unforeseen. «Finally, children are active protagonist of their learning process rather than passive recipients of teachers' actions». «The outdoor education brings new value and meaning to each child's participation to school activities and enhances their attention span»[10]. The school immediately surroundings, especially the schoolyard and the nearby public parks, were rediscovered as accessible and healthy 'teachable spaces', with great potentials. The environment potential has allowed teacher to witness the power of learning-by-doing «Concrete and real action makes for deeper and longer lasting learning»[11]. This is proving influential to their attitude both in- and out-doors.

Throughout the project a greater sense of agency and empowerment in teachers has emerged. While this is stronger for activities carried out in parks and the schoolyard, further training and experience could yield results also regarding overall urban public spaces. Th R-F approach was one of the key components for this change, confirming the power of reflection and the need for professional development to take place within a community.

The emphasis on relationships, relationships concerning people and natural resources, that emerges naturally during OE, has caught teachers' attention and interest. Interestingly enough, teachers have placed more emphasis on activities fostering both disciplinary and transdisciplinary competences and less on promoting environmental awareness. This unexpected result could be further analysed in the future.

At the end of this first year we can draw some preliminary conclusions. This project confirms that R-F approach, based on collective research and

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[10] Final questionnaire.
[11] Focus group discussion.

self and group reflection, fosters visible and lasting changes in posture, didactic and teachers' confidence.

The school immediate surroundings are comfortable and proximal teachable space. They provide a balance between new challenges and known variables, that can push teachers' themselves, as Vygotski would say, along their area of proximal development, producing deeper understanding of students' potential, didactic opportunities, ow to use the environment intentionally. These new understandings can inform teachers' professional development bringing indoor new didactic experiences.

Teachers have also discovered new allies along this path. Parents have shown support and interest, have participated to the new opportunities and want to be involved in this collective reflection. This involvement used to make teachers uncomfortable in the past. Yet the pandemic environment has helped moving beyond this traditional attitude and see parents' involvement not just as a potential problem, but also as an opportunity. Opportunity for coherent actions between school and families, for greater resources, for support.

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Reinventing Professional Learning and Development

Toward a Phenomenology-oriented Transformative Education in Adult Life

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ABSTRACT: *The paper highlights Husserlian phenomenology as a fruitful pedagogical paradigm for adult education philosophy. Actually, through a comparison with the Transformative Learning approach as developed by Jack Mezirow, phenomenology is presented as providing a peculiar account on learning from experience as well as on reflection. More precisely, a stress on the value of reflection in adulthood is detected both in the Deweyan line of thought, as expressed by Mezirow, and in the Husserlian one, as developed also in Martin Heidegger, Hannah Arendt, and Paul Ricoeur. My aim is to show that, even though the reflective approach has certainly affected contemporary education, chiefly the phenomenological reflexive attitude – however less often explored with pedagogical purposes it may be – can be particularly precious in educational theory and practice. Actually, a phenomenology-oriented education paves the way not only to some practical and professional skills but, more deeply, to an existential and ethical competence, i.e., a genuine adult life.*

KEYWORDS: *Transformative Learning, Phenomenology, Reflection, Adulthood, Ethical Competences.*

Introduction

Transformative Learning represents a leading approach in contemporary adult education. It underlies pragmatistic, constructivistic, humanistic, and critical social theory assumptions (Taylor, Cranton, 2012). In particular, thanks to the pragmatistic ones, Transformative Learning encompasses a specific focus on reflection as the proper way of learning from experience.

On the other side, in a more general perspective, nowadays reflection is widely acknowledged as a significant feature of our late modernity (Beck, 1992; Beck *et al.,* 2003) so that it sounds like an imperative (Archer, 2012). Actually, in these last few years, reflection has been the object of several theoretical and empirical educational inquiries on adult education, where it is considered as a way to better perform. Consistently, it is viewed as such a significant goal to be achieved by high school students and adult learners that the reflection-oriented attitude toward experience seems to imply a reshaping of the very notion of adulthood.

However, a crucial unasked question in our allegedly 'reflexive age' seems to be what reflection, reflectivity, and/or reflexivity really mean. Therefore, what 'learning from experience' does mean remain unclear. Yet, as long as we do not devote a specific philosophical attention to these issues, learning will always fail to be really transformative and a genuine adult education will remain a task far from being accomplished.

Therefore, the article presents some insights into the value of human capability to reflect with a particular focus on adulthood by comparing the two above-mentioned approaches.

Many years ago, with respect to philosophy of adult education, Stanage provided a view on Husserl's thought as a possible approach, involving

> systematic investigation of the essential structures of the phenomena constituting adult education of person. These phenomena most specifically are of the deliberative and liberative action of consciousing and responsible persons whereby they become transformed and empowered with vital motive for living (Stanage, 1987, 304).

In this perspective, Stanage suggests that Dewey's works and especially *Logic: The Theory of Inquiry* are particularly useful to envisage adult education in a phenomenological perspective. In more recent years, many fruitful connections between the 'continental', i.e. European, educational thinking and the American approach to adult education have been detected (Siljander *et al.,* 2012; Laros *et al.,* 2017; Brinkmann, 2017). So we can easily see that Mezirow on the one side and Husserl and his on the other disciples recognize the centrality of human experience and the different meanings involved, beside sharing an antidogmatical and critical use of reason -- which makes it particularly useful to compare their philosophical methods in adult education.

Nevertheless, further developing a previous study (D'Addelfio, 2017) where I have explored Transformative Learning and Phenomenology in their possible similarities, here I intend to show that when we try to ask some fundamental questions – like «What does reflection mean? What does learning from experience mean? When is learning really transformative?» – some significant differences arise. Such differences are the main focus of the present account.

1. The Deweyan legacy in Transformative Learning

As it is well known, Dewey is the chief exponent of the pragmatistic and progressive educational thought. In short, pragmatism can be presented as the philosophical tradition, originated in the United States during the last quarter of the nineteenth century, according to which the meaning of an idea is to be found in the practical consequences of accepting it. This implies that unpractical ideas, not empirically verifiable, are to be rejected

as meaningless and insignificant. Consistently, pragmatistic thinkers consider the method of naturalistic sciences, i.e., the method of inquiry, for understanding human beings and solving human problems. This can be recognized in Dewey's *Logic: The Theory of Inquiry* but mostly in *How we think. Restating the Relation of Reflective Thinking to the Educative Process*, where the distinction between 'ordinary thinking' and something very different called 'reflective thinking' is crucial. By 'reflective' thinking, Dewey means that sort of thinking that makes the reasons as well as the consequences of an idea explicit.

More precisely, knowing the reasons of an idea implies being aware of the condition under which this idea is conceived, just as knowing its consequences implies being aware of its practical effect on concrete life. As a result, being reflective means liberating ourselves from dogmatism, intellectual rigidity, and the authority of unreflective traditions. Undoubtedly, it is a significant goal for adult life.

Within his transformative learning theory, Mezirow frequently mentions Dewey's seminal analysis on reflection, for example when he states that «a defining condition of being human is our urgent need to understand and order the meaning of our experience» (2012, 73) – as opposed to our seizing the explanations provided by traditions and authority figures. A key element of the transformative learning theory is, indeed, the notion of 'frame of reference' followed by the possibility to change such frame through reflection.

By 'frame of reference' Mezirow means the structure of tacit knowledge, assumptions and expectations that, despite our general lack of awareness, gives rise to the habits of mind and resulting viewpoints that guide our action in ordinary life. According to Mezirow, this frame of reference is hardly reconsidered unless our education-derived attitude to reflect comes into play making us more critically reflective on our own frame of reference. Through this process, described by Mezirow as 'premise reflection', an adult learner may transform their frame and envisage a new one, namely one that is more inclusive, permeable to other viewpoints, and integrative of experience.

To sum up: according to the pragmatistic legacy, reflection can be defined as the act of 'thinking about' something during or after an event. Reflectivity is, therefore, the related attitude to monitor oneself as life unfolds, that is to scrutinize what has just happened with a metacognitive and epistemic purpose. The goal of reflection is, therefore, an increasing effectiveness and educating to reflect means preparing learners for the demands of practice: this is, in this line of thought, the scope and the aim of 'learning from experience'. As mentioned above, according to the Deweyan legacy educating a person, especially an adult, means helping him/her to become more and more reflective.

However, being reflective is different from being reflexive insofar as the former does not necessarily include the latter, which implies a different scope. Actually, the reflexive process can be meant as a tool to scrutinize my lived-experience, my mental state, and my emotional

being, in order to gain new insights not only into my own practice but, mostly, into my own self. In other terms, reflexivity involves the kind of introspection that is precisely the focus of the phenomenological approach.

2. Insights from the Heideggerian Phenomenology

The phenomenological approach is a wide philosophical movement starting at the beginning of the last century with Husserl's works. It is a way of thinking both implying a serious consideration of what appears and a commitment to return to the things themselves, i.e. bring into the fore the essence.

Therefore, phenomenology can also be considered as: «a way to educate our vision, to define our posture, and to broaden the way we look at the world» (Mortari, Tarozzi, 2010, 10) and, consequently, at ourselves.

First all, it helps us to consider how our experience is always embedded into a horizon, that is a lifeworld. It can be defined as the world already there for us, i.e., the world that is lived and experienced in a natural attitude, that is in a pre-reflexive way, with its pre-understandings, taken-for-granted, and routines, conventions.

As Heidegger (1962) – the most famous of Husserl's disciples – points out, our 'being-in-the-world' does not simply mean that we are contained in it but, rather, that we are embedded in, and entwined with, our world. Therefore, we are typically absorbed in many activities and projects that involve the use of familiar tools – which have the mode of being of readiness-to-hand (*Zuhandenheit*). Actually, we generally carry out activities and projects in a mode of average everydayness, which enables us to quite quickly complete our ordinary tasks and activities. It is the background – the frame of reference in Mezirow's terms – that Heidegger calls the 'They' (*das Man*), the generalized and impersonal. We actually do not place all this under scrutiny.

However, within Heidegger's phenomenology, precisely the effort to scrutinize and really understand is presented as the peculiar human mode of our 'being-in-the-world'. Indeed, rather than being an object among others, the human being is a relation of being (*Seinsverhältnis*). This implies not only that human beings have a range of possible ways to be, but also that our being is an issue for us; it is up to us who we are and who we are becoming.

We are a being who takes a stand on its being and is defined by that stand (Thomson, 2004). In other terms, it is because our being (our identity) is a question for us that we are always taking a stand on who we are. Since the German word for 'understanding', *Verstehen*, is etymologically derived from the idea of 'taking a stand', Heidegger can mean understanding precisely as the projection into the future by which we shape our identity.

Therefore, a clear pedagogical implication can be recognized in the need for taking a stand consciously and deliberately, which only an appropriate education makes possible.

Actually, in potentially forming and shaping the stands we take, education can play a key role in who we are becoming: in what we come to know, how we act, and who we are (Dall'Alba, 2009).

Heidegger holds that all possibilities of concrete understanding take place in the background of shared practices and preunderstandings, which – as above stressed – he calls the 'They'. With regard to this, the philosopher suggests that even in this conformism of average everydayness we are constantly taking a stance that reflects our understanding of who we are and who we are becoming. Then, he pinpoints that there is something deeply problematic about this *falling* (*Verfallen*) mode of existence. In 'doing what one does' – Heidegger argues – we fail to own up to who we are. Actually, we do not take over our own choices as our own and, as a result, we are not really the authors of our own lives. To the extent that our lives are unowned or disowned, existence is inauthentic (*uneigentlich*), not our own (*eigen*).

Our condition as They-selves is one of dispersal, distraction and forgetfulness. In order to be able to realize the capacity for 'authenticity', one must undergo a personal transformation. This implies a different aim and scope of each 'learning from experience'.

Actually, in this perspective, Heidegger suggests that we 'grow into' a familiar way of interpreting not only the world around us and our tasks in it, but in doing so, more basically and implicitly, ourselves.

We understand ourselves in terms of this interpretation, which opens up some possibilities for being as well as constraining other possibilities.

According to the Phenomenology-oriented idea of 'learning from experience', first of all in the lifeworld, as before stressed, when we 'learn' to think and act as 'they' do, we take a stand also on who we are becoming.

Then, when a genuine learning experience takes place, «the learner not only has an experience of something or about something but also an experience of herself/himself» (Brinkmann, 2017, 78). Only in this case can learning be transformative. Indeed, precisely in this involvement of the self that phenomenology allows for – and that in the following paragraphs will be deeply considered –, experience can be really reframed and transformed.

3. *Epochè* and Reflection: Different accounts

Considering what has emerged so far, we can state that, according to both Transformative Learning and a Phenomenology-oriented adult education, the process of learning implies an opening, a reframing and transformation of existing frames, so as to reconstruct reference and meaning and reshape one's horizon of experience.

We can also add that in the two paradigms we are considering learning arises in front of practical problems and the motivation for change is identified in an unexpected interruption of one's familiar routines: continuity is displaced. Heidegger speaks about '*Unzuhandenheit*/Un-readiness-to-hand' and Mezirow about 'disorienting dilemma'. Actually, encountering a familiar tool as 'un-ready-to-hand', i.e. no longer usable, involves some sort of disorienting 'breakdown' of existing knowing-that and knowing-how. In both approaches these so-called 'negative' experiences can be considered precious turning points that allow for new construction of meaning.

Face to this kind of interruptions, Phenomenology and Transformative Learning account for *epochè*. Nevertheless, the two lines of thought mean the same word in two very different ways. In phenomenological terms, *epochè* indicates the need to 'break with our familiar acceptance' (Mearleu-Ponty, 1962, XIV) of the world as we find it on hand in the natural attitude. Performing this *epochè*, therefore, means accepting the challenge of interrupting and suspending previous assumptions and preunderstandings in order to fulfill a new way of learning. Only through this bracketing, indeed, are we allowed to recognize essential evidence.

In an apparently very similar way, in one of his last presentations of Transformative Learning core concepts, Mezirow himself writes: «reflective discourse involves what the Greek Skeptics called *epochè*, a provisional suspension of judgment about the truth or falsity of, or the belief and disbelief in, ideas until a better determination can be» (2012, 80).

However, it is worth stressing here that whereas what the Skeptics called *epochè* implies negating the world and our possibility to know it, what Husserl and his disciples recall by speaking about bracketing definitely does not. In Husserl's words: «I am not negating this 'world' as though I were a sophistic; I am not doubting its factual beings as though I were a skeptic; rather I am exercising the phenomenological epochè» (2012, 61).

What Husserl intends to suspend is not just natural attitude (the Deweyan 'ordinary thinking') but also the scientific attitude of experimental sciences insofar as they only orbit around facts and not their essence. Significantly, in his unfinished 1936 book *The Crisis of European Sciences and Transcendental Phenomenology*, Husserl writes

> merely fact-minded sciences make merely fact-minded people [...] In our vital need [...] this science has nothing to say to us. It excludes in principle precisely the questions which man [...] finds the most burning: questions of the meaning or meaninglessness of the whole of this human existence (Husserl 1960, 6).

What Husserl here implies is that the phenomenological *epochè* is an exercise, «a first-person exercise» (Crotty 1996, 84) that is, an ethical one.

The phenomenological idea of *epochè* is more radical, precisely

because it requires a deep involvement of the self. Therefore, in the phenomenological line of thought educating means preparing learners to develop an existential competence (Bellingreri, 2015), i.e., an ethical competence far beyond the demands of practice and ordinary activities, as opposed to pragmatism.

Actually, in pragmatism reflecting is a useful and hopefully effective activity of the mind implying looking back in order to determine the future course of actions (looking forward). On the other hand, from a phenomenological perspective, reflection seems to mainly mean looking inside oneself. And experience is meant as what is internally experienced and not only as a sense experience, i.e. as knowledge acquired by means of the senses and verified by observation. Therefore, the actual difference between the legacies considered seems to lie in the direction of reflecting as well as the way in which the ethical value of reflection is developed.

More specifically, Mezirow, as Dewey's follower, focuses on the process of becoming critically aware of one's assumptions, reformulating them, and acting upon these newly acquired understandings; thus, they deal with the criteria and limits of knowledge and agency, hence with self-criticism and self-correction. Conversely, within the phenomenological approach, reflection is mostly a focus on human inwardness rather than on action and on the capability to act. As a consequence, an adult is one who critically looks into his/her inner self or, to quote Hannah Arendt, into *The Life of the Mind*.

4. Hannah Arendt and Paul Ricoeur on Reflection and Human Inwardness

In *The Life of the Mind* (1978), H. Arendt envisages human inwardness as a special region of life, which reflection discloses. Actually, for her, reflectivity is closely linked to the Husserlian gesture of *epochè* insofar as the former stems from the inclination to stop-and-think and to consider freedom as connected to the phrase 'I will' rather than 'I can'. She, therefore, interprets reflexivity as a split in the willing faculty as well as a Kantian drive for totality and for what will never be fully captured by our thought.

Accordingly, she stresses that what is useless and ineffective – i.e., not immediately associated with either problem setting or problem solving aims – is still indispensable to a truly human life. On the other side, eliminating reflection implies reducing acting in terms of making as well as refraining from genuine interaction with others. In this perspective, according to Arendt totalitarianism destroyed human life «after obliterating the meaning of all life» and, in many other cases, «masses of people are continuously rendered superfluous if we continue to think of our world in utilitarian terms» (Kristeva, 2001, 7).

Moreover, Arendt considers the ethical nature of reflection as relevant to the avoidance not only of evil-doing (as in Eichmann) but also of what she calls the «victory of *animal laborans*», whereby evil and other forms

of dehumanisation are viewed as the result of the absence of reflexivity. Hence, reflection is not guided by practical needs and, rather, interrupts any doing, so to genuinely transform our attitude toward the world, the others, and ourselves.

This peculiar phenomenological understanding of reflection and transformation can also be seen in Ricoeur's philosophy where his hermeneutics meets phenomenology or better, in his own terms, is grafted onto it. Indeed, he develops a reflexive philosophy, whose aim is to properly unfold the desire-to-be, meant as the original dynamism which grounds human existence. Reflection occurs through the interpretation of the signs in which such desire is inscribed and testified. Actually, since self-consciousness is first of all a false consciousness, the effort of interpretation is needed – the confrontation of the world of the 'text' and the world of the reader enabling the interpretative appropriation of the structure of the self.

In Ricoeur's own words:

> reflection is nothing other than the appropriation of our act of existing by means of a critique applied to the works and the acts which are the signs of this act of existing. [...] Reflection is the appropriation of our effort to exist and of our desire to be by means of the works which testify to this effort and this desire (1974, 17-18).

More precisely, each text opens up a space in front of it, i.e., new possible meanings of human experience. This is the reason why Ricoeur maintains that the reader is broadened in his/her capacity to understand and project himself/herself by appropriation, i.e. getting new mode of being from the text. Consistently, the scope of reflexive interpretation can be described not as understanding the text but, rather, as understanding oneself in front of the text. As Ricoeur puts it:

> The interpretation of a text culminates in the self-interpretation of a subject who thenceforth understands himself better, understands himself differently, or simply begins to understand himself. This culmination of the understanding of a text in self-understanding is characteristic of [...] concrete reflection (1981, 158).

Hence, such reflexive act can be considered as «the locus of the humanity of the self» (Gregor, 2013, 157).

Here, the phenomenological gesture of suspending in order to reflect on lived-experiences is developed as distanciation – which can be considered precisely as a form of *epochè* – whereby the role of a «critical moment in understanding« (Ricoeur, 1981, 113) can be discovered. «Distanciation is understood as more than a mere distance as it implies a creation of distance, in order to permit a re-description of reality» (Suazo, 2000, 59), namely of the reality of personhood, making imaginative variations of the *ego* possible. As a result, reflection means existential self-interpretation and implies the commitment of self-care.

According to Ricoeur, indeed, reflection is the only act that makes self-consciousness or self-understanding possible. To put it differently: reflection is the act by which «a subject grasps, in a moment of intellectual clarity and moral responsibility, the unifying principle of the operations among which it is dispersed and forgets itself as subject» (Ricoeur, 1991, 12). Therefore, it is also meant as a moral task: «the task of equating my concrete experience with the affirmation: *I am*» (Ricouer, 1974, 329).

Conclusions

In this paper I have presented some insight into the value of reflection and, more specifically, of reflexivity in adulthood, by considering two particularly relevant legacies in contemporary philosophy of education. Namely, I have presented some of their aspects in their possible similarities and, mostly, differences.

Actually, even if many passages of phenomenological texts may recall a pragmatistic approach, due to a deep and radical involvement of the self in experience, I have highlighted phenomenology as a more appropriate paradigm for a genuine transformative learning.

Moreover, I have highlighted that, although the pragmatistic philosophical tradition and the phenomenological approach both consider reflection as a virtue requiring an appropriate education, the phenomenological effort of widening, deepening, and radicalizing reflectivity into reflexivity seems to disclose a new way of understanding adulthood and adult education. Indeed, through a comparison between the two lines of thought considered, a major difference has emerged between reflectivity, which recalls the Deweyan legacy in Mezirow's approach, and reflexivity, which mirrors the Husserlian and his disciples one and shows a peculiar educational and ethical value.

Therefore, we might finally speak not only about a Phenomenology-oriented transformative learning but rather about a Phenomenology-oriented transformative education. Actually, as this paper tries to show, the need for an existential pedagogy of the self – that is, a wider-ranging notion than any learning approach, however lifelong it may be – emerges. A Phenomenology-oriented adult education, indeed, shall be meant not only as supporting learning but, also, seeking for self-understanding and meaning for life.

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Citizenship Education in Secondary School: Between Teachers Representations and Student Voices

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ABSTRACT: *This contribution illustrates a case study carried out at the IC Gobetti of Trezzano S/N (Milan) on the topic of citizenship education aims at enhance teacher professional development; the research investigate the representations and the teaching practices, through the voice of teachers and students, in relation to Citizenship and citizenship education social constructs. A mixed-method approach was chosen consistent with the need, on the one hand, to involve the entire educational team, and on the other hand, to make a qualitative in-depth geared towards understanding teaching/learning processes. A questionnaire survey for teacher and two focus groups with students of low secondary classes were conducted. Analysis of the questionnaires shows that the most frequently used terms ('right', 'respect' and 'duty') refer to an idea of citizenship 'stricto sensu' of a mainly political-legal nature. In defining citizenship education, the term 'respect' is the most recurrent, however, it presents a multiplicity of meaning, that refer to ethical and value dimensions and, in the case of respect for others and differences, to a cosmopolitan approach. The focus groups with students evidences engagement with socially vivid matters. The transcripts analysis identifies significant evidence: the connection between the local and global experiential dimensions and the shift from recognizing problems to proposing solutions, an attitude characteristic of an active citizenship and emblematic of the construction of an awareness of political dimensions. The comparison between teachers and student voices will provide input for evaluating, reflecting on and rethinking teacher practices.*

KEYWORDS: *Citizenship education, Teacher representations, Student voices*

Introduction

The present research, still ongoing, started in December 2019 from a request of the head teacher of IC Gobetti in Trezzano sul Naviglio, a town in the metropolitan city of Milan, who was interested in investigating on Citizenship education: what kind of idea of Citizenship itself and Citizenship education had the teachers? and what kind of practices they were carrying on within their classes?

We propose to work first on teacher representation, aware of the crucial role they play in teacher practices (Moscovici, 2005), even more in the field of citizenship education where personal values and beliefs are

strongly involved (Pineda-Alfonso *et al.,* 2019). On the other side we proposed to listen to student voices (Cook-Sather, 2006), in order to compare them with the teachers' ones and to foster teachers' reflection on them with the aim of promoting an inclusive curriculum redesign, issue we will address in the next research phase.

We were supposed at the end of the last school year to engage teachers in a focus group to discuss the issues emerged, both from their own questionnaire and the students' focus groups, with the aim to develop a more reflexive attitude towards their current practices (Mortari, 2003). But the pandemic situation affected the research plan and at the present time we've just started the focus group with teachers. Meanwhile the teaching of Civic Education was introduced in the Italian curriculum (or rather reintroduced) by law 92/2019, and the theme of citizenship education was back in the spotlight. The guidelines for the application of the law drawn up by the MIUR, albeit with a few chiaroscuros, emphasize the transversal nature of the new teaching, and represent a useful tool for revising school curricula in order to adapt them to the new provisions. The opportunity to define a vertical Civic Education curriculum has often involved entire teaching boards in reflecting on the need to work in a transdisciplinary and participatory sense in order to promote educational experiences that have a strong link with the context of pupils' lives. Therefore, our schedule delay will allow us to compare the picture before the introduction of the law, given by the questionnaires and the focus group with pupils, and the situation in this first year of the introduction of the 33 hours of civic education, that we are collecting focus group with teachers. In the present paper we are going to present the analysis of the first two phases of the research.

1. Teachers representations

A mixed-method approach (Creswell, Plano Clark, 2017), was chosen consistent with the need, on the one hand, to involve the entire educational team, and on the other hand, to make a qualitative in-depth geared towards understanding teaching/learning processes.

FIG. 1. *Research plan*

PHASE 1 – December 2019
129 Questionnaires administered to teachers (79 answers)
PHASE 2 – January 2020
2 Focus groups with student representatives
Sixth grade, 11 participants, 1:50 h
Seventh and eighth grade, 12 participants, 1:30 h
PHASE 3 – June 2021

Focus group with teachers (pre-primary-secondary school) to present the data collected and discuss it in light of the introduction of the 33 hours of Civic Education

FIG. 2. *Questionnaire administration*
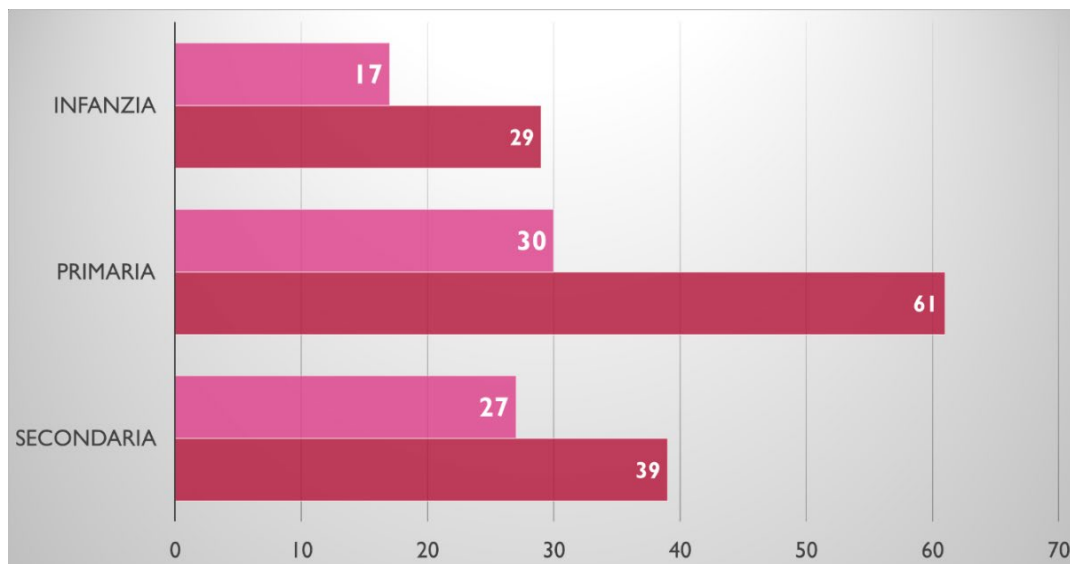
The number of questionnaires was administered to the whole teaching stuff (n. 129) in December 2019 by the school, through a google form, and 79 (61,24%) fulfilled get returned.

FIG. 3. *Questionnaire structure*
Q1. What words or expressions come to mind when you think of the concept of 'citizenship'? (indicate 5 words/expressions)
Q2. What words or expressions come to mind when you think of 'citizenship education'? (indicate 5 words/expressions)
Q3. In the 2012 National Curriculum, and in the 2018 New Scenarios, there is a lot of mention of citizenship education, do you think it is possible to achieve what is indicated?
Q3.1. What are the achievable goals at school?
Q4. Do you use textbooks or specific documentation and/or websites for citizenship education? (If yes, please specify which ones)
Q5. In providing citizenship education, have you experimented activities in partnership with local or national associations and civil society organizations? (If yes, please specify which ones)

The questionnaire has been structured in a fast-filling way and to be inclusive for all school levels and grades. We had also added some professional profile referred questions. As shown the pie charts (Fig. 4-5-6) there is a prevalence of seniority in service, a huge prevalence of female (the Italian average is 78%) and considering pre and primary school teachers, less than 30% is graduated.

FIG. 4. *Sex at birth*
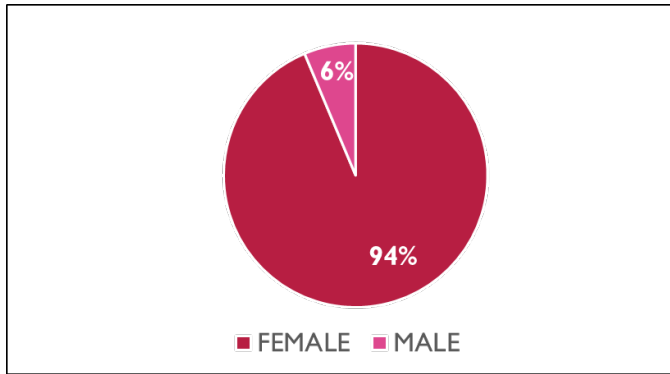
FIG. 5. *Education level*
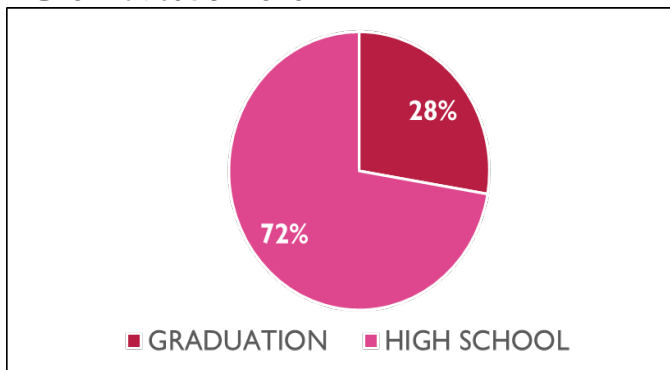
FIG. 6. *Seniority in service*
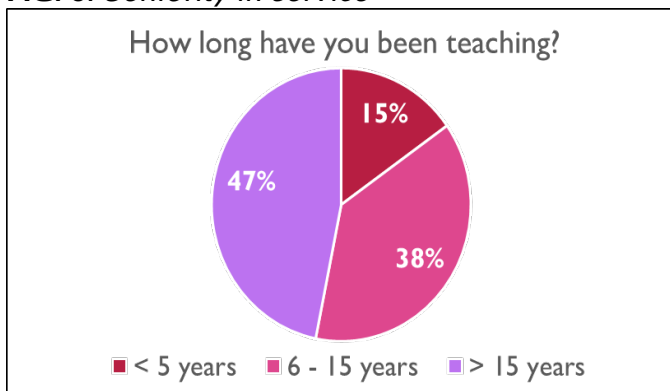
1.1. Comparing citizenship, citizenship education teacher's perspective and K14 curriculum

We analyze the first two questions through the most recurrent words (Fig. 7-8) and building co-occurrence tables (Fig. 9) with the software Atlas.ti. In the idea of citizenship education the most recurrent word 'respect' goes 12 times with the second one 'rules', and often come along also with 'sharing', 'others' and 'living together'. Rights and duties, recurring 10 times together, go also with 'awareness' and 'responsibility', that are often combined with 'active'.

We can see, like for the idea of Citizenship itself, an evident predominance of the issue of respecting rules, that we can refer to an idea of citizenship of a mainly political-legal nature and considering also

the several mention of 'knowing rights and duties' (and the mentions of the Constitutional Charter) we can place this idea of Citizenship education in the level that Francois Audigier label as 'knowledge and understanding' (Audigier, 2000). But with the co-occurrence between 'action' and 'awareness' and 'responsibility' we can say there is also an openness to an idea of Citizenship education aimed at promoting skills, attitudes and values (the levels 2 and 3 of Audiger).

FIG. 7. *Idea of Citizenship*
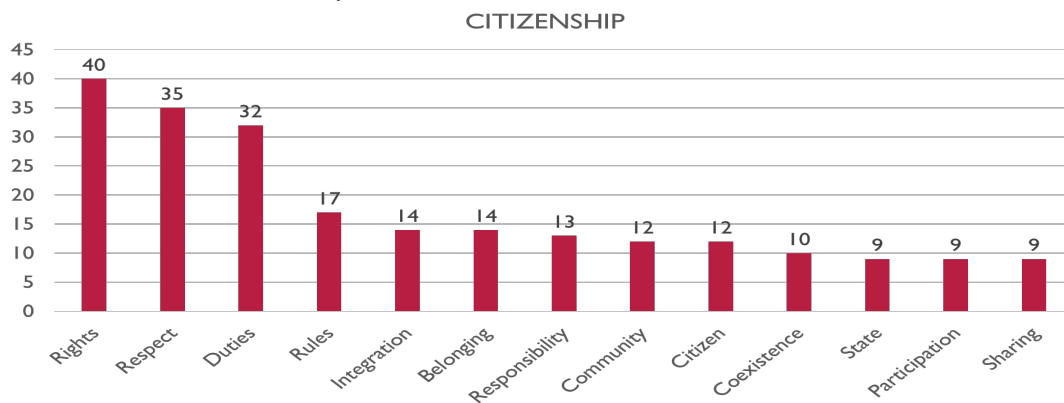
FIG. 8. *Idea of Citizenship education*
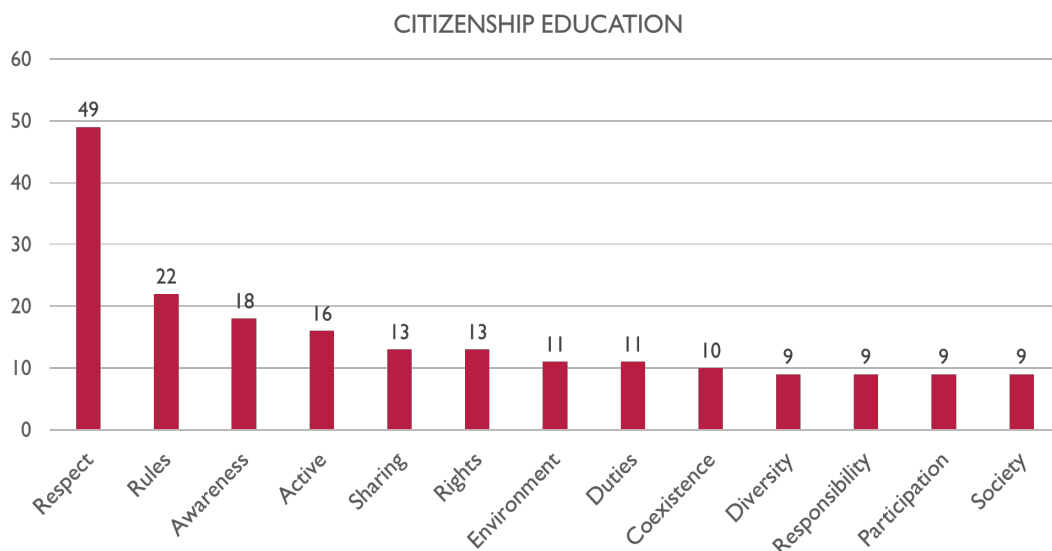
In Audigier's construct of citizenship education, the concept of belonging is crucial, is the main characteristic of being a citizen in a democratic society. Whether local or global, citizenship 'is always a question of belonging to a community, and a reference to politics and rights, particularly political rights. In this sense, the citizen is always a co-citizen, a person who «lives with others» (Audigier, 2000, 17).

FIG. 9. *Citizenship Education Co-occurrence table*

	Respect	Rights	Duties	Active
Rules	**12**	I	I	3
Other	**7**	I	I	3
Share	**7**	0	0	0
Living together	**7**	0	I	2
Awareness	4	**8**	**8**	**7**
Responsibility	4	**8**	**8**	**7**

A sense of belonging, therefore, that, even if acquired by birth (as in the case of the Latin *ius civile*), is built only through the contribution that the individual can, and must, give to the life of the city; a sense of belonging that restores to the term 'politics', «one of the most mistreated words of our time» (Zagrebelsky, 2005, 36), its deepest sense, of Aristotelian memory, of taking care for the common good. The concept of citizenship *stricto sensu* in fact concerns the relationship between the individual and the political-legal order, but this relationship unwinds at the same time in multiple articulations: «expectations and claims, rights and duties, ways of belonging and criteria for differentiation, strategies of inclusion and exclusion» (Costa, 2005, 3-4).

Referring to the goals of Citizenship education there is a large majority who consider the national curriculum applicable (Fig. 10).

FIG. 10. *Applicability of the school curriculum goals*

IN THE 2012 NATIONAL CURRICULUM, AND IN THE 2018 NEW SCENARIOS, THERE IS A LOT OF MENTION OF CITIZENSHIP EDUCATION, DO YOU THINK IT IS POSSIBLE TO ACHIEVE WHAT IS INDICATED?
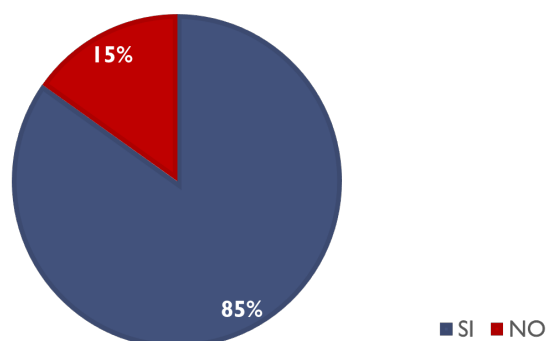
The main goals indicated in the curriculum could be divided in knowledge objectives and objectives related to an idea of active citizenship, under the declared umbrella of the goals of 2030 Agenda (Fig. 11), which directly involves schools with Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

The document New Scenario in 2018 focuses on the theme of citizenship, 'the true integrating background and reference point for all the disciplines that contribute to defining the curriculum. Citizenship concerns all the major areas of knowledge, both in terms of the contribution made by the individual subject areas and, even more so, in terms of the multiple connections that the disciplines have with each other' (MIUR, 2018, 18) and states in conclusion that 'it is not a question of 'adding' new subjects, but rather of recalibrating existing ones' (ibidem).

FIG. 11. *Curriculum goals*

Knowledge objectives:
Constitutional Charter
Political and administrative forms of organisation, social and economic organisations
Citizens' rights and duties
Objectives to exercise active citizenship:
To take care of oneself, others and the environment
To foster cooperation and solidarity
To acquire a sense of legality
To develop an ethic of responsibility
To promote early forms of participation in common decisions
To get a positive meaning to differences, preventing and regulating conflicts.

The 2012 document acknowledges an articulation into three levels of increasing complexity (Balconi, 2017), which correspond to the subdivision of the objectives of educational action into knowledge, skills and behavior (Pellerey, 1998), that could guide the teacher in the design of pathways, in the adoption of methodologies and preparation of settings consistent with the goals for competences assessment.

The analysis of the recurring words in these answers shown that they are mostly coherent with the representation reported in previous answers, and by extrapolating from the co-occurrence table (Fig. 12) the most frequent matches, we have gathered the objectives into three main themes, that clearly have several overlapping areas.

One factor to raise for consideration is the fact that many teachers use catchphrases, mostly from the National Curriculum (MIUR, 2012) itself, some of them just words, and there are 6 questionnaires with all answers identical.

The first category is 'respect' (Fig. 13), of rules, of others and often the environmental issue that comes up combined together with the first two.

FIG. 12. *Goals Co-occurrence table*

	Environment	Active	Community	Responsibility	Rights	Rules	Awareness	Respect	Oneself
Other	11	8	7	10	3	3	4	6	12
Environment	0	7	8	10	1	2	2	4	9
Active	7	0	8	10	1	1	2	1	6
Community	8	8	0	8	0	2	0	1	6
Share	1	0	1	1	1	5	0	3	1
Knowledge	2	0	2	1	0	5	1	3	1
Responsibility	10	10	8	0	3	0	5	2	8
Duties	1	1	0	3	6	1	3	0	3
Rules	2	1	2	0	2	0	1	6	2

FIG. 13. *Emblematic quotation of the category 'Respect'*

RESPECT (21)
Rules (6)
Respect rules and institutions.
Educating to civil and democratic coexistence, developing rules of correct behavior to respect and protect the environment.
It is only possible if the right milestones are laid from an early age for a global and continuous knowledge, teaching children respect for what surrounds us and for environmental resources. Creating a network, including a digital one, of shared experiences and rules valid for all.
Other (6)
Civil coexistence respecting others and their stuff.
Accepting and respecting others and those different from oneself, fostering the maturation of personal identity and autonomy.
Environment (4)
Respect others and the environment.

The second one is 'other' (Fig. 14), already seen with respect, that goes frequently with oneself and environment, but also with responsibility. The theme of the 'other' is crucial in the pursuit of education for global citizenship in a cosmopolitan approach (Benhabib, 2008). As states Edgard Morin, in a continuous positive tension between the individual and the community, between respect for the individual and for 'us', education must take on the arduous task of ensuring that «the idea of the unity of the human species does not obliterate the idea of its diversity and that the idea of its diversity does not obliterate the idea of its unity» (Morin, 2001, 56). Is also a fundamental theme in dealing with the concepts of identity and belonging. The consideration of the 'gaze of the other', with whom one shares a specific social and territorial context, indispensable component is the «reciprocity of perspectives» (Bauman, 2002, 8), as well as the dynamics of the development of critical thinking, and which commits us to the reasoned and reasonable construction of a common sense, a 'con-sense' (Di Masi, 2010).

Fig. 14. *Emblematic quotation of the category 'Other'*

OTHER (21)
Self (12)
Knowing how to interact with others, learning to respect ourselves and others.
The achievable objectives in primary school are to live together respecting others and to bring this way of being together outside the school walls.
Environment (11)
Take care for oneself, others and the environment.
Responsibility (10)
Choose and act in a conscious way, acquiring responsible behavior towards oneself, others and the environment.

The third one is 'active' (Fig. 15) that co-occurences with 'responsibility', 'awareness' and 'community' and in this category we find examples of a more complex and thought-out expressions. As Gherardo Colombo (2008) argues, being an 'active citizen' is an intrinsic condition of the democratic citizenship, or as Balibar calls it, a tautological expression (2012). Activism is closely related to taking responsibility and the willingness to contribute in the community.

FIG. 15. *Emblematic quotation of the category 'Active'*

ACTIVE (17)
Responsibility (10)
Developing an ethic of responsibility, caring for places and common material, knowing how to interact with others and making children aware of being an active part of the community.
Awareness (8)
Developing key competences in a transversal way through authentic tasks and creating aware and responsible citizens who play an active role in the society.
Community (6)
Raising children's awareness of being an active part of the community.

Finally we looked also at the verbs teachers use to define the goals and comes out a balance between the ones we can be referred to idea of teaching knowledge (to know, to teach, to provide…) and the ones related to the idea of developing competence and promote action (to activate, to experience, to develop, to do, etc.).

1.2. Teaching tools and strategies
The last two question of the questionnaire aimed to take a rapid glance at two aspects of established practices: texts adopted or similar mediators and partnerships with institution or association in the local area

The 63% of the teachers declared not to use any specific textbooks, documentation and/or websites and those who mention it, use mostly the Constitution Chart itself, narrative books, the Charter of Children's Rights and websites (Fig. 16).

The 65% of the teachers declared declare not to activate partnership, and this percentages lead us to imagine a more common transmissive rather than active teaching practice, on the assumption that engaging with the territory, where community the memories is layered, is imperative for the formation of citizen identity (Barthes, Champollion, Alpe, 2018).

FIG. 16. *Textbooks or specific documentation and/or websites used for citizenship education*

DO YOU USE TEXTBOOKS OR SPECIFIC DOCUMENTATION AND/OR WEBSITES FOR CITIZENSHIP EDUCATION?
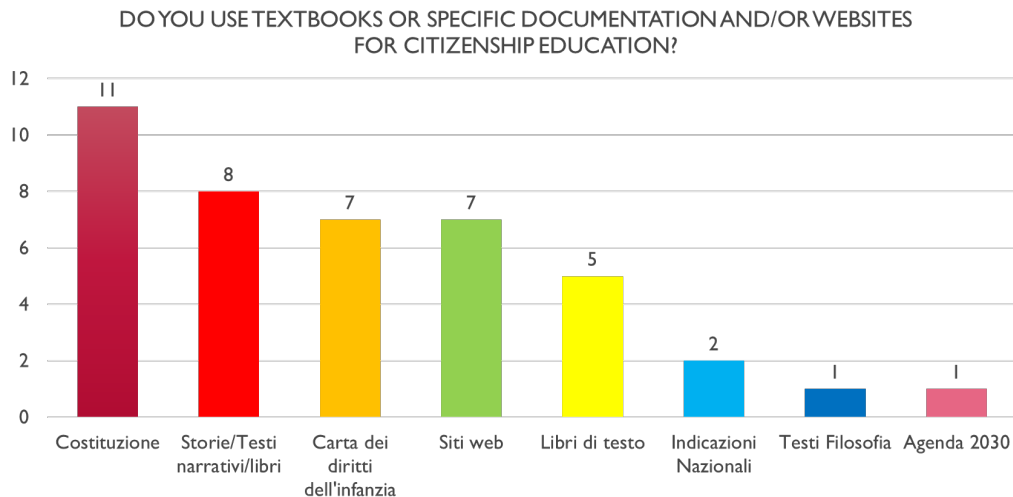
Those who mention it (Fig. 17) mostly quote the Youth city council, some recycling and intercultural labs, local and national association like ANPI (National Association of Italian Partisans) and Libera (Association against mafias).

FIG. 17. *Partnership with local or national associations and civil society organizations*

2. Student voices

We decide to engage secondary student representatives in order to have a manageable number of participants. The outline of the focus groups (Fig. 18), held in January 2020, retraces the themes of the teachers' questionnaires to address the topic from the two perspectives.

FIG. 18. *Outline of the students focus group*

Incipit
We are interested in your point of view on the theme of citizenship.
Question 1
If I say citizenship, what are the words that come to your mind?
Question 2
Could you give me examples of your experiences of citizenship, both positive and negative?
Question 3
Let us now talk about citizenship education. What does it mean to you?
Question 4
Could you give me examples, if you did it at school, of how you did it? (you can also think of primary school)

The idea of citizenship, of the first group (6th grade), revolves mostly around these concepts: city, rules, organization (Fig. 19):

> A: A place where you live and where there are rules because otherwise you wouldn't be able to live.
> B: All the rules there are in a place because otherwise there would be chaos.
> C: The way should we, as citizens, behave in our city.
> D: A lot of people get together and talk about their country or their city.

FIG. 19. *Most recurring words in the idea of Citizenship of the 6th grade*
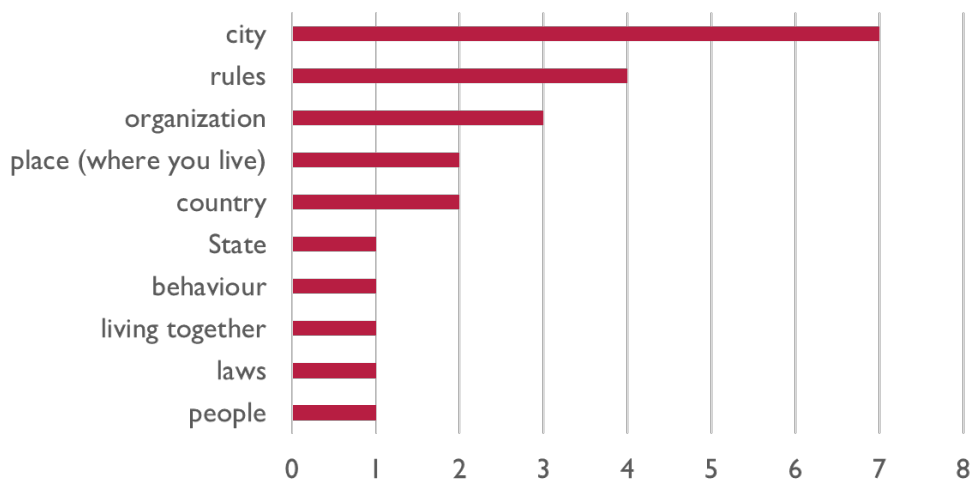
In the 7th and 8th grade (Fig. 20) came out some similar concepts, but also emerged some new concepts like equality, community, and the role of the school itself.

> A: In my opinion, citizenship is the rules that a citizen has to respect in order to be able to live better.
> B. In my opinion, citizenship is equality, equality of all citizens.
> C: Citizenship reminds me of a group of people who live together and try to respect each other.
> D: Activities proposed by the school that are done outside the school, in groups.

When they were asked to give some example, raised out in both group many issues, from the respect of the law to the of the environmental care, from participation even to the idea of an European citizenship, with the mention of the Erasmus project.

Clearly the pupils' idea of Citizenship is less structured than the teachers' one, but here the focus on the community emerges to a greater extent and rules and their observance are also frequently linked to better living together, albeit naïve, and sometimes accompanied by a 'justicialist' idea of increasing sanctions for those who cause damage to the community itself.

FIG. 20. *Most recurring words in the idea of Citizenship of the 7th and 8th grade*
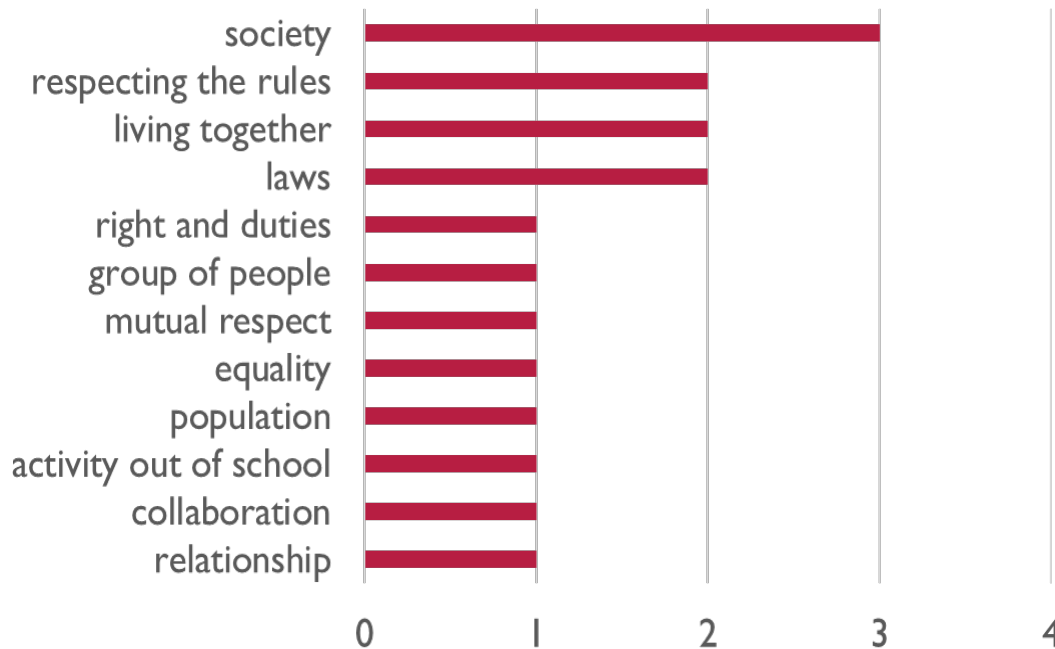
About citizen education at school they first stated they do it «very little» and that «at the beginning of the year we saw how the constitution was born, we read this page, then the book ended up under the desk and there it remained».

This prompt mention of the book implies that the first link students make is with an idea of teaching 'a subject', necessarily based on a textbook, but then, asked to provide more example, they talked about several experiences of citizenship education in their daily life and in the families, and they got back spontaneously at school, they got more and more engaged in the conversation, which became very rich and meaningful.

We organized their ideas per issues in the following scheme (Fig. 21).

FIG. 21. *Quotation of the students' idea of citizen education*

KNOWLEDGE/EDUCATION
Last year we had some kind of lesson on citizenship that I had read, like when the constitution was born, so I knew more or less the things that characterize our state.
Projects that we do at school for the environment with the teachers.

We also had a lesson on food waste.
CONTROL/PUNISHMENT
I would install mini cameras
I would put speed limiters on traffic lights and when they go too fast I would fine them, increase the price of the fine.
In my opinion also maybe increase the punishments, because maybe people keep doing it because the punishments that are there are not enough for their actions.
Making them understand that laws are not made to punish people but to help them live better...
PREVENTION
I would put baskets, I mean, baskets at the lake, at the sea, at the rivers as well.
ACTION
In the morning when I go to the beach I always find cans and all the dirty things, so I pick them up with a rake
I ask my mum if we could buy an electric car
I use the water-bottle
PARTICIPATION
In Trezzano we have this Youth City Council which gives a lot of ideas, last year I was part of this council, so we had a budget, and we spent that budget... I don't know... we inaugurated the nursery behind here, we took away a house from the mafia to give it to people in need, especially women and children. In my opinion this is very important because otherwise it wouldn't be so Trezzano
Recital on the Constitution (at the primary school)
March against racism that we all did together
BAD EXAMPLE/GOOD EXAMPLE
For me, it's enough for one person to throw a cigarette on the ground, for example, and then a child sees it and thinks it's fair enough and then when they grow up they teach it to their children
We have always had a very good teacher and she has always educated us very well, so if there had been someone who was not educated, she would have put him in line immediately.
INFORMATION
Another way to do citizenship is to talk in class, maybe not necessarily from the book, but to go outside the lines and talk a little bit about current topics, like X said about the coronavirus or in general about what's happening.
The history teacher gave us each a newspaper and taught us to read it so that we would always be up to date on what is happening in the country.

And at the end, asked what they would do, if they had the chance to organize the teaching of citizenship in the following year, a lot of interesting proposals came out and some student mentioned spontaneously active teaching methods such as brainstorming and debate, and propose to use spaces out of school. Some other pointed out clearly how the teaching could (and should) be trans-disciplinary, and they imagine to activate dialogues with experts, seeking good examples, to be prepared to provide in the future a good example themselves. A relevant issue are the mentions of the dialogue as in instrument for building 'their own idea' on several vivid matters, fundamental aspect to be considered when outlining the profile of the active citizen: knowing how to speak out to express one's thoughts. A knowledgeable public opinion is a *condicio sine qua non*, not only for the exercise of democracy, but also for the survival of democracy itself, understood as «coexistence based on dialogue» (Zagrebelsky, 2005, 35), an essential tool for participation.

Conclusion

The Eurydice report (Eurydice, 2017) identifies four broad areas of competence, inferred on the basis of the EU framework on citizenship competences (European Parliament, Council, 2006) and the competences identified by the Council of Europe on democratic culture (Council of Europe, 2016):

- Area 1: effective and constructive interaction with others, including personal development (self-confidence, personal responsibility and empathy); communication and listening; and cooperation with others.
- Area 2: critical thinking, including reasoning and analysis; media literacy; knowledge, identification and use of sources.
- Area 3: acting in a socially responsible way, including respect for justice and human rights; respect for other human beings, other cultures and other religions; developing a sense of belonging; and understanding environmental and sustainability issues.
- Area 4: acting democratically, including respect for democratic principles; knowledge and understanding of political institutions, organisations and processes; and knowledge and understanding of basic social and political concepts.

The students' idea of Citizenship education encompasses the four areas, is rooted in their living environment and they identify the community/city as the place where they can face with and experiment individual or collective deliberative behaviour and actions. They particularly focus on the need to develop critical thinking, to form 'their own ideas', through comparison with reliable sources, on the several issues they consider to be relevant.

There is a gap with the teachers' statements, in which emerge as prevalent the goal of promoting democratic coexistence, mostly by 'teaching' civic education, but their practice is mainly perceived by students as a 'provision of knowledge', even more so long as it remains within school walls.

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Teacher Merit Restyling through Inclusive Teacher Leadership

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ABSTRACT: *Global education policies have heavily invested in promoting teachers' professional development to meet the demands of the current highly competitive knowledge economy but have often ended up reproducing the functionalist model of an accountability and profit rationale. The Italian Ministry of Education developed a plan for continuing professional development and the allocation of a bonus as a form of teaching merit based on the criteria identified by the School Assessment Committees. With the school at a crossroads between market laws and democratic principles, the complex issue of pay for performance is here analysed and a new vision of merit is proposed rested on shared involvement with colleagues. A qualitative analysis carried out on a sample of comprehensive institutes in Tuscany has showed responsibility and participation as valid indicators for a merit-based school system. The paper proposes diverting teacher professional development towards the acquisition of expertise as a form of shared, inclusive, and collaborative leadership for professional learning in which teachers can transform daily practices starting from their micro-level development in conscious acting (service) for the others. Effective professional development focused on teachers' needs and inclusive teacher leadership can become a responsive tool to empower educators in a democratic perspective.*

KEYWORDS: *Teacher merit, Professional development, Inclusive teacher leadership.*

Introduction

Teachers have been gradually considered a key variable in improving students' learning and formative success (Biesta, 2017; Capperucci, 2013; Darling-Hammond *et al.,* 2017; Franceschini, 2019; Margiotta, 1999). Global education policies have heavily invested in teacher's professional development to meet the demands of the current highly competitive knowledge economy. Money have been allotted as performance incentives for merit pay programs in many OECD countries once the managerial and functionalist system was considered the dominant paradigm to face the decreased level of students' outcomes in standardized test. Cross-counties evidence showed that test scores result in the 2003 Program for International Students Assessment (PISA) could be correlated with salary increase policies in some countries to

demonstrate how 'outstanding performance in teaching' can impact on students' performance (Woessmann, 2011).

Since the new Millennium, the accountability vision has grown in popularity due to its immediacy and easy reasoning. Economists expect positive results from merit pay tying salary levels to performance indicators: if paying workers more can get better results and rewarding them can get higher profits, paying teachers differently can impact their effectiveness when measured on student results. However, the issue is far from simple; indeed, it appears rather complicated and controversial, and it seems difficult to find a way-out because of the methodological, practical, and valuable implications of the concepts of merit and accountability and the idea of professional identity.

A possible solution is envisaged in a shift of focus, in adopting alternative ways of measuring the effectiveness of professional development (Evans, 2014) and the impact of teacher identity (Hendrikx, 2020) in rethinking the role of accountability in teacher education (Cochran-Smith, 2021) and merit (Boarelli, 2019).

In line with the latest stimuli and «in search of the optimal mix» (Guskey, 1994), the article will be around the issue of merit for teacher professional development in Italy as it has been defined in the Education Reform Law 'Buona scuola' and proposes a conceptual model based on the dimension of teacher leadership as an activator of transformative practices through a revision of the concept of teacher merit as an aspect of expert and inclusive professionality in a democratic context.

The criteria adopted for the attribution of teaching merit in 35 comprehensive institutes in Tuscany are investigated using a qualitative approach and a descriptive analysis. The data show how merit is considered a dimension of expert, conscious and inclusive professionalism that qualitatively marks the training systems to overcome the dichotomy between approaches based on accountability on one side and on improvement on the other that place the school at a crossroads between market laws and democratic forces, to affirm the value of professional training not as an obligation but as a personal choice to be shared with the school community.

1. Implementing teacher professional development

Teachers play a pivotal role in influencing students' success and triggering school improvement. There has been a growing international interest in the promotion of teacher professionalism to build high quality teaching profession, to make teaching an attractive career ensuring initial and on-going teacher education (Schleicher, 2012) after a period of crisis in the sector, as shown by the 2018 TALIS international survey. Substantial efforts have been made to lift the education processes and system quality in the direction of an accountability discourse, which

erupted in the 1970s and 1980s to sustain effectiveness as a key determinant of differences (Hanushek, Woessmann, 2011).

The school systems have faced a demanding challenge in meeting the demands of a highly competitive knowledge economy, but the process has often ended up reproducing the functionalist model of profit and managerial reforms aimed to increase efficiency, effectiveness, and competitiveness, that goes under the label of 'accountability' in a dominant neo-liberalist vision.

Strategies implemented to foster professional development based on performance measurement systems have introduced rewarding mechanisms as merit-based teacher pay, also referred to as 'pay for performance', 'performance pay' or 'merit pay', a rewarding system that provide financial incentives correlating teacher salary to student outcomes on their test score results, for example in PISA.

The traditional single-salary systems based on years of experience and degrees guarantee a certain stability in terms of equity and fairness in pay on one side, but on the other, they present some drawbacks as limited profession attractiveness (scarce room for career growth) and reduced intrinsic motivation to improve (dissuading potentially good teachers): «The single-salary structure incentivizes effective teachers to move farther away from the students who need them» (Ritter, Barnett, 2013, 6). Such programs have been largely substituted by compensational approach for three reasons mainly: merit pay can improve working with students, it can encourage high-quality teachers' retention and help identify teacher effectiveness, a 'genuine solution' more than an 'educational fad', as Ritter and Barnett (2013) underline, that may help as a sort of 'natural selection' of the workforce.

Many debates have taken place concerning the feasibility of a pay-for-performance school system, but the issue remains controversial since it appears to be extremely difficult to measure the impact of students' learning. Potential positive impacts exist together with negative outcomes: proponents are confident that merit pay will stimulate good work because hard-working teachers deserve to be valued; opponents point to the risk of encouraging individualistic rather than cooperative attitudes.

According to Woessmann (2011; 2011b), in countries with performance pay programs there are evidence of students performing significantly better in math, science and reading PISA test.

A recent meta-analysis on teacher merit pay literature (Pham et al, 2020) suggests that this system can motivate teachers to work better to improve students' outcomes and has the potential to improve students' test scores, but it requires policymakers paying close attention to program design and implementation.

2. The issue of teacher merit in Italy

Within the broad framework of the improvement of the educational system, the logic of self-assessment (Presidential Decree 80 of 2013) and the professional development of teachers, with in-service training made «compulsory, permanent and structural» (Art. 1, paragraphs 121-125, Law 107/2015), the Italian school laws aimed to enhance a type of recognition of merit by allocating two different forms of appraisals: a bonus of 500 euros a year (known as *Carta del docente*) to be spent on cultural training and professional development the central authority assign to permanent teachers working in state schools who make request and another fund for the enhancement of teaching merit the head teacher allocates those teachers who particularly distinguish themselves in teaching, innovation, and process organisation, on the basis of criteria identified by a Committee. The latter will be the subject of this paper.

The issue of merit has been addressed several times in our state school system and has been presented as an opportunity for some teachers to distinguish themselves: after the *Competition for distinguished merit* (1958) there were the Luigi Berlinguer Reform (2000) that was not implemented and projects such as the *National Quality and Merit Project* (PQM) (2010) and *Evaluation and Development of Quality in Schools* for the 'best' teachers. But it is with Law 107 of 2015 that the issue is fixed.

The law provide tools for improving professional performance identifying three areas in which merit can be made visible: a) the area of didactics, of quality of teaching and contribution to the improvement of the educational institution, as well as the educational and scholastic success of students; b) the area of the results obtained by the teacher or group of teachers in relation to the enhancement of pupils' skills and didactic and methodological innovation, as well as collaboration in didactic research, documentation and dissemination of good teaching practices; c) the area of responsibility for organizational and teaching coordination and staff training. Each area is divided into sub-areas with a total of 10 indicators, as shown in the following figure:

FIG. 1. *The three areas of merit*

A) The Area of teaching quality	
A1	Teaching quality
A2	Contribution to the improvement of the educational institution
A3	Pupils' educational learning and success
B) The area of the results	
B1	Results obtained by the teacher or group of teachers in relation to the enhancement of pupils' skills
B2	Results obtained by the teacher or group of teachers in relation to didactic and methodological innovation
B3	Collaborazione alla ricerca didattica
B4	Collaboration in didactic research, documentation and dissemination of good teaching practices
C) The area of responsibility	
C1	Responsibilities in organisational coordination
C2	Responsibilities in teaching coordination
C3	Responsibilities in staff training

This teacher performance appraisal system is designed to promote teacher development, encourage professional growth, and provide a type of measure of accountability to the public. The framework reveals the idea of quality underlying the normative approach, a model of merit as a set of quality teaching practices that require effort and conscious assumption of responsibility, time to be dedicated to obtaining evident learning results and the willingness of the teachers to be engaged into their own training. Merit should be searched in the intersection between innovative teaching practice, results obtained because of the enhancement of pupils' skills, the assumption of new responsibilities and a greater commitment to be shared with colleagues.

However, this model represents a kind of flexible structure as educational institutions can identify sub-categories and additional indicators to address specific needs within their Three-year Education Plans ('Piano Triennale dell'offerta formativa', or PTOF) which must then be published online, on institutional websites, complying with criteria of transparency and public accountability.

It is precisely those institutional websites that have been investigated to explore what choices have been made in some Tuscan schools regarding merit criteria.

3. The qualitative analysis

The research was conducted on data from 35 institutions in the 2019-2020 school years through a descriptive analysis (Salvadori, 2020). Data were collected by consulting documents published online on the schools' institutional websites. In Tuscany only 35 schools had published data at the date of this research.

The qualitative survey was carried out using content analysis software and made it possible to identify the most recurring variables in each area. Using coding, it was then possible to observe the frequency of variables as the following figures show:

FIG. 2. *Area A1: Teaching quality criteria*
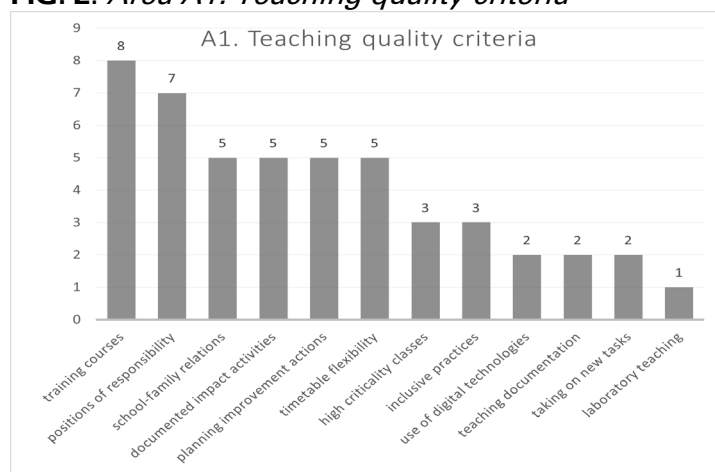
FIG. 3. *Area A2: Contribution to improvement*
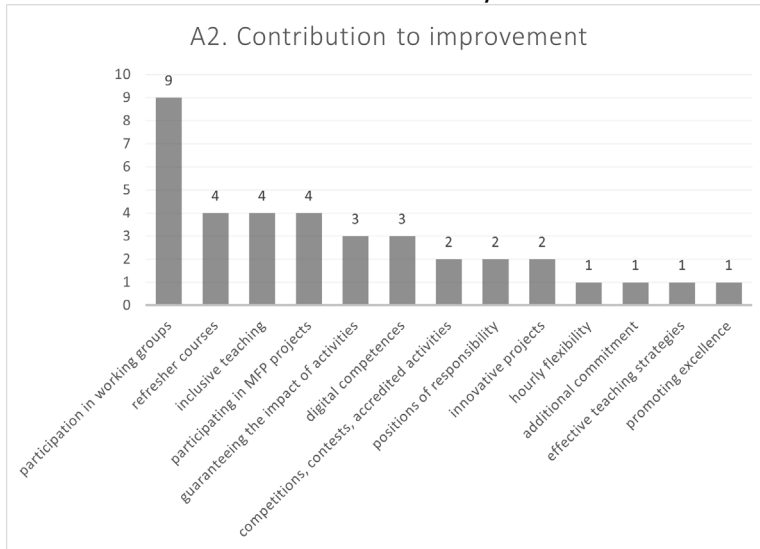
FIG. 4. *Area A3: Educational success*
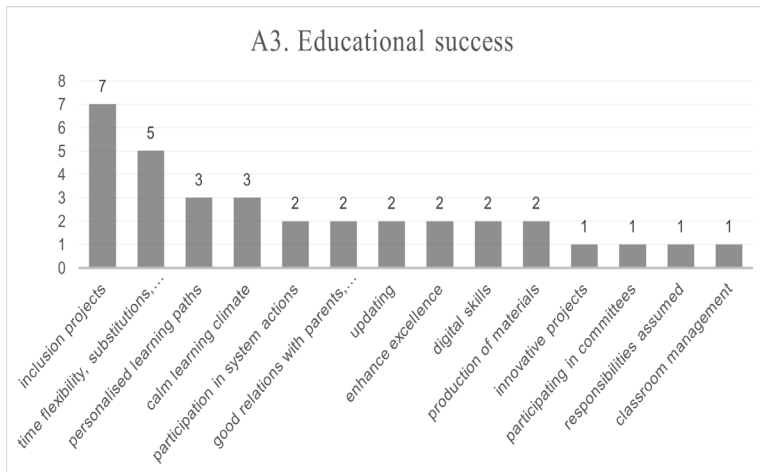
Considering the first three factors indicated for each area, it is possible to derive a series of practices and attitudes that comprise the merit recognition system. For the first area related to quality processes (area a), the first three indicators concern the participation in training courses, the willingness to take on additional responsibilities also in relations with families, the ability to work in teams and to adopt inclusive teaching to customise pupils' learning paths.

Repeating the same analysis for the other two areas, it turns out that about the Results (area b) the criteria for the evaluation of teachers are the participation in research projects, the adoption of innovative assessment and teaching tools, the enhancement of digital skills and the dissemination of good practices. For the third area (area c) concerning the assumption of responsibility, the factors that contribute to determine the teacher merit refer to the willingness to take on the coordination of classes and projects, to support the head teacher and to train colleagues and newly tenured teachers.

In a very synthetic way, it appears evident that the distinctive sign of merit is the willingness to devote additional time to 'be active' in the school, to participate proactively in changes and in the smooth running of processes. The image of a learning community and the vision of a school as a learning organisation in which everyone works towards common goals is thus reinforced.

4. Discussion

If we stop at these considerations, there is still the risk of a functionalist and business-oriented drift whereby it seems that the teacher who deserves the bonus must be more productive. Teachers are asked to do more rather than having indications on how they should implement their actions. And there is also a lack of debate and critical reflection on the issue. So, there is a need to promote a greater awareness among teachers that stimulates them to improve professional learning through restyling their identity and agency.

What the article proposes is the need to act on individual teachers, to stimulate the creation of a professional profile, a conscious and informal teacher leadership for professional learning that is also shared, collaborative, inclusive of colleagues, that connects personal traits with professional aspects (Korthagen, 2017). A non-formal leadership that is not determined by institutional choices but blossoms in the contingency of situations and contexts and that involves everyone to form what Castells (1997) called 'project identities' which aim to transform social structures, through social and political action based on reflection. Teachers play a role determined by social organizations, they carry out functions, but at the same time, they have an identity through which they express their professionalism by teaching. It is in the interplay among role, identity, and agency that teacher leadership can emerge including other identities, redefining one's own identity, transforming the learning context, improving the communities in a pedagogy built around the idea of the person. It is necessary to start from individuals by accepting different versions of merit (Boarelli, 2019) and disseminating pedagogies built around the idea of the person (Bertagna, 2020).

Restyling teacher merit in this direction means substituting a functionalist framework with a democratic one (Baldacci, 2019) and paving the way for democratic accountability in public education (Bearzi, 2017; Cochran-Smith *et al.,* 2018; Gottlieb, 2019) adopting a cross-eyed view of reality: attention to the system and to the other identities with their implicit singularities to build a community and establish a collective orientation to agency based on inclusiveness and inclusive leadership.

To solve complex problems, creative answers need to be found in the collective intelligence of a team, a group, not in one single leader. Teams that include different kind of thinkers are considered to outperform homogeneous groups on complex tasks; teacher with different voices,

competences, skills, attitudes, working together and sharing ideas, giving voices to the song of divergences (Sadin, 2019) can maximize their informal learning and make great actions starting from their micro-level development (Evans, 2014).

This new vision of merit implies moving from meritocracy to meritoriousness with the acknowledgement of merit as personal talent shared with the colleagues.

Conclusion

The analysis carried out showed a possible future direction of teaching professionalism through a restyling of the concept of merit to purge it of references to managerialism and accountability. According to the opinions of the teachers of the 35 Tuscan institutes, the teachers receiving the bonus must demonstrate that they 'deserve it' by acting beyond the classroom teaching, on a relational and motivational level. Merit, therefore, is an indicator of quality practices that require teachers' constant willingness and responsibility to strive to ensure that their pupils achieve the best possible educational results, a school model based on human development where merit is seen as a tool to encourage the best professionalism in an inclusive, not individualistic, systemic context.

From this perspective, it seems appropriate to think of the bonus not as an acknowledgement due at the end of a school year, but as a strategic resource for investing in the enhancement of all teachers, leveraging on their personal motivation and inclusive leadership.

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Reinventing School between Pedagogy, Architecture and Design: A Dynamic Laboratory?

Modern Architecture for Contemporary Communities: Learning and Inclusion in the Open Work

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ABSTRACT: *According to the definition of 'Open Work' it is possible to reinterpret the experiences of Modern Movement in architecture through some eminent experimental model-schools that were able to define spaces for learning as places for communities, at the same time didactic and social ones, starting from the pedagogical methods developed at the beginning of the 20th Century, which have deeply affected the experimental practices linked to the field of design and art. The most relevant case can be considered the Bauhaus school, where new pedagogies expressed the need to re-found the entire society, in order to retrieve the totality and complexity of mankind. Starting from these assumptions, the ongoing research[1] investigates the most significant design experiences carried out in the suburban areas of Italy in the late 1950s, such as the villages and hamlets of Sardinia built by the regional institution ETFAS. The spatial outcomes of these small local schools show design principles that are still valid in contemporary learning models. Strengthening the role of architecture in educational processes and reinforcing the relationship between school and its extension to the urban context becomes a crucial point; the topic has been investigated during the fourth edition of the International Summer School ILS _ Innovative Learning Spaces – 'a city for everyone', in the workshop coordinated by the Colombian architect Giancarlo Mazzanti.*

KEYWORDS: *Modernism, Inclusion, Learning, Totality, Perception.*

Introduction

Modern architecture has experimented throughout the XX Century a wide range of space layouts for school, overcoming the limits of the traditional classroom model, based on a positivist spatial scheme which over time had become the standard reference: «it was the ne plus ultra in scientific-technical perfection, but at the same time it was a real failure from the pedagogical and psychic hygienic point of view» (Carbonara, 1942). The innovative experiences that have reached our time as models to look at, show how different potential school layouts can achieve the dematerialization of the boundaries of the classroom, as it happens in

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[1] The ongoing research is part of the Program PON Ricerca e Innovazione 2014-2020 AIM – Attrazione e MobilitÂ Internazionale, with a project titled *Spaces and places for learning. Experiences, practices, projects*.

some eminent examples, such as Jan Duiker's *open-air school* in Amsterdam (1930), in Beaudouin and Lods's *École de plain air* in Suresnes (1932), or in Richard Neutra's *Corona School* in Los Angeles (1935). The open-air school movement, primarily developed to respond to health issues related to respiratory diseases, had the effect of establishing a new spatial paradigm according to the active education principles promoted by Maria Montessori and John Dewey, but also in the frame defined by Eileen Key in her pivotal book *The Century of the Child* (Key, 1909), where education is intended as a liberation of childhood's full natural potential.

The experience of Modernism in architecture – in its diverse expressions and regional interpretations – also gave the opportunity to re-establish a relationship of physical and emotional nature between the human scale of space and the child, definitively overcoming the idea of the monumental school coming from the eighteenth Century (Pezzetti, 2012) through the exploration of space and conceiving the individual in his own totality as a psychosomatic being. The foundations of this principles can be easily found in the programmatic of the Bauhaus school, whose experience was developed according to the search for a *total* architecture.

1. Avantgardes and architecture: on the concept of totality

Before dealing with the proper architectural space – more specifically with school spaces – it is necessary to go through the main pivotal experiences of the artistic avant-gardes which introduced innovative elements in the spatial apparatus of stage and theatre; the first space renovation were oriented to bring abstract architectural means to enhance the possibility of interaction and motion (Artioli, 2005). The need for an active participation of the audience, aiming at gathering together the community of individuals, was at first developed by Richard Wagner in his work *Die Kunst und die Revolution* (1849) in the search for new spatial principles for theatre. His approach provided the starting point for the experiences to come on the artwork as a means of total involvement, able to bring the viewer to an ecstatic state, recovering the primitive Greek tragedy spirit. Wagner's theatrical reform aims at representing the three main human features – i.e. man as mind, feeling and perception – making use of the forms of expression for achieving the 'total artwork'. The *Gesamtkunstwerk* seeks for a suggestion and involvement of the public through a new stage layout and the introduction of the mystic gulf for the orchestra, inaugurating a series of experiences that will develop until the first decades of the twentieth Century, in the name of the constant research of a synesthetic dimension for the achievement of the total involvement of the public. The center of the avantgardes performances is the garden-city of Hellerau, designed by Henri Tessenow, fulcrum of cultural life where artists, musicians and architects

expressed the instances of a unitary renewal of every artistic expression. The *Festspielehaus*, the public life place designed for performances, in its interior layouts is an eminently abstract architectural space, created by the combination of the pedagogical and gymnastic methods of Émile-Jacques Dalcroze and the scenography of Adolphe Appia. According to Appia, the scenic event is like a collective ritual, recalling local festivals (*Festspiele*). The scenic apparatus he designed 'Rhythmic spaces' represents the place where actors dynamically animate and mark the articulation of the horizontal and vertical plan, synthesized in the element of the stairs. This research is closely related to the instances that the Bauhaus will accept later on as its constituent principles, in which the human body is placed in relation to new spatial coordinates in a new dynamic dimension (Cabras, 2021).

Referring to school spaces, it can be said that in the case we find the architectural prerequisites for learning spaces that later on will take on the distinctive features, such as the large central stairway in the collective spaces by Hermann Hertzberger, in which is encouraged the same tension to interact and inhabiting a space in through the exploration of space. *Totalität* is not casually the title of the most theoretical writing of the art historian Carl Einstein (Einstein, 1914), who defined the concept of unity of artwork through the philosophical, cognitive and perceptual aspects that have to be considered fundamental key concepts to the issues addressed here:

> The cognitive act, that is the reshaping of our image of the world, takes place neither through creation of the work nor through viewing it, but through the artwork itself.
> Totality is a concept that can in no way be extrapolated, that can neither be derived from parts nor be traced back to some higher unity (it legitimizes every living being).
> Totality never excludes anything; that is, before there is neither a positive or a negative, for the contrast, in other words the unconditional unity of opposites, constitutes totality. (Einstein, 2019a)
> a picture achieves physic wholeness when it comprises various primary physic strata. Thus the question of pictorial totality [*Bild-totalität*] is not, as one generally assumes, a merely formal problem, but above all a question about physic wholeness. (Einstein, 2019b)

The most relevant experience developed in terms of totality still remains the didactic and social community of the Bauhaus (Faiferri *et al.,* 2019), where the search for 'totality' has radically changed the point of view on plastic art, theatre, music and architecture. The principles of the dynamic perception of space, achieved by the most relevant investigations in neuroscience over the last decades (Rizzolatti, Sinigallia, 2008), were *ante litteram* declared by the experimentations of the Bauhaus workshops, which had strongly related space, body and mind. Neuroscience investigations has widely confirmed the historical assumptions of the educational programme of the Bauhaus school – after a hundred years

from its foundation – based on the most contemporary principles of learning: the laboratory practice as the determination of a synesthetic experience within a social and didactic community, as the founder Walter Gropius stated referring to the principles of the *Staatliche Bauhaus Weimar* (Wingler, 1987). The aim of the school was to educate natural abilities of individuals to understand the existence in its wholeness, as a cosmic entity. In the learning experience at the Bauhaus it is even clearer how the study of form, color and space is the main tool for understanding reality, through a pedagogical operation where students were required to start a new learning process, performing a proper *tabula rasa* of their previous experiences. Johannes Itten, master at the *Vorkurs* – the preliminary course of the school – is one of the teachers who carried out in a radical way a new learning method for art, aimed at reaching a new equilibrium, in search of a constant balance between the Apollonian spirit and the Dionysian spirit (Schlemmer *et al.,* 1975). There was no difference between play, party and work, since the Bauhaus itself was a learning community where life was a learning experience itself:

> Play becomes party; party becomes work;
> work becomes play.
> Our play should become work; our work,
> a celebration; and our celebration, play.
> I regard this as the supreme excellence
> of the human tasks. (Itten, 2003)

Itten's method looks at the theories of Franz Ci ̌ek[2], based on the stimulation of creativity and the principles of 'Learning by doing' by John Dewey, fundament of the entire didactic plan of the Bauhaus. The goal of his course is to train man as a creative being, invoking the synergy of his energy in body, mind and spirit[3], setting up the perceptual ways through specific exercises to develop visual and tactile abilities of students. The aim of teaching is to shape man as a creative being, making use of the synergy of his physical, psychic and spiritual forces, stimulating perception through exercises designed to develop the visual and tactile abilities of the students: «The perception of forms means being moved, and being moved means forming. Even the lightest sensation is a form that radiates movement: it is distinguished by the quantity and quality of the movement» (Itten, 1987). Still under the sign of a 'total' perceptive process, the Bauhaus experience shows its contemporaneity in a context in which the school put first psychophysical self-awareness, in a dynamic

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[2] Founder of the *Kunsterweberschule* of Wien, art school exclusively dedicated to children, where he developed a new teaching technique aimed to promote free expression of students, taking inspiration from Maria Montessori's theories.

[3] Itten makes use of a series of exercises taken from the sect Mazdazdnan he had belonged to, an exoteric doctrine diffused over Europe in the early XX Century by Otto Hanish.

dimension that informs relationships and learning methods (Pusceddu *et al.,* 2018).

2. Open work for learning spaces

After the Word War II Modernism shifted to a more diverse interpretation of space, which fully embraced the concept of 'open work' as an active experience of the user, where space hierarchies are abolished.

> The artwork is a fundamentally ambiguous message, a plurality of meanings that coexist in a single signifier […] that is, to define the limits by which a work of art can achieve its maximum ambiguity and it depends on the active intervention of the consumer, without however ceasing to be a 'work'. By 'work' we mean an object endowed with defined structural properties, which allow but coordinate the alternation of interpretations, the shifting of perspectives (Eco, 1962).

Eco's work has widely affected artists and architects worldwide, giving the chance to reconsider architecture as a field for active experience and involvement.

Nowadays, as a result of the current pandemic crisis, the role of space has acquired new centrality, opening up a necessary debate on the inadequacy of collective space we live in and we share. The school space, conceived as natural extension of the body able to acquire knowledge through exploration and motion (Tagliagambe, 2016) requires then special attention not only in relation to proxemic distances and new possibilities of aggregation, but also in relation to a wide range of possible interactions with the urban context. Over the last years, local communities in depopulated areas and rural contexts of Sardinia have become the core for case studies oriented to social innovation. This chance could trigger new pilot projects, if we consider that the territory of Sardinia is made up of a plurality of small hamlets hosting the legacy of school buildings, as a result of projects of typological and space quality that after the Second World War have responded to the needs of a mainly agri-pastoral context, in conditions of structural backwardness from the social and economic point of view. Within this framework, the initiatives promoted by the Region of Sardinia through 'Ente per la Trasformazione Fondiaria in Sardegna' – E.T.F.A.S.[4], established for different purposes than designing schools, played a crucial role for the development of educational buildings in the late 1950's of the last Century. The broader aim of the institution was framing agricultural activities through land and agricultural reclamation works, but also improving living conditions through the creation of infrastructures, farmhouses, villages and service

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[4] Founded in May 1951, within the framework of the national land reform approved by the Italian Parliament with Law No. 841 of 21.10.1950, known as the 'Legge Stralcio' or 'Legge Segni'.

centers as a reference point for public and social life for the new communities of allottees who would have moved in the new centers (Di Felice, 2005). The low density and the different geographical conditions of the colonial settlements allowed to structure a common endowment of infrastructures, but at the same time diversified by «a wide and full freedom of technical and artistic expression» (ETFAS, 1962) of the designers. The general plan of services planned by the institution provided for the construction of seven residential villages, thirty-three service centers, fifty isolated rural schools and fifteen chapels. The villages and the service centers were provided with a general plan that included, in a typical scheme: the chapel, the civic center, the primary school, the kindergarten, the shop, the post office and the barracks.

After World War II, the principles of modern architecture in Italy took on the connotations of the so called «architectural neo-realism» (Benevolo, 1960), insipired by Italian cinematography, by the use of typological elements belonging to the language of rural buildings, such as pitched roofs covered with tiles or exposed face brick and stone, recurring in the E.T.F.A.S. service centers and villages, set on variable urban systems in relation to the conditions of the context (Casu, 2001). Indeed in the school buildings can be found the most diverse experimentation in search for spatial qualities; the school is placed as the central core of civic life, as outlined by Ciro Cicconcelli, «the environment of the school (as Mumford also argues), crossing the boundaries, which have become too narrow, of the school building, comes to be constituted not only by this, but by the entire neighborhood unit, a wide field of observation and theater of multiple activities» (Cicconcelli, 1958).

In addition to the historical, cultural and documentary value of the school architectures identified in the rural centers of Sardinia, the research aims at identifying the spatial principles they were based on in order to enhance their affinities with contemporary pedagogical theories and provide recovery actions through light design actions. Pivotal in this process is the integration between social life proper of the urban dimension and learning activities, which are increasingly shown to be the basis of virtuous processes aimed at «making community» (Weyland, 2014). In the original projects investigated, the presence of flexible and «polyvalent» spaces (Hertzberger, 1996) clearly emerges, as well as the search for a direct relationship with the outdoor space and the attention to the psychophysical well-being of children, for whom even the simple act of washing their hands takes place in circular fountains placed at the center of the space, just like the contemporary water ateliers intended as an opportunity for action (Weyland, Galletti, 2018). Starting from these assumptions, through archive research and on-site mapping, have been identified the schools that already in the original layouts were characterized by fluid spaces and outdoor educational areas.

One case study is the village of Tottubella, located in the center of colonization of Sassari, the first to be realized under the project by

Fernando Clemente[5] and Oreste Noto between 1957 and 1962. From the description of the urban layout, based on the garden-city organicist scheme, emerges how the relationships between the parts are designed to «arouse in the visitors a sense of friendliness and harmony so that it facilitates the education and understanding of the group»[6]. The school of the village hosts three classrooms for the primary school and two for the nursery school and is set up on a free system in which a central room with a fireplace identifies the public core dedicated to meetings. From here, towards the west wing, a wide curved ramp, following the orography of the site, leads to the primary school classrooms, each one of them has a dedicated outdoor space; on the east side there are two classrooms of the kindergarten, set up on the same pattern of the previous ones. In the intentions of the designers the outdoor spaces are recognized as essential for teaching activities and are described as follows: «even the classrooms have direct access from the outside; classes can be held outdoors with the benefit of the health of teachers and students» (ibidem).

Several decades after the birth of these villages, most of them are now in a state of abandon and public buildings are no longer in service. But their characteristics makes them still contemporary also because of the outdoor connections, where children could play again, discover nature and growing vegetables in a diffused school invading the village. The didactic space, both in its mobile and fixed components, could be easily implemented to arise multiple chances of interaction for children, translated into their daily activities. The furniture itself, as integration of the building, could be designed and assembled to support the growth of children and to achieve the maximum expression of making together and sharing knowledge. Thus, the space conception of this villages can be at the base of a radical reconsideration of acting, to support a creative and active use. Inhabiting a space requires the knowledge for interacting with it, i.e., knowledge is intrinsic to the space itself (Emery, 2007). The preexisting partitions of the buildings, in most cases added over time, should be demolished to enhance the flexible characteristics originally designed, where groups of children of different ages could work and study in a shared space. Classrooms had been already conceived as learning environments where children learned in a proper 'home', made up of informal spaces, such as the welcoming and entertainment area, laboratories, experimental activities and outdoor classrooms. All the learning environments, communicating with each other, overlook the green landscape – a public shared space – open to the village.

The projects for E.T.F.A.S. rural schools are an example of the widespread quality existing in the Sardinian territory as a result of good

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[5] Fernando Clemente, pupil of Giovanni Michelucci, based his practice on the principles of Lewis Mumford's 'neighborhood units' and the instances of 'Movimento Comunità' founded by Adriano Olivetti. For further information on Clemente's activities, see Clemente, 1964 and Lucchini, 2009.

[6] Project report, deposited in the archives of former E.T.F.A.S., now LAORE.

practice showing full affinity with the contemporary design experiences at the center of the international architectural debate (Roth, 1950-1966), where the primary school of Darmstadt[7] presented by Hans Scharoun at the conference *Mensch und Raum* in 1951 (Bartning, 1991), is one of the reference model for translating into spatial terms the idea of democracy and civic values to share since early childhood.

Conclusion

If we look at the most contemporary experiences in architecture, the idea of 'hands-on' is an extremely fertile practice as demonstrated by the work of *El Equipo Mazzanti* in Colombia. *We play, you play* is the title of the exhibition that summarizes the essence of its design approach, aimed at defining types of space and architectural visions based on inclusion and diversity as founding values, starting from an educational process of collective learning. Not only schools and learning spaces in the strict sense, but rather urban devices where the community can live in the city and take part in an open and non-deterministic performance, able to open resilient scenarios over time. The topic was investigated during the IV edition of the international summer school ILS - Innovative Learning Spaces 'a city for everyone', of Alghero in the workshop coordinated by the Giancarlo Mazzanti titled *Architecture and education for diversity: architecture as a pedagogical play for social transformation.* The workshop was held as an educational game, a platform to learn how to anticipate and predefine social actions within the public sphere focused on the value of diversity and dialogue. The project proposed seek then for spaces of education and understanding. They are defined as starting points for any form of architecture in order to incorporate all the complexities of living in today's society.

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[7] The project of the primary school in Darmstadt presented by Scharoun was then developed through the project of schools in Marl and Lünen. The plan layout has several similarities with the school of Tottubella.

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School Buildings as a Pretext for an Architectural Manifesto

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ABSTRACT: *Giancarlo De Carlo is one of those architects who has been most interested in the relationship between architecture and education, exploring it not only through projects, but especially with his writings starting from 'La piramide rovesciata' in 1968 that investigates the relationship between the student protest and universities conditions. An article entitled 'Why/How to Build School Buildings', published in 1969 in the Harvard Educational Review, deals specifically with the relationships between education, school, architecture and the city. In continuity with some anarchist theories of the time and with the architectural-pedagogical debate that in those years was particularly vivid in investigating the relationships between school and the city, De Carlo recognizes the real focus of education in the globality of the experience, which take place mostly beyond school's walls, in the city. De Carlo analyses 'why', before analysing 'how', it is important to discuss about the construction of school buildings proposing on the one hand a fragmented school, spread in the city in order to overcome the barrier that unties it from urban space. While on the other hand he suggests a project-process modality able to arrange open-ended spatial configurations and capable of accommodating a multiplicity of uses and programs: this possibility enables an increased richness of the experience even within an enclosed architectural space. The comparison with the current trend that conceives school spaces as metaphors of urban space, often leading to vague and allegorical representations (corridors as streets, atrium as agorà, classroom as educational landscape), highlights the importance of De Carlo's interpretation of the city in its relation with education: the city as a space for events complexity and richness of the experience. The translation De Carlo makes into operational indications for the conception of a possible other architectural space stands as one of the most interesting and less explored readings regarding the design of school spaces. The aim of his indications leads to the possibility of a space capable of promoting any kind of event and hosting any unexpected development. The need for a de- institutionalized design both for educational spaces and in general for architectural space, reaffirmed by De Carlo, becomes crucial if contextualized in the contemporary socio-cultural panorama (knowledge society, lifelong learning). Moving through the text of De Carlo, this article tries to highlight whether the discussion on school buildings and education can be considered as a pretext to express a specific position in a wider debate on architecture as to build a proto-manifesto for an architecture of global disorder.*

KEYWORDS: *City, De Carlo, School, Architecture.*

Introduction

Giancarlo De Carlo has been one of the most important architects of the XX century, recognised not just for his buildings but especially for the ability of understanding multiple aspects of reality and of including the complexity of places, people, relationships and concepts in his work. Being one preeminent member of the Team X helped him to build relationships with architect and thinkers all over Europe and the US, so that his work and theories, especially experimentations on participation and participatory design, are probably better known outside than inside Italy.

One of the most important experience to mention in order to fully understand the character of Giancarlo De Carlo and which certainly characterized him most, was his participation in the WWII as a partisan starting from the Italy armistice in September of 1943. In those years he had the opportunity to meet and connect with many of those who would later become the most important personalities of Milan post war intellectual class; in particular he approached the anarchist culture, thanks to Giuseppe Pagano above all, a Milanese architect with whom he constituted one of the partisan brigades with a libertarian-anarchist inspiration (Brigate Matteotti). In the following years he met and frequented not only Italian anarchist intellectuals, Carlo Doglio among them, but he also came close to the English: among these Colin Ward, British architect and urban planner, who in fact was subsequently published by De Carlo in his magazine *Spazio, Società*[1]. Moreover, he also contributed for many years to *Volontà*, a magazine of the anarchic wing founded in 1946.

It is conceivable that De Carlo's interest in education is partly due to this closeness to anarchist culture: in fact, no other movement has ever given within its work so much significance to theories, practices and researches concerning education and the relationship between society, space and educational processes (Krimerman, 1966). It is also clear, reading texts and exploring De Carlo's thought, that many of the ideas underlying his observations come from that anarchist culture: even if it is not possible to reduce all the references to a single author, his thought has often been associated with that of the Russian philosopher Pëtr Alekseevi Kropotkin. He had a quite rooted idea of education as a global and experiential practice that has led at first to the consideration of the necessity to rethink a school built as a rich and complex environment and also to evaluate the proposal of a school that could expand beyond the school building itself: in workshops, in the city[2]. It is essential to underline

[1] Colin Ward published an article titled *Education to the Environment* in *Spazio, Società*, n. 4, 1978.

[2] The idea that schools should had been rich and various environment persist through most of anarchic thinkers (e.g., Bakunin, Krotopkin); moreover, the potentiality of exporting the school beyond the wall, through the city, is another proposal that was

the relationships that De Carlo had to critical and libertarian thinking since they had constantly permeated his words and work, playing a fundamental role also in some of his main projects.

1968 is a crucial year; the student protests had a strong impact on De Carlo's life; although the Triennale that he curated has been occupied and subsequently canceled, his opinion towards student protests has been one of approval. In that year he wrote *La piramide rovesciata*, a text defined as a chronicle of the past events that introduces issues as the principle of authority on which the university institution's managerial pyramid is developed. Those themes, there introduces, then became the core for further developments on the subject of education and starting points for a possible translation into architectural themes.

In 1969 he published one of the most interesting articles on the subject. The article, titled *Why/How to Build School Buildings*, has been published in the Harvard Educational Review, in an issue that contains other important texts by his colleagues and fellow Team X[3]. The text will then be translated and republished in Italy in Casabella n. 368-69 with the title of *Ordine Istituzione Educazione Disordine*.

The text is mainly divided into two parts that deal precisely with 'why' even before 'how' to build school buildings. It all begins with four questions that De Carlo considers fundamental to address the question of school buildings whose answers will lead directly to the suggestion on how the project for such school buildings should be approached.

1. Why

In the first part of the text De Carlo clarifies his position with respect to the initial questions through four points: the plausible pointlessness of an institution managing the educational process, the ambiguous necessity for a specific building where to develop learning, the ostensible causal link between education and architecture and finally the issue of a specialization of architecture for learning spaces (De Carlo, 1969).

As already mentioned, at the basis of De Carlo's thought is the awareness that education is the result of experience which should be the broadest and most complex and which must try to contain and solicit the maximum number of events, as opposed to what happens in classical schools, in which rituals and regulations tend to forbid rather than propose. Anticipating some of the most famous experimentations that

already explored, for example, by Paul Goodman referring to the idea of the ancient Greece peripatetic education.

[3] Shadrach Woods, Aldo Van Eyck and Hermann Hertzberger wrote articles in the same issue. It is worth to highlight the text from S. Woods, *The Education Bazaar* in which he proposes the concept of a non-school, following the same path towards the potentiality of deschooling.

will begin in the following years in the wake of Illich's writings[4], he saw the possibility of pushing the concepts of education and of global experience tend towards an overlap; furthermore, always anticipating what Illich himself will later underline, he recognized in the institution an inability to build complexity and richness of relationships, that are base concepts for a rich education built on global experience[5]. Institutions are in fact considered organizational structures aimed at limiting and defining to preserve the necessary processes of accumulation, conservation and stability of the system.

The school building as it was conceived at the time is described by De Carlo as the materialization, the embodiment of the static nature of the institution. Moreover, he stated that these buildings were typologized precisely when the institutionalization of educational practice became necessary: the consequent subdivision and specialization in different types of buildings is a process that occurred after the need for specialization of the institutional educational structure.

Reading between these lines we can acknowledge the fundamental deterministic/causal link with which school buildings were built in relation with the program that they contain. The more specialized the program became the more specific the building were conceived. Moreover, there is a further critique that De Carlo moves to this tendency of separation and specialization: he proposed to strive for the possibility to unite, re-connect the fragments building a higher order of complexity focusing on the goal of the limit-concept of a 'global' experience.

This process of separation, aimed at the specialization of the entire system, is operated through methods based on principles such as reduction, division and simplification, that have transformed the entire school space in a controlled and authoritarian environment. This kind of learning space encourages through those principles, action of segregations and does not stimulate exchanges and consequently human relationships. It is precisely at this point that, according to De Carlo, the need to take a step beyond the building starts to take place: stressing that global experience is made richer by relationships and participation and that this potentiality is blocked by the rigid organizational structures of schools, he started to look outside, beyond school's walls, towards the city. «The rest of education— the richest and most active part—goes on elsewhere and has no need of buildings; or perhaps it has not yet found the appropriate spaces in which it could take place as a whole, becoming a part of a sphere of total experiences» (De Carlo 1969, 19).

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[4] In Italy, in particular in 1970's, different group of architects, most of them ascribable to the movement of *Architettura Radicale*, started different experimentation undertaken in the wake of Illich's thesis; among them Superstudio, Archizoom and others founded in 1973 a group called Global Tools.

[5] I'm referring to the book of Ivan Illich *Deschooling Society*.

Reading between lines it is interesting to recognize on the one hand a sort of distrust of architecture conceived as finished act, as he de-emphasises architecture as mere built form (Woods, 2019), which will then prove to be a critique of the idea of form as starting point and project goal of the design process. On the other hand, there seems to be a tendency towards the acknowledgment of the city as a model, not looking at the forms through which it is built, but for the complexity, quantity and quality of relationships and possibilities. Both considerations somehow clearly characterize a specific architectural approach, different from other tendencies that will develop shortly thereafter such as post-modernism[6].

However, there seems to be also a detachment of De Carlo's vision from the functionalist-modernist approach while describing the relationship between school spaces and educational processes. Even if he highlighted a quite obvious correspondence between formal order and order as educational purpose within classical school spaces, through a series of examples he shows how in fact architecture, due to its super-structural nature, is unable to modify the activities that take place within the environment it builds. According to what has been reported, school spaces are therefore defined by two fundamental principles: the aesthetics of order and an authoritarianism of space. The inclusion of 'disorder', «conceived as the expression of a higher type of functionality, capable of taking in and manifesting the complex interplay of all the variables involved in a spatial event» (De Carlo, 1969, 21), is the key point in order to reach a more complex and richer experience, according to De Carlo. The perfect spatial configurations would be one of inclusion: a new comprehensive and manifest aesthetic code built from unstable and continuously changeable configurations since an *a priori* aesthetic code (as the aesthetic of order) cannot structure spaces able to include unexpected manifestations of events due the necessity to reach a form of stability and definition.

While denying a causal link between space and function, he highlighted the need to influence the events that occur within and through space using design as a tool to 'provoke situations' (Buoman, Van Toorn, 2005).

The last paragraph, which deals with the definition of the role of the architect and his relationship with the community, contains the first hints to propose a full participation by users in the design process[7] and includes a clear trace aimed at indicating the coherent direction to tackle the project.

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[6] I'm referring, among others, to Gruppo Architettura: a collective of architects that were all gravitating around Iuav university in Venice, that in the same years were also conducting researches on cities, finding in themes such as the permanence of morphological constructs, main concepts for the elaboration of architectural theories. See Rossi, A. 1966. *L'Architettura della città*. Padua: Marsilio or Aymonino C. et al. 1970. *La città di Padova*. Rome: Officinaedizioni.

[7] 'L'architettura della partecipazione' will be published some years after as the outcome of a conference held in Sidney in 1970.

Forms must be open to change, and should not define an event through a reduction of its potentialities by preventing the occurrence of other subsequent ones[8]. On the contrary, forms should be capable of defining configurations that are not stable and concluded. The definition of such architectural forms must not be given by the resulting configuration of *stasis*, says De Carlo, but they must be «defined only in the essential elements which generate and regulate their evolutionary process» (De Carlo, 1969, 24).

The tendency to specialization is what makes architects aim at building autonomous and self-sufficient systems through stable and complete configurations, on the contrary «the design is the process itself, its reiterated transcription into spatial terms; therefore, it goes on without ever concluding itself along the path drawn by its formulator and continually readjusted by those who appropriate it» (De Carlo, 1969, 32).

2. How

«The design of schools which are purified of their institutional limitations should begin with the non-institutional design of the physical environment» (De Carlo 1969, 26). From a certain point of view, therefore, there still remains a sort of trust in architectural design as a process capable of influencing events and behaviors; an attitude that still characterizes other theoretical works that take hold starting from the experiments subsequent to 1968[9].

And in fact, the distrust placed in the building as a mediator for the educational process, reiterated again by De Carlo, however, leads to a new proposal: the disintegration of the school building conceived as a specific place built for a single function, re-conceptualized instead as a series of structures consisting of a double mechanism, spread throughout the city. De Carlo described the central part of the structure (nucleus), as a specialized technical apparatus for a specific use, and an external part (orbit) that will instead contain spaces for generalized and continuous activities capable of binding each time to urban structure. In this way, the idea of a school building as a unit of place disappears in favor of a fragmented and widespread idea of school, in continuity with the urban space and with the experiences that can grow in it. De Carlo described again education as a continuous and generalized omnipresent fact, not locked up (enclosed in a building) and not permanently determined (programmed), therefore able to accommodate multiple potential configurations. This idea of a fragmented, widespread school, of a network able to increase relations with the city, which will be later

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[8] It is clear the reference to the principle of continuity expressed by J. Dewey in his book *Education and Experience*.

[9] The thought of Lefebvre influenced the production of theoretical work of several architects that then focused on the relation between space and use. One among the others has been the book of Bernard Tschumi *Architecture and Disjunction*.

developed in the plan for the University of Pavia (1972-1985), is a concept already elaborated in the same period (e.g., Cedric Price's Pottery Thinkbelt, 1964-66), but above the same idea will be continually re-proposed in many other declinations (e.g., the diffuse school proposed by Paolo Mottana).

De Carlo nevertheless, declaring that this proposal should be taken as a limit concept to aim for, encourages us to think about considering every urban and architectural void as a potential. In this way he shifts the discourse on the city, perhaps a Learning City[10], but certainly a city whose project must take into account the issue of diffuse school and education. It is about unleashing the stifled potential and making it explode into occasions of experience (De Carlo 1969). In this way De Carlo criticizes the concept of 'zoning', the process of designing the city according to isolated functions, proposing the re-configuration of contexts according to organizations that are aware of the effective use of places, of the relationships between the different spaces and of the synergies that could be created and opportunities to trigger unexpected events.

The same discussion persists at the microscopic level (i.e., the school building) establishing a recombination of activities, now segregated and compartmentalized within the building, with all the promiscuous uses able to better connect with the city even if not properly and classically classifiable as scholastic.

Even the design process should be re-thought in order to achieve the result: the authoritarian space of the classic school building is construct through an imperative design modality that aims at defining uses of the spaces and at creating spaces able to strengthen the educational ritual procedure of the *machine-à-enseigner*. Instead, according to De Carlo design must serve as a process which, taking up the previously expressed idea of participation, must integrate users thought since the beginning of the design process. De Carlo eliminates the tendency to achieve a formal model as the goal of the design process; on the contrary, the concatenated development of events that leads to the conception of an open-ended architectural form must conceive an organizational structure characterized to orient and help users, but not enough defined to the point of limiting and discriminating in a static way freedom of use and appropriation of space. The designer's task, therefore, is to build an organizational structure that must contain the basic elements capable of configuring it and regulating its growth and development process. For De Carlo is fundamental the ability of the architectural form to accommodate modifications and evolutions over time made by those users, not just providing for predictable multiple uses but leaving the potential towards unexpected events, towards a disorder of experiences.

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[10] Herman Hertzberger in his book on learning spaces describe the concept of a learning city (the city as a school), highlighting how the interest on the city as a potential school (thanks for the multiplicity of events that occur) is in a way the only space that could never be under the control of the designer after his project: the city as the place of the unexpected.

De Carlo concludes his text by describing some events of that fateful year, 1968, in which the appropriation of the university spaces by the students during the protests, is taken as the perfect example that represents his idea of an architecture of appropriation and inclusion, of open forms and disorder that highlight his conception of building as «the outline of potentials [...] only made relevant by the group of people it is intended for» (Bouman, van Toorn, 2005).

3. (Anti) Manifesto

De Carlo's proposals are, on the one hand, extremely clear propositions able to define the objectives for a project/process of school buildings and the necessary issues to be discussed in order to face its development. At the same time, it seems that De Carlo is conscious that his written suggestions can only be verifiable through projects: only through a verification on reality, taking into account its complexity enriched by contexts, by the participation of the public and by the specificity of each situation.

According to what has been described, it could not be correct to define his article as a proper manifesto; the anti-authoritarian theoretical construction he built on the principle of inclusion and disorder does not allow the prescription of imperative norms and regulations to develop any project. However, the structure of the article, organized per points and the precision with which issues are identified and comments are expressed by crossing the entire topic, albeit transversely, could perhaps lead to the possibility of consider the text as a more general statement on the condition of architecture.

The issues raised in the discourse around education actually become broader concepts that deal with architecture and design, with the relationship between form and function, program and use of space, with the city as a potential design reference highlighting the necessity to reconstruct an idea for the urban project.

It is quite difficult to state whether main concepts expressed in De Carlo's article, which then have been crucial in many of his subsequent writings and projects, were elaborated thanks to the reasoning on issues concerning education and school buildings or if, on the contrary, the debate born in the first place commenting the student protests of 1968 and the condition of universities at that time that then culminated in this text, has been just a good opportunity (therefore a pretext) to express them. However, these 'non-prescriptions' expressed by De Carlo, find even more reason to be debated and re-evaluated in light of the evolution of the pedagogical debate.

The suggestion of the school as a network spread through the city, the acknowledgment of disorder as a driving force of inclusion and trigger for richer experiences and the proposals for a flexibility of learning spaces, prove the relevance of De Carlo's discourse to be fundamental in

a society which, despite many of these issues had already been widely discussed in the 1970s, recognized the importance of informal and non-formal learning only twenty-five years ago and now claim the potential of a lifelong-lifewide learning.

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The 'Flexible Space' and the Pedagogical Role of Architecture

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ABSTRACT: *Why are we so subjected to what the spaces in which we live convey to us? What information do we receive from space and how do we interpret it? The reflection on the capacity of space to generate emotions has always accompanied me: some spaces have the ability to touch the soul and speak to the point of moving us: space, like life, is made up of relationships and always communicates in a symbolic way with our 'inner' space. At all times, we dialogue with space at an unconscious level and the research of 'Lo spazio flessibile' connects two disciplines, art therapy and architecture, working symbolically with space: space awareness laboratories that, starting from the reflection on one's inner space, open the way to a critical elaboration on the lived space and the influence that the space around us has on us. Just as Architecture is the discipline that deals with the organization of space at any scale, Art Therapy is the discipline that deals with the organization of the 'inner' space. 'Lo spazio flessibile' believes in the pedagogical role of architecture, in its ability to shape our shell on a symbolic level, through play, creativity and relationships. Observing space, listening to it, acknowledging the feelings that it conveys, retracing it with our memories, are key milestones in this journey of the senses and of the critical knowledge of the environment that surrounds us. Learning to listen involves a work on the recognition of one's emotions and an emotional growth: working on a symbolic level through a metaphorical dialogue with ourselves opens direct channels on our awareness and suggests ways to work on to become active and aware users of our space, external and inner. The pedagogical aspect becomes fundamental, the arts and architecture become a privileged channel as they dialogue directly with our emotions. Space awareness courses are promoted in schools of all levels, starting from childhood where dialogue between structural elements assumes a role of 'foundation' for the discovery of the reality that surrounds us, up to secondary schools where the pedagogical role of architecture becomes more conscious. Proposing space awareness workshops with children in kindergarten means helping to form and consolidate a structure that is still in its embryonic phase. We all need a structure, and this is formed through our life experiences, a structure that supports us and identifies us, that allows us to orient ourselves in relation to the outside world. «What is needed most in architecture today is the very thing that is most needed in life- Integrity. If you defend the integrity of your building, you will defend the integrity of society as a whole: a mutual relationship is inevitable» (Lloyd Wright, 1960, 292-293).*

KEYWORDS: *Architecture, Pedagogy, Space, Art therapy, Workshops,*

Introduction

Why are we so subject to the space in which we are immersed? What information do we receive from the space around us and how do we encode it? What role does the environment in which we live play and how does it affect our mood? The reflection on the ability of space to generate emotions has always accompanied me: some spaces have the power to touch the soul and speak to the point of moving us: space, like life, is made up of relationships and always communicates in a symbolic way with our 'inner' space.

«Any place can leave impressions, partly because it is unrepeatable, but also because it has stimulated the body and generated associations that have allowed us to welcome it into our personal world» (Bloomer, Moore, 1981). In this contribution I want to convey how space and architecture can be a tool for personal growth through the identification of the emotions that space transmits by the symbolic reading of the elements of which the architectural environment is made of. Even if I am basically an architect and not a pedagogist, my contribution to *Scuola Democratica* has been included in the pedagogical field and this makes me very happy since it means that the meaning of my participation has been truly understood: for me architecture is a space that is intimately linked to the person.

I am an architect and the link with the perception of space by the human being has always guided my work, an introspective look at the sensations that accompany the perception of space and the interest in an interdisciplinarity of architecture that intersects with art, pedagogy, psychology. Especially in this time in which the role of the architect does not seem to find a precise place, contemplation becomes increasingly pressing and necessary. At a time when technology too often powerfully takes over, at a time when the medium seems to have ousted the thought of the one who should merge the different disciplines together, to achieve the goal of creating spatial well-being, the question is: what role does the relationship with the individual have from a design point of view?

How much is architectural design at the service of the person and how much are the people consciously aware of being an active user of the space on an emotional level? This introspective research on the sensations that space generates and on the coding mechanism of the messages that space transmits to our interiority has allowed my profession as an architect to integrate with my passion with art, leading me to become an art therapist as well: an art therapist whose primary field of application and favourite means of expression is space.

1. *Lo spazio flessibile*

'*Lo spazio flessibile*' is a field of research that aims to investigate how we accept and code the stimuli that come from the architectural shapes and

how they affect our interiority, through the power that space has to create emotions.

FIG. 1. Lo spazio flessibile. *Inside/outside*
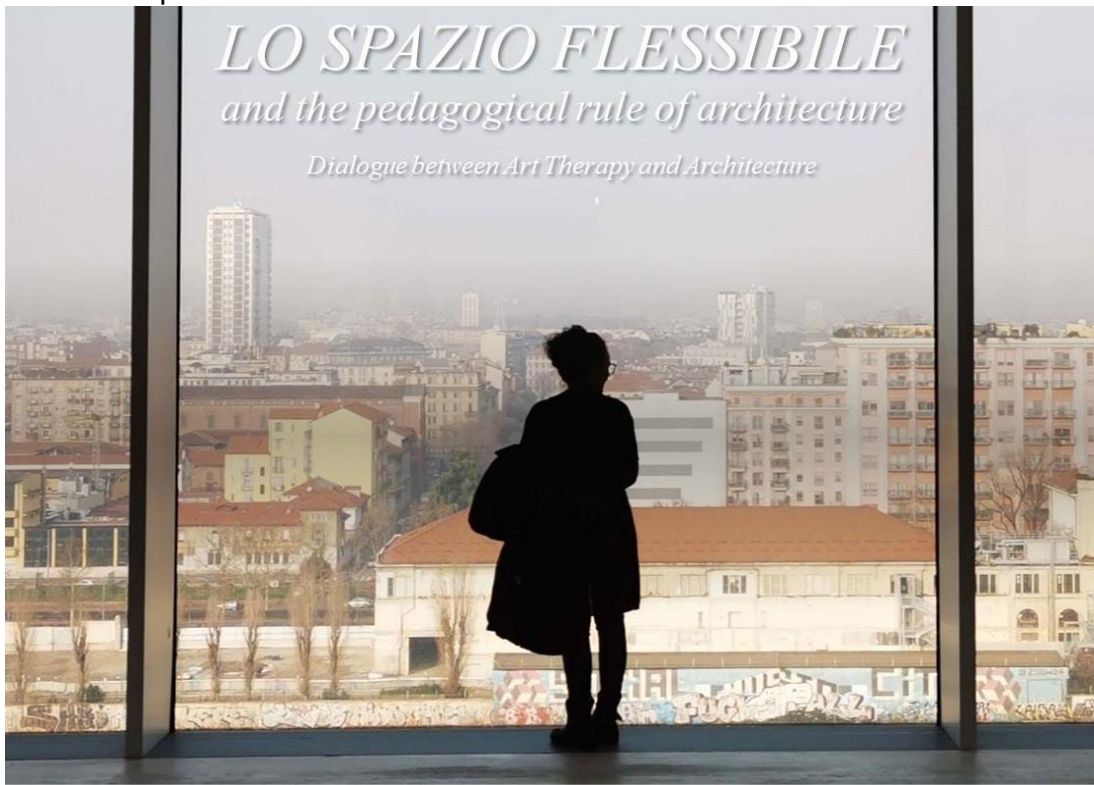
The ability of space to create emotions has always accompanied me, since I was a child, with that ability that only children have to generate ever new 'spaces'. A bit like 'jumping to the other side of the mirror' and imagining another world, another life.

We are aware of the power of space to communicate with our 'inner space' when 'simple' sensations can be transformed into real phobias such as agoraphobia and claustrophobia, the first as 'fear of emptiness' the second as 'fear of enclosed spaces'.

At the end of the nineteenth century, the transformation of traditional cities into metropolises favoured the birth of urban phobias. In the case of Vienna, the demolition of the historic walls to create the large space of the Ringstrasse generates a sense of disorientation, terror and anxiety. Fears were essentially alleviated when in the company of others but worsened with the size of the space, especially when there seemed to be no limits to the field of view.

In the phenomenon of agoraphobia, particularly sensitive people feel terror as they cross a large empty square. They feel lost in a space whose size is not commensurate with the human scale. But if vertical diaphragms, fences, walls were erected in this space, the illusion of security would be recreated, and fear would vanish as the gaze would find a reference structure (Vidler, 2009).

2. Dialogue between art therapy and architecture

How does the emotional communication of space take place? What memories does it awaken and with what symbolisms does space communicate with us?

FIG. 2. 'Lo spazio flessibile'*: dialogue between art therapy and architecture*

INNER SPACE
«psycological» space,
not measurable,
abstract

ART THERAPY

Lo spazio Flessibile

EXTERIOR SPACE
Physical space,
Measurable,
concrete

ARCHITECTURE

The research field of '*Lo spazio flessibile'* becomes a link between the external space which surrounds us, governed by architecture, and our inner space: the reading and understanding of our interior space, the fundamental starting point for the process of personal growth, which instead is the responsibility of art therapy.

But if we all know what 'architecture' is, not everyone knows what art therapy is and how it works: art therapy is a discipline that uses the artistic medium in caring relationships and has as its objective the revelation of internal contents (what I call 'the inner space') while working on one's inner growth. Art therapy gives us the opportunity to materialize, in a material space external to us, our inner, psychological, only abstract space and trigger a conscious process of growth. Art therapy becomes the medium with which it can take shape, grow and be visualized, it is our 'inner space', intimate and affective: «The creative process allows you to express and transform something that lies within yourself to make it shareable with others through its shaping and consequent introduction into the external world» (Della Cagnoletta, 2011)*.*

The relationship with the space thus becomes two-way, a round trip OUT-IN-OUT. From the outside to the inside, from the inside to the outside. We receive stimuli from space, and we return them through our personal, and unique, work.

The understanding of the stimuli that come to us from the outside world passes through the understanding of the material construction of the stimuli that come from our interior.

Architecture communicates with our interior space through symbolic codes: at this point semiotics can be useful.

Semiotics is the science that studies cultural phenomena as if they were signs that communicate on a symbolic level. Umberto Eco, in his book 'the absent structure' associates a primary practical function and a secondary symbolic function to the architectural code.

For example, for a primitive man, the object 'cave' is associated with the primary function of 'shelter' but over time this element also comes to mean, on a symbolic level, 'family, safety, salvation' (Eco, 1996).

It is thus through the deconstruction of elements of the architectural work into categories that we can establish a parallelism with the work of art therapy and associate a symbolic meaning to each one. Structure, base, envelope, skin, openings, become architectural elements that are symbolically reproduced in the work of art therapy in the construction of one's own building.

3. Experiential workshop in a lower secondary school

'*Lo spazio flessibile*' acts through space awareness workshops for all ages starting from the youngest individuals: in my contribution I want to show the experience of workshops in a lower secondary school. Workshops are divided into various 'steps' so it is possible to approach the theme of space and a gradual 'free' methodology, to get used to the art-therapeutic approach.

We are all used to having to follow laws and rules, to always be performing and competitive. We must always do 'better' in a context that does not belong to us.

The art-therapeutic approach works on freedom and individual choice, it is a non-judgmental, non-performance context. There is no good or bad way, there is no better work than the others. There is only 'letting it flow', acceptance. Learning to 'let it flow' means learning to listen to ourselves, our personal choices, learning to accept them and pursue them without fear.

The workshops that I describe start from working in a two-dimensional space and then subsequently move on to three-dimensional, from individual space to group space, relationships, and social space. All in a context of 'awareness' of space. 'Sensitization' comes from the word 'senses' because in accepting the information that space transmits to us, we use all our senses. Every architectural experience is not only visual, the perception of space is multisensory: space is also measured by hearing, by touch, smell and taste, our senses merge and it is our skin that connects us with the space that surrounds us. Even sight can be considered an extension of touch (Pallasmaa, 2007).

3.1. The two-dimensional space

During the first meetings, the 'two-dimensional' individual space is explored, and the attention is focused on learning how to approach work where creativity must be released using different materials, without rules, each with its own timing.

Usually, we start with a presentation of ourselves, using various graphic materials and props. The symbolic dialogue with ourselves begins at this stage: from the choice of the material that most attracts us, that most 'belongs to us' and that we feel close to us. In this case it would always be advisable to precede the meeting with preparatory meetings on the knowledge of the materials. Not all children know the materials that will be used in the laboratory and their potential. Follows a phase of free work, experimentation, and approach to methodology. After the presentation of oneself, of an abstract and dimensionless space, one moves on to the real/symbolic representation of one's physical space. Speaking of 'physical' borders, work and discussion symbolically shift to our personal borders: how much we manage to stay inside our borders, how tight our 'borders' are, how much we are able to protect and defend them. At the end of meetings there is always a discussion that moves the reading of the works from a physical point of view to an interior and personal point of view. Everything becomes a symbol and pretext for the construction of our personal building. As closure there is always a discussion about one's own feelings and impressions, and a visualization of relationships through a thread of wool stretched and intertwined among the participants.

FIG. 3. *Two-dimensional space – Identity*

3.2. The three-dimensional space

We then move from individual space to three-dimensional space: here we begin a series of encounters in which we enter the heart of the relationship with the three-dimensional architectural work and its constituent elements. These are meetings in which we explore elements such as the structure, the base and the envelope (skin and openings), elements of the architectural work that now interact freely and non-judgmentally with our interior space to create our own building. The words themselves take on both a physical and a symbolic meaning: it is precisely at this moment that the elements are charged with their symbolic meaning and are modelled through our individuality and our practical action. Inner growth and outer development are always linked by a constant conscious dialogue that creates a relationship of 'discovery' of our individuality and our individual abilities to form our physical and symbolic structure.

FIG. 4. *Three-dimensional space*
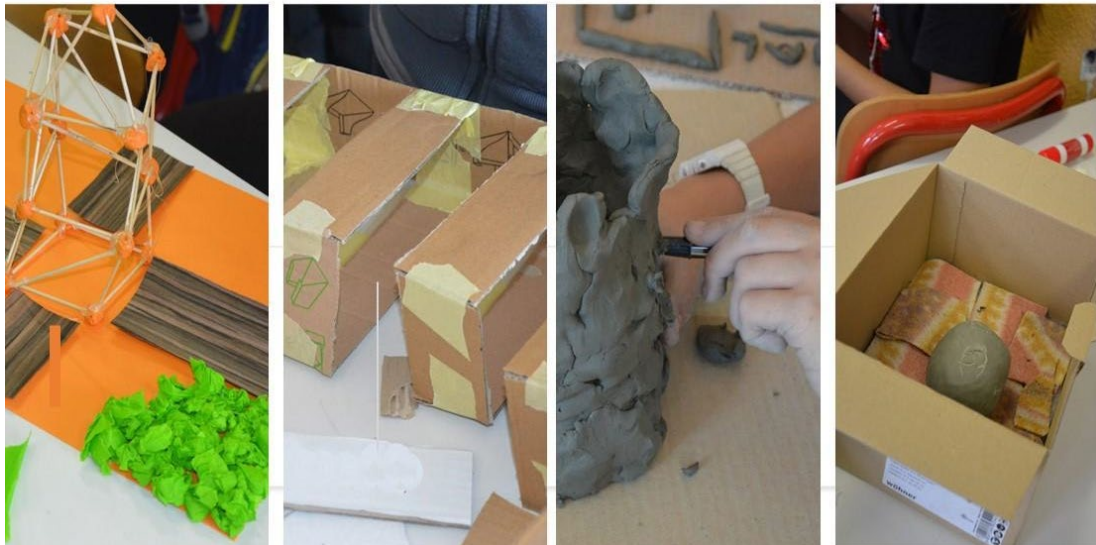
3.3. The structure

The first architectural element we approached in a symbolic way is 'the structure': the architectural structure is made up of pillars, columns, beams, load-bearing walls with primary support function.

The element of the art therapy work is made up of the skeleton whose secondary objective and symbolic function is to give strength, resistance, stability, the possibility of growth, search for balance, mediation between forces to support our building. The dialogue with the work therefore focuses on questions such as: have I managed to grow a structure? What problems have I encountered? How did I solve them? How did failing to reach my goal make me feel? Is my structure stable enough? Does it allow for growth?

The students worked with various means, deepening their knowledge of the fundamental geometric entities: point, line, plane, space. Using

these means, they were able to experience its structural potential and possible geometries.

FIG. 5. *The structure*

Structure

Architectonical Elements	Primary function	Elements of the work	Secondary Function	Dialogue with the work
Pillars, columns, beams, load-bearing walls	Support. Allow for resistant growth	Skeleton, internal or external	Strength, endurance, security, stability, balance, possibility of development	Does my work have a structure? Does it allow for growth? Is it stable?

Points and lines structure: balance and stability | Surface structure: stability and openings | Three-dimensional structure: modeling of space

3.4. The base

The second fundamental element of the architectural work is 'the base'. The architectural elements constituting the base are foundations, platforms, pedestals, with a primary function: anchoring to the ground, allowing stability. Sometimes increasing the sense of majesty and grandeur.

The symbolic secondary function of the work of art therapy, the base symbolically becomes our history, our family, the society in which we live, which supports us and gives us solidity, security, the possibility of development.

The dialogue with the work involves reflection through questions: does my work have a good foundation? What is it based on? How is my base structured? What do I need my base to give me?

The types of bases can be various: planned, layered, disordered, fragile or that can be enlarged to a larger size than the work itself.

FIG. 6. *The base*

Base

Architectonical Elements	Primary function	Elements of the work	Secondary Function	Dialogue with the work
Foundations, platforms	Anchoring to the ground, allow stability	Safety Base	Solidity, safety, development possibilities	Does my work have a good foundation? What is based on?

Planned platform | Platform that elevates | Layered platform

3.5. The envelope

Another architectural element that can be analysed symbolically is the envelope, consisting of the skin and openings.

The architectural elements are doors, windows and gates that allow access. But also, the 'facade' treatment, the 'dress' of my building: how do I want to show myself to the outside world?

The symbolic elements of the openings in the art therapy work become the internal/external passages and everything that allows permeability.

The dialogue with the work therefore focuses on questions such as: are there any passages, openings? How are they treated? Do they allow you to 'enter' my building? How much and how do I really make myself known?

There are soft and welcoming entrances, 'non-existent' entrances to be found with difficulty, 'selective' entrances that 'warn' and try to protect against the intrusion of unwanted people.

FIG. **7**. *The envelope*

The casing: Skin - Openings

Architectonical Elements	Primary function	Elements of the work	Secondary Function	Dialogue with the work
Doors, windows	Allow internal/external passage	Passages	Dialogue, relationship inside/outside, possibility of movement	Are there any openings? How they are treated? Can I enter on the work?

Fortress building — Balanced and welcoming entrance — The threshold

3.8. Relations

After having discussed and observed various elements of the single creation, a work on relationships is started: we leave our personal space and face the first group work in which our personal building and personal space relate to others.

We all have our own 'territory of expertise' beyond the skin, and the sensation that a space transmits to us is strictly connected to the interference and intersection of the distances between individuals and to the interference of our 'spaces of mastery' (Hall, 1998). So in our practical and group work, we also have to position our building, considering each own's area of expertise, in relation to others: how? Am I looking for a relationship or am I moving away? How are relationships managed in the group? What place (role) do I play?

Collaboration becomes very important to create a common place, the construction of the landscape of the mutual relationships for the use of mediums to create connections, through bridges, strong points, roads, obelisks.

FIG. 8. *Relations*
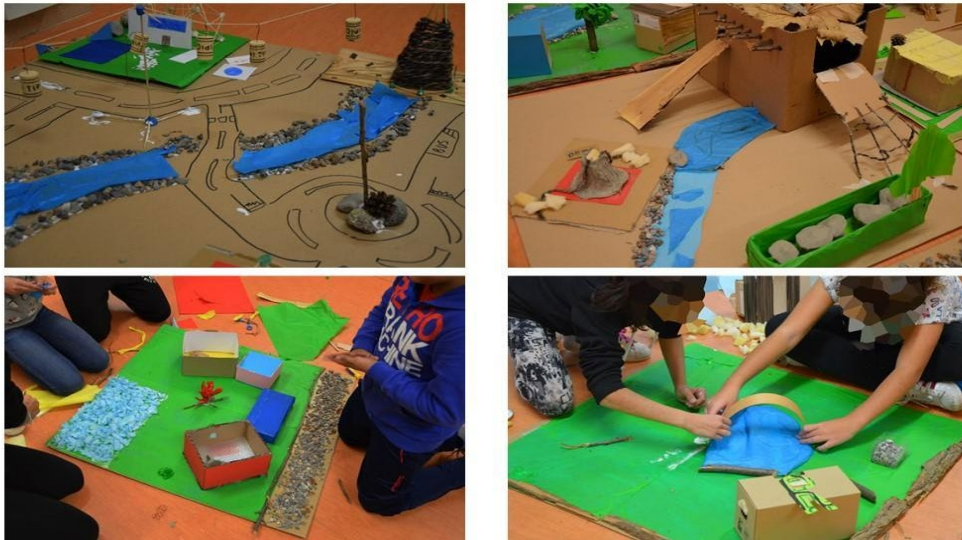
3.9. The lived space

The next phase of workshops is concerned with the interaction with the space we live in every day, the critical thinking on the sensations that accompany the perception of space and the importance of collaborative design.

After working in the IN-OUT direction and after creating the landscape of our relationships, we approach the space outside us, the built space that sends us OUT-IN inputs. This is the moment when it is most required to feel the space on a sensorial level and then be able to return the experience through a critical reflection. The children are invited to 'feel' through all their senses the emotions that the space communicates and try to identify the architectural elements that promote this emotional communication, both positively and negatively.

FIG. 9. *The lived space*

Conclusion

In this experience we wanted to travel on a continuous round trip between internal and external space, creating a web of symbolic relationships between the two.

This research wants to propose a method of deconstructing space, combining the work of art therapy with architectural work, to set a new interpretation, in the light of the three-dimensional elements from which it is composed.

By reading the elements of the art therapy performance, we work symbolically on our inner world and on the relationships we establish with others and in society. The personal confrontation with our building, and the relationships that our building establishes with others, allow us to acquire a critical awareness of the space that surrounds us, a different, privileged point of view of those who have lived in the space in first person. It means learning to look at and feel the space in a personal and 'sensitive' way.

Through the creation of spaces, we have created relationships, we confronted each other, and we had the opportunity to grow, creating together in an organic way.

And above all, in all this, we have had the opportunity to elaborate, redo, repair, recreate again to transform ourselves.

The one here described is just an example of a space awareness path. The stimuli and interventions can be infinite and move from a more pedagogical and introspective point of view to a more architectural outlook, of civic education and relationship with the environment. Building and recognizing your structure in its constituent elements means learning to know and take care of yourself, knowing your own space as a living place means accompanying it in personal growth and in its relations with the outside world.

I would like to conclude this journey with a phrase from architect Frank Lloyd Wright: «What is needed most in architecture today is the very thing that is most needed in life: integrity. If you defend the integrity of your building, you will defend the integrity of society as a whole: a mutual relationship is inevitable» (Lloyd Wright, 1960, 292-293).

Space awareness courses should be promoted in schools of all levels, courses that, through the symbolism of art, know how to establish a bridge between one's interiority and the construction of space, to create the beauty we so greatly need (Groups, 1943).

Taking care of the 'inside' to learn to observe to take care of the 'outside', through emotionality and play.

FIG. 10. *Own building*

"What we need most in architecture today is the very thing that is most needed in life: integrity.

If you defend the integrity of your building, you will defend the integrity of society as a whole: a mutual relationship is inevitable"

(Frank Lloyd Wright)
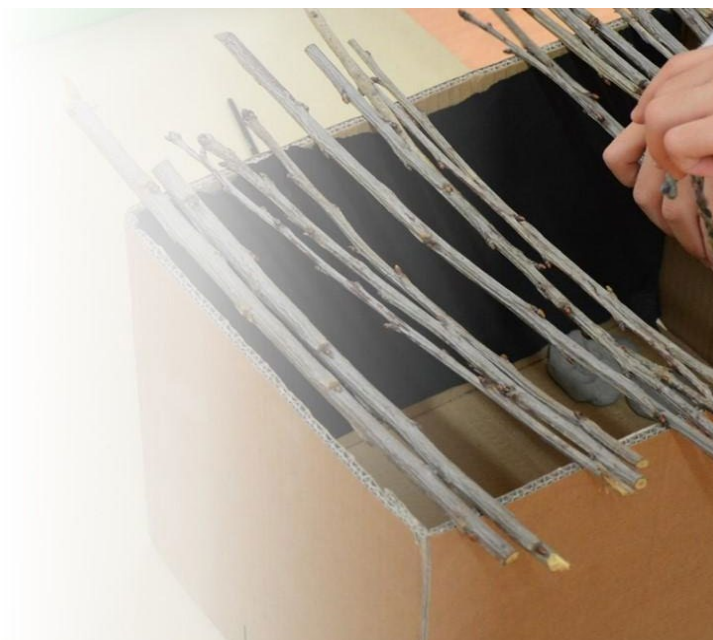
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Modern School Heritage: Architectural and Pedagogical Models in Sardinia (Italy)

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ABSTRACT: *The innovative educational methods of the sisters Rosa and Carolina Agazzi in the immediate second world post-war period and the contemporary spatial paradigms of modern schools, experimented nationally and internationally, found their application in Sardinia as a result of a special regional program. The Autonomous Region of Sardinia, in fact, with the aim of resolving its own condition of social and economic backwardness, established and entrusted the E.S.Ma.S. Ente per le Scuole Materne della Sardegna with the construction and management of more than one hundred new nursery schools built between 1950 and the early 1960s throughout the island's territory. This important initiative enabled the development of an architectural 'model' for nursery schools, repeatable and based on three typologies, which from time to time allow for variations and adapt to the context in which they are set up. Today not all ESMAS schools are in use – some are abandoned, and others have changed destination or are being demolished – the research, in addition to recognizing the historical-patrimonial value, aims to reinterpret and update them.*

KEYWORDS: *Agazzi, Learning space, Modern architecture, School, Sardinia.*

Introduction: the social role of schools

The post-war period in Italy and Europe was an important period of reconstruction dictated by the historical needs of the moment. In this context, gradually increased by the economic boom, school buildings are the subject of an interdisciplinary debate that goes beyond physical characteristics and involves the pedagogical sphere and the way of learning in a given environment. In fact, the educational space is conceived as «a single organism and no longer as a set of aggregated functional environments» (Fondazione Giovanni Agnelli, 2020, 76), a conception that will also influence the new school building regulations, such as DPR 01 December 1956 n. 1688. This led to the development of a number of reflections considering some innovative architectural principles, such as the opening up of the school to its surroundings and the flexibility of its interiors. These latter themes are still topical today and the object of study.

The post-war situation made it necessary to tackle the construction of the country and education became a public priority on which to base the future of a nation. The Italian cultural debate looked at the international context even if there was not always a correspondence between architectural production and the possible innovative ideas developed (Fondazione Giovanni Agnelli, 2020, 77). The operation of schooling and construction of the school heritage affects the whole country, including the regions of the South and the Islands, as shown by the *Anagrafe dell'Edilizia Scolastica* (AES) data.

The research proposed here focuses precisely on the identification of models and design experiments widespread in villages and hamlets in the island territory, the result of individual initiatives commissioned by local administrations or of regional programmes by bodies set up ad hoc. These include the case of the former *Ente delle Scuole Materne in Sardegna* (ESMAS) and the schools set up in the hamlets *Ente per la trasformazione fondiaria and agraria in Sardegna* (ETFAS), both of which came into being after the Second World War. On this occasion, a reinterpretation of the first institution created «for the dissemination of pre-primary education and the assistance of children» (ESMAS, 1961, 3) will be proposed, carrying out a high moral and social task on three levels:

> for the child, who is helped in the very delicate moment of the opening of the soul to the first knowledge of the outside world; for the family, whose work is not replaced but certainly integrated by the work of the educators; for society, which with the Pre-schools, modernly built and conveniently managed, offers the children the opportunity to expand their nascent 'Personality' and to understand the limits that each one encounters in living in a community (ESMAS, 1961, 3).

On 1 June 1942, Law no. 901 established ESMAS, which the Ministry of Education entrusted to an Extraordinary Commissioner in 1946 and then, in March 1949, to the Honourable Minister G. Gonella and Professor A. Amicarelli. In 1949 the Autonomous Region of Sardinia was founded and shortly afterwards the Regional Council realised the importance of school building and drafted and approved the Regional Law of 20 December 1950 no. 72 for the establishment and increase of nursery schools, benefiting from special regional funding for the design, construction and furnishing, with the obligation to take over their management (ESMAS, 1961, 6). The ESMAS schools, set up and initially run by the *Ente* and then passed under the administration of the individual municipalities, thus favoured the spread of education in many towns on the island, immediately taking on an essential social role dedicated to the education of the character of children from three to five years old. Between 1950 and the early 1960s, more than a hundred new nursery schools were built throughout the island using regional funds, in addition to the others that had been taken over. While in 1949 only 20 schools were under

management, in 1960 there were about 245 schools with 390 sections attended by about 19,500 children. At that time Sardinia was divided into three provinces and the schools were spread all over the territory, with a greater prevalence in Cagliari, followed by Sassari and then Nuoro.

As stated by ESMAS Extraordinary Commissioner Amicarelli, the model takes its inspiration from the pedagogical thinking of R. Lambruschini, quoting that:

> The nursery school gives man his first crease, a deep indelible furrow that never disappears. It is precisely in infancy that those deep sediments are formed that live on at the basis of personality and behaviour throughout life (ESMAS, 1961, 7).

In the Sardinian agricultural context, a pedagogical interest in the need for educational places for the working classes engaged in work in the fields and in the first industries, which saw the collaboration of the school-family binomial set the moral and social values of pre-school education.

1. Spatial and educational models

In many virtuous cases, the nursery school prototypes correspond to precise spatial models (Calidoni, 2018) and the aim of this essay is precisely to focus on this character through a reinterpretation of the former ESMAS schools and the pedagogical methods taken as reference. The educational principles favoured and practised in these kindergartens were geared towards learning in line with the educational styles of the working class of that historical period, marked by a strong rural and Catholic tradition.

The regional ESMAS plan provides for the design of nursery schools based on three types – one, two and three sections – to be repeated and applied throughout Sardinia, while allowing for a variety of types according to the different needs dictated by the contexts, which are mostly rural or partially urbanised. This important initiative will make it possible to develop a 'model' of school reconstruction to rethink education in its workshop dynamism through an interdisciplinary exchange between architecture and pedagogy, which can be repeated and adapted from time to time to the territory in which it is set up. These modestly sized schools were designed in the wake of the enthusiasm of Ferrante Aporti's directives, proposing the overcoming of the nursery school and giving a new lease of life to the educational role of the nursery school with a precise pedagogical value (ESMAS, 1961).

The types of school buildings adopted demonstrate a desire to reconcile economic needs and local conditions with the construction of a model school. The architectures in question are all designed according to

common compositional principles that make it plausible that they can be adapted to different locations.

The design method used for the former ESMAS schools uses a «simple and linear» plan (Sanjust, 1961, 12), with the modest architectural and construction quality characteristic of school buildings at the time, often compromised by the use of mediocre materials (Fondazione Giovanni Agnelli, 2020). The articulation of the system, controlled in size and structure, uses schemes that have been progressively perfected with respect to the organisation's initial experiences. The matrix conceived from the first period, between 1950 and 1955, aimed to respond to the criteria of flexibility of the spaces by using mobile partitions capable of transforming the classrooms into a single hall. This system is organised around a large distribution area for practical activities, to which are attached a series of service rooms, including the teachers' quarters, a kitchen and the refectory (Sanjust, 1961, 12-13). The compositional concept that exists in the relationship between the elements will serve as a rule for the model.

The idea of the classroom, in symbiosis with some design experiences of the modern movement in the post-war period (Pezzetti, 2012) – among them for example the *Asilo Sant'Elia* in Como by G. Terragni – is modified and structured in a spatial sequence of environments with the overcoming of the corridor, which is itself wide and dedicated to educational activities. This space can be conceived as an entrance filter atrium at the same time inhabited as a meeting place and workshop brought outside the section: educational environments in power, recognised in a relationship of similarity with 'open learning spaces' «where pedagogical and cultural identity is materialised» (Weyland, Galletti, 2018, 55). This allows educational activities to be taken outside the sections and become a concrete opportunity for learning integrated with the environment. The case study under consideration contains the principles of this and, with a view to a possible actualization, it constitutes a design opportunity to ensure a community place for meeting, exchange and growth within the school. Looking at Europe, there are many exemplary cases in which spatial articulation allows a certain dynamism and freedom of learning that is always open to new scenarios. Think about architectural and theoretical production of the well-known architect H. Hertzberger, with his concept of schools and the idea of *learning landscape*, which corresponds to a vision of a democratic school:

> The learning landscape is continually in a state of flux because of the succession of teachers, subjects, resources and ideas. Its major quality is being able to absorb and adapt to these changes, at the same time patently showing up the disadvantages of the rigid system of classrooms. The idea of a landscape makes its entrance wherever individual freedom is suggested and structure is felt to be unduly imposed from above. Situations and processes that seem to evolve unaided, as if naturally, tend to appeal more and appear more

democratic than those that are orchestrated and controlled (Hertzberger, 2008, 58).

The ESMAS buildings, although invested with innovative features which echoed the experiments in school curricula at the time, did not seek a direct relationship with the outside space, a choice motivated by certain safety requirements. In fact, the buildings were enclosed by fences which guaranteed an unstructured but protected open space, sometimes even covered, dedicated to play, physical education and direct experience of nature. Continuity with the outdoor spaces is now an interesting condition that could represent a school model looking to the future. It has been debated since the 1940s and is still relevant today and highlights the need for a balance between flexibility of the environment and good lighting and ventilation to ensure a place of well-being for the child. An important experience to look at in this sense is the Open Schools in Holland, France, Switzerland and the United States, where the traditional classroom layout is called into question by trying to investigate how architecture can contribute to a condition of hygiene in the broadest sense. In his book *Space and Learning*, Hertzberger includes, among the many examples of openness to the volume, the Open-Air Schools by E. Beaudoin and M. Lods in Suresnes, France, or those of J. Duiker in the Netherlands, which highlight the new educational ideas contained in the projects as a comment on Duiker's thought: «a healthy school for the healthy child» (Duiker, 1932; Hertzberger, 2008). In this context, care for hygiene plays an important role, which in ESMAS schools will be translated into interior service areas with collective washbasins similar to water studios or fountains located in the various rooms for laboratory and collective activities (ESMAS, 1961). Important aspects for the development of the child's perceptive abilities of their body in space through the control of movement that generates an appropriation of the educational environment (Weyland, Galletti, 2018).

The educational method favoured and practised in these kindergartens was the one used, in the pedagogical field, by the Agazzi sisters (1929), a learning that well reflects the educational styles of the working class in a historical period marked by a strong rural and Catholic tradition. The denomination of *scuola materna*, contained in the acronym of the ESMAS plan, thus indicates a precise image of the spatial, layout and educational model referred to (Calidoni, 2018). The school, as well as entrusting a key role to educators, had to be child-friendly and reminiscent of a family environment, an aspect traceable in architecture in the adoption of the archetype of the home. On this metaphor, school as home, it is possible, once again, to trace pedagogical concepts brought forward by prestigious experiences such as *Casa dei bambini* by M. Montessori, Fröebel's approach to the pedagogy of childhood or J. Dewey's reflections on education as a social process starting from the home environment. Hertzberger, too, takes up the importance of proposing environments in which the child can find a sense of belonging:

> With classrooms disappearing entirely to be taken up in an open learning landscape, the need for a home base is felt all the more, for a place for the children to fall back on, a place they feel responsible for and where they can leave their belonging. It is not enough to have lockers in anonymous surroundings so that pupils wander daily through the building like nomads. There has to be a space where they can engage socially with others of their group or year. [...] To satisfy this spatial condition is a new challenge for architects, one that may give entirely different shape to the idea of a home base if the classroom were indeed to disappear completely. (Hertzberger, 2008, 36)

The ESMAS school complexes, especially the single-story types, are domestic in size and are characterised by slightly articulated pitched roofs. All the schools, including those with more than one section with the teachers' accommodation on the first level, were simply plastered and had stone cladding running the length of the plinth, at a set height, evening out the unevenness of the ground on which the model was built.

The flexibility, in terms of space and use, enjoyed by these architectures was dictated by hygienic and sanitary needs and the welfare role played by the institution during the physical and moral reconstruction of the country. Various aspects derive from this: the independent arrangement of the kitchen and refectory; the distribution, where possible, of small washbasins for drinking; the presence of large modular windows to ventilate the rooms. Photographs of the period interiors also testify to the care taken over decoration achieved with the furniture in the classrooms, the inhabited niches carved into the wall face, or the attention paid to the sanitary facilities.

In accordance with the recognition of the educating role of space (Weyland, Galletti, 2018), the research identifies many design principles in such school architectures, including spatial permeability and adaptability to contexts, as values that can constitute both an opportunity for the social life and well-being of the child and an essential pedagogical aim.

Conclusion: learning from school heritage

The innovative model of the ESMAS schools, which at the time was so much appreciated in Italy by the general public and by illustrious pedagogues, became an illustrious example outside the region and was praised at national conferences, such as the one organised by the National Congress of the *Centro Nazionale delle Scuole Materne di Brescia* held in Cagliari in the first week of September 1959. This is testified by a letter sent to the Extraordinary Commissioner of ESMAS Amicarelli by Prof. A. Agazzi, President of the Centre, which reads:

> We wish your noble and always fervent activity the success it so richly deserves and which has done so much good for Sardinia and Italy: good that is projected into the future and that will not cease to work for the greater elevation of the people's childhood (ESMAS, 1961, 8).

After the first wave of regional funding and the prosperous period for ESMAS schools, there followed a rather weak period which led to the end of the organisation's activities in 1998. Today, unfortunately, not all the schools are in use – some are abandoned, and others have changed destination or are being demolished – the study underway, in addition to recognising the historical and heritage value of the former ESMAS schools, aims to reinterpret and update them. The research, using a number of pilot cases, aims to propose slight modifications to the models adopted by rethinking the relationship between architecture and education; in particular, the theme is related both to the relationship between the classrooms and their potential extension towards the outside space, and to the recovery of an internal flexibility that was already present at the beginning but that incongruous interventions have altered over the years.

Considering that the importance of the experience of ESMAS lies mainly in two aspects: in the definition of models which are spatially defined but at the same time open to educational needs, and in the design criteria adopted which remain unchanged for each school organism while allowing for variations. There is an adaptability that covers different scales and timescales, from contexts to pedagogical needs The key concept of flexibility, in the terms described, constitutes a parameter that is still sought after by national (MIUR, 2013) and international guidelines for the design of educational spaces (Borri, 2016) and that the needs dictated by the momentary pandemic make current and pursuable.

There is a disconnect between the building and school reality and the regulations currently in force, which date back to the Ministerial Decree of 18 December 1975 and provide for the rigid application of certain standards, regardless of the quality of the spatial configuration of educational environments. Recent research by the INDIRE group, commissioned by MIUR in 2013, develops studies, starting from the MIUR guidelines of 2003, addressed to innovative learning spaces *Manifesto 1+4* (INDIRE, 2016) in which the place used for learning is no longer only in the classroom but in a wider context defined as «didactic landscape» (Weyland, Attia, 2015). The research pathway attempts to question and answer the following question posed by the *Istituto Nazionale Documentazione Innovazione Ricerca Educativa* (INDIRE) in its analysis «What is the most effective configuration of educational spaces for learning in the third millennium?» (2016). The updating of these spaces, which have undergone tampering that conceals the architectural qualities illustrated, becomes necessary.

To conclude, E.N. Rogers' concept of 'educating architecture' (Rogers, 1947), expressed in his editorial in *Domus Journal* in June 1947, is topical

in this dissertation. Rogers, in the monographic issue dedicated to schools, declares that learning together with space contribute to the formation of the pupil (1947). It is deduced that the conformation of the environment inevitably marks the psychic growth of the child, and the task of architecture could be an opportunity in this sense (Cicconcelli, 1952). A thought that dates back to the end of the 1940s and that remains contemporary, just think of the innovative ideas put forward by the pedagogue Loris Malaguzzi, founder of the *Centro Internazionale per la difesa and la promozione dei diritti and delle potenzialità dei bambini and delle bambine* who, through his educational programme centred on the hundred languages of the child, highlights the value of space in its educating role (Malaguzzi, 1992).

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Education Rethinking Schools and Redesigning them Together

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ABSTRACT: *This paper presents a project based on collaboration between architects, education specialists, teachers, and students. It originated in 2015 from a basic research project funded by DAStU, Department of Architecture and Urban Studies at the Politecnico di Milano, on the theme of existing school buildings, livability, and the wellbeing of students and teachers. The research aim was to build up a knowledge base on the condition of school buildings, and the relative problems and expectations, to be shared with all salient actors: architects, teachers, policymakers, etc. The first steps in the research process included a comprehensive review of the literature, encounters between architects and education specialists, and interviews with the head teachers of lower secondary schools, a segment that is often overlooked in innovation projects. Field work was then conducted involving: observation of school spaces by a group of architects and education specialists, with the help of floor plans; an on-site visit during which the research team first engaged in free exploration before being given a guided tour by school staff; further in-depth observation of the use of the spaces; focus group discussions with students and teachers to elicit their opinions and suggestions for change; administration of a questionnaire adapted from a European project in keeping with the local research aims and context. The results were analyzed, compared, integrated, and ultimately disseminated, mainly via open access outlets. The study gave rise to further developments. On the one hand, it led to the setting up of the transdisciplinary work group Ambiente Scuola [School Environment], which continues to promote cooperation across a growing network of schools, local authorities, associations, etc. On the other hand, the field work fostered enhanced awareness, on the part of the participating schools, of the topic of school spaces, leading in some cases to continued reflection on the innovation goals to be pursued and/or the independent implementation of improvements. Thus, teachers and students have become direct actors in the revisiting of spaces and their uses, and the enhancing of the physical school setting with help – proactively offered in some cases – from parents. An example is the A.B. Sabin school in Segrate, where renewed interest in school spaces inspired both an educational project that qualified for national funding and engaged the students themselves in redecorating the school, and the design and implementation of maintenance and furnishing projects by the students' families.*

KEYWORDS: *Architecture, Education and teaching methods, Schools, Co-design, Student voice, Teacher voice.*

Introduction

Education and architecture have not always been in dialogue. Space, despite its importance for educational trajectories and the well-being of students, teachers, and school staff, was not a priority when schooling was first institutionalized at the national level. There were many other urgent needs, including: overcoming illiteracy, introducing basic school subjects, addressing health issues, and forming citizens with due appreciation of the national unification process. With regard to space, schools legislation mainly only defined the standard parameters for the construction of school buildings. However, some educationalists were beginning to observe, and increasingly to emphasize, that children's learning and participation were positively impacted when the material setting was seen as playing a role in the teaching-learning process and in school life more generally. Examples are two educationalists born in 1870 and active in the 20th century, whose work continues to be influential today. Specifically, Maria Montessori and Giuseppina Pizzigoni both acknowledged the importance of indoor and outdoor spaces, albeit from different conceptual perspectives. Thus, the educational approaches they brought to bear were embedded in the places of their schools, defining the layout of classrooms, furnishings, yards, and gardens. While Maria Montessori (1969) worked on detailed specifications for indoor and outdoor spaces and school furniture, Giuseppina Pizzigoni (1971) focused on the school building as a whole, viewing the educational process as intimately related to the construction of the physical edifice.

Over time, the theory and practice of teachers and education specialists have increasingly come to focus on indoor and outdoor spaces, and especially on what children should do in these places. Crucially however, as students grow older, less attention is paid to space, and by high school, the school spaces they typically encounter might be classified as 'nondescript'. The classrooms are highly impersonal, and bear no trace of what goes on inside them in terms of learning and participation, as though when subject contents become abstract, there is no need to take care of space.

In lower secondary (also known as 'middle') schools, which are typically located in older buildings that have been in use for many years, renovation projects are often carried out at the level of individual rooms. Such 'patchwork or mosaic'-style interventions are based on the well-intentioned inputs of individual teachers, which however are rarely drawn together into a holistic view of the entire school building, based on in-depth analysis and documentation of its uses, needs, and potential transformation. The layout of the school building and its indoor and outdoor spaces are often observed separately to one another. Building maintenance is carried out by external agencies on an emergency basis only. Head teachers are not always fully briefed about interventions that have been made, contributing further to a lack of consistent planning over time. Some fine renovation work has been done, but rarely has it concerned the entire school building, or been based on analysis of the

overall layout of the school, or been executed as part of a coordinated strategy. The project we present here represented an attempt to reverse this pattern by conducting a preliminary analysis of school spaces and listening to the voices of their users, with a view to generating a new, and more comprehensive perspective. After the project, some of the participating schools independently continued exploring the potential for transforming their buildings with the involvement of students and parents.

1. Basic research for advancing and sharing knowledge about middle school facilities

1.1. Hypotheses and goals

Recent decades have seen a renewed focus – internationally – on school infrastructures and their role in learning processes and educational outcomes (Fianchini, 2019). However, it is more difficult to introduce innovative models of using space into existing schools than to incorporate them into new ones. This poses a great challenge, if all future students (and their communities) are to be offered equal educational opportunities, at least in terms of the contribution of the 'third educator', as defined by Malaguzzi.

In-depth knowledge of the problems, needs, and wishes of school users – concerning the conditions and use of school buildings – is required to raise awareness of physical environment issues and inform decision-making, but such knowledge is not commonly pursued in Italy.

To fill this gap and bring to light a range of issues that are rarely visible outside of school walls, a basic research project entitled *Back to School* was designed to gather knowledge in the field and share it with all actors who are interested or wish to initiate improvement processes (Fianchini *et al.,* 2019). It was specifically focused on middle schools, given that at this level of schooling, attention to the relationship of spatial and environmental factors with learning and wellness tends to decrease (Zuccoli, 2019).

This research was funded by the Department of Architecture and Urban Studies (DAStU) of the Politecnico di Milano in 2015 and carried out by a transdisciplinary group of scholars from both DAStU and the 'Riccardo Massa' Department of Human Sciences for Education at the University of Milano-Bicocca, in collaboration with a representative of the regional education department and the participating school communities.

1.2. Research methodology and programme

In order to home in on the quality issues with middle school buildings – within national and local, legal, operational, and management conditions and constraints – at the outset of the research project, a workshop was held with a group of school principals. Next, a field survey focused on the

physical school environment was devised, targeting the communities of five middle schools, all different in terms of context, size, crowding, age and technical characteristics of school building (Fig. 1).

FIG. 1. *The five case studies in the field research*

In evaluating the performance of school physical environments in relation to user needs, we mainly followed the literature on Post-Occupancy Evaluation methods or POE (Preiser *et al.,* 1988; Baird *et al.,* 1995). POEs are a methodological approach to assessing existing building systems, with a view to informing decision-making about renovation and/or adaptive reuse (Fianchini, 2017). Many government agencies and institutions have used such methods to evaluate and monitor their real estate assets, with a view to planning renovation projects, or designing new development projects and processes based on the 'lessons learned' (Blyth *et al.,* 2001).

From the educational research perspective, we adopted a mixed-method approach, which supplemented quantitative with qualitative methods to make the data more intelligible and hence provide a stronger basis for action.

The involvement of teachers, students, and parents in the research was implemented according to the method and praxis of Student Voice (Cook-Sather, 2002, 2009; Flutter *et al.,* 2005), a field of research that was pioneered in English-speaking cultures, but has now become mainstream in Italy too (Grion *et al.,* 2013).

Our research was also informed by the European project, Voices, in which the Milano-Bicocca Department of Human Sciences for Education played an active part in exchanges between European universities and teachers on the transformation of schooling, including in relation to educational environments and the challenges of the Twenty-First Century (Teruggi *et al.,* 2015).

The procedural model and instruments for the evaluation process were drawn from the *International Pilot Study on the Evaluation of Quality in Educational Spaces (EQES)* (OECD/CELE 2009) but adapted to our own specific research objectives, and informed by the research team's own prior experience (Fianchini, 2001, 2007, 2015; Dessì *et al.,* 2015).

The on-site implementation stage involved two days' work at each school. During the first day, the physical and functional conditions were observed and information on the use of the different spaces was collected. During the second day, focus group discussions were held with both students and teachers.

The tours of the schools were conducted from two different perspectives: a more strictly architectural one, with a focus on the physical structure of the school building, the exact layout of the spaces, the furnishings and other architectural details; and a more pedagogical view, understood as a key to accessing the voices of the schools' 'inhabitants', concerning the way that the various actors in the school community inhabited the building, moved around it, and statically or dynamically occupied it.

The students' and teachers' own voices on the topic under study were recorded during separate focus group discussion sessions. At the beginning of each discussion, the research project was presented, emphasizing the fact that the discussion would not lead to immediate concrete change, but was designed to build up an understanding of how the school environment was experienced, and to tap into any associated difficulties, ideas, thoughts, and proposals. The sample of students that participated in the focus groups comprised one student per class, while in most cases the discussion groups with the teachers were less well attended.

A wider survey of the usership was conducted via a questionnaire, with a view to involving the entire school community in reflecting on the school environment and to broadening the pool of participants from which to collect information and qualitative evaluations. Rates of participation across the five case studies varied significantly; overall, 673 students (from 36 classes) and 69 teachers (covering all ten groups of compulsory school subjects) took part. Separate data analysis was conducted for each school. Then the outcomes were compared with a view to distinguishing between commonly recurring patterns and issues specific to individual cases.

Finally, a workshop was held with the principals of the five schools to present, discuss, and validate the research findings.

1.3. Outcomes

The technical inspections revealed that most of the buildings had only undergone a limited number of interventions related to compliance with safety and disabled access legislation; the interiors rated poorly in terms of finishes and decoration; systems and equipment were dated, although many classrooms had interactive whiteboards (IWB). There are also multiple discomfort-related issues, especially: noise; temperature control (during hot/cold weather); glare.

From our observations of typical school mornings, some basic conclusions were drawn:

− the space most used was the classroom; laboratories were often empty;
− usage of school spaces and times followed a pattern linked to the class group and the school timetable;
− there was little mixing between different class groups, even during recreation;
− typically: empty corridors=working in the classroom, corridors full= not working, breaktime or school over;
− the need for constant authorization from the teachers for students to move around school spaces;
− students had necessarily to be supervised by teachers and/or caretakers at all times, including breaktime.

During the focus group discussions, students proved to be acute observers of all aspects of the classroom, from its more general to its more specific characteristics, and offered many details, including concerning its layout and shape, which they immediately associated with liveability and visibility.

The students' feedback fell under the following categories:

− the request for greater attention to the body, its dimensions, and need for physical movement;
− the consequent need for furniture to be appropriated designed to contain/host the body, from smaller items such as desks and chairs to the larger scale;
− a focus on environments as a whole: colours, brightness, temperature, and noise;
− the desire to have opportunities to use the school more autonomously, and participate in decision-making processes.

Notably, group work, project work, individual or pair work, readings held in a corner of the library, were never mentioned by the students. Only a few examples were recalled of working outside the classroom setting; one student pointed out that in his class, learning was more active and participatory and reported a flexible use of space, as if this were the exception to the rule.

In the teacher groups, discussing environments, their uses, their characteristics, and indoor and outdoor spaces ultimately led to broader reflection on the teachers' own professional competence, and their role

in contemporary society. In many cases, they conveyed a sort of weariness, and in some cases, demotivation concerning their work. This seemed to be exacerbated by contact with a complex society in a continuous state of flux, and the incessant social, economic, and cultural change, which in turn requires schools to adapt quickly and rise to the new challenges.

Concerning the use of spaces, although the classroom was undoubtedly the most intensely experienced space, many teachers stressed the importance of having dedicated classrooms for individual subjects or at least laboratories for subjects such as art, music, etc. When specifically discussing alternative teaching-learning methods to conventional lecture-style classes, such as group work, the obstacle explicitly raised was large class size.

In many school buildings, laboratories, especially modern ones, were not included in the original building design and so have been installed in spaces originally designed for other purposes. Compelling needs such as a greater number of students with disabilities also create space pressures. Due to this lack of space, many teachers of laboratory subjects (technology, etc.) are forced to teach in ordinary classrooms, which necessarily means, in their opinion, cutting down on both the learning contents and the practical activities offered. A further obstacle to making flexible use of halls and corridors is the issue of teaching students to respect safety regulations, and a lack of emergency exits and easy access. The inherent constraints of the buildings, originally designed for a radically different teaching-learning style, were thus viewed as insurmountable. Similarly, green spaces, and outdoor spaces, were only seen as suitable for exceptional teaching-learning activities.

A frequently-mentioned theme was dissatisfaction with current staffroom arrangements. Another recurring theme was the use of innovative methodologies, including frequent use of laboratories, where present, but both the inspections conducted in the schools and the students' comments suggest that such approaches are rarely implemented in practice.

A final key theme was the school's ties with the local community. Some of the participating schools had been practising forms of exchange with the surrounding area for years, for example by making the school building available to host community activities, although some of the teachers did not agree with this policy, stating that they would prefer the school to be kept closed to outsiders for security reasons. In other cases, the school has concentrated primarily on cultivating relationships with the students' parents rather than the local community per se, involving parents in projects designed to enrich the educational offering (manning the library and actively contributing to the maintenance of the school building).

The most important points that emerged from the focus group discussions with the teachers may be summarized as follows:

- lesser participation, in numerical terms, of teachers compared to students;
- reflection on spaces acting as a cue to discuss teaching-learning methods and educational strategies;
- preoccupation with safety issues, interpreted as institutional constraints preventing change;
- the need for a shared educational approach, which seems to be lacking in the lower secondary school cycle given its compartmentalization into subject areas.
- almost no mention of involving students in the potential rethinking of school spaces, their layout and uses.

The questionnaire data provided a large amount of information about the accessibility, features, and conditions of the school, the functionality and comfort of the classrooms, the mode and frequency of use of the different spaces, the users' perceptions of safety and sustainability practices, the changes needed, and related proposals.

The main outcomes from the student questionnaire data were:
- concerning internal and external access, in all case studies, no critical issues were flagged;
- apart from the classroom, the most used learning environments in the schools assessed were the gym and IT room; the least used were the art and science labs;
- furniture and especially the comfort of chairs received the most negative evaluations in the domain of functionality;
- in relation to the school's appearance and maintenance, the most negatively rated features were the conditions of the toilets and the colouring of the walls;
- the security of their belongings was problematic for 55% of students;
- over 75% of students wished for changes to be made to their school and many made proposals in answer to the open-ended questionnaire item. Most of their suggestions focused on aspects elsewhere flagged as critical. There were also many suggestions for enhancing the liveability of the school building. Organisational aspects were also assessed, with a focus on increased and more targeted use of school spaces. Roughly 50% of students expressed the desire to return to school outside of class hours, thus identifying the school building as a space with a role in bringing people together, including outside of regular educational activity, and with more autonomy.

The main outcomes from the teacher questionnaire data were:
- with regard to learning environments and equipment, the greatest dissatisfaction concerned 'variability in classroom configuration', a lack of space and facilities for storing work materials belonging to the teachers and students, classroom size, insufficient student access to ICT, insufficient equipment for

students with special needs, a lack of alternative spaces and equipment for teachers (individual workspace and computer access, places for meeting parents, staffroom facilities);
- evaluation of the school's appearance and maintenance differed significantly across the five case studies;
- in relation to comfort: most teachers deemed summer conditions to be worse (too hot) than winter conditions; scope to regulate natural light and/or artificial light in the classroom was poor; most teachers reported uncomfortable levels of noise from outside the classroom
- high level of dissatisfaction with the lack of availability and related lack of security of personal spaces for keeping their materials;
- a variety of realistic proposals were made, especially concerning possible changes to the staff room, and tailoring spaces and equipment to foster learning and meet students' needs.

1.4. Findings

The initial concept of involving a group of school communities in a research project, aimed at bringing out the most common issues that significantly affect the physical educational environment turned out to be undoubtedly positive and effective, with regard to both the reflections that matured over time, from the standpoint of teachers and researchers alike, and the long-term results which brought about the first tangible signs of change. Indeed, the time spent on-site by the team of researchers (theoretical experts) and the on-site tours and focus groups conducted with school users (actual local experts) facilitated a collective increase in knowledge and skills concerning the relationships between physical environments and learning environments in school buildings. The project was an intense self-learning opportunity, based on an in-depth exchange of ideas and impressions which derived as much from different disciplinary and cultural backgrounds as from different levels and conditions of experience.

However, feedback obtained subsequently from the teachers suggested that the project left its mark on the schools that participated. Teaching staff at some of the school continued the discussion about how to change and improve the physical school environment conditions, even questioning their own way of occupying and using their allotted space.

Where the schools involved were more committed to enhancing their buildings and were operating under more favourable conditions, the reflective process initiated during the research project led to the subsequent launching of improvement schemes and actions. These were autonomously managed by the schools themselves, with the different sectors of the school communities participating in a variety of ways.

A particularly significant example is described in the next section.

2. Interventions for enhancing school spaces via the involvement of the school community: the experience of a lower secondary ('middle') school at the A.B. Sabin Comprehensive Institute (Segrate)

The A.B. Sabin Comprehensive Institute, in the town of Segrate in the province of Milan, consists of seven schools of three different levels. In the context of the above-described 'Back to school' research project on lower secondary school spaces conducted by DAStU at the Politecnico and the University of Milano-Bicocca, the comprehensive institute's two middle schools were assessed with a view to identifying the weak points and potential strengths of their existing spaces by listening to the voices of their users: the students and teachers. The principal of the Comprehensive Institute, Elisabetta Trisolini, also participated in one phase of the research. Feedback from the ongoing research activity and recent international projects stimulated the launch of a series of interventions by the comprehensive institute itself, implemented with the collaboration of a very active and enterprising parents' association.

The actions undertaken by Istituto Comprensivo Sabin to enhance the school are still ongoing and involve the entire school community formed by students, teachers, and parents. Reflection on the role of the indoor and outdoor school environment in learning and well-being –via both the functional layout of educational spaces and the multisensorial perceptions of those who use them daily – encouraged the school principal to channel human and economic resources available within the school community into educational activities designed to enhance selected school spaces and make them more distinctive. Thus, the lower secondary school students who were the beneficiaries of these activities have played a leading part in launching a process of personalization and characterization of their own school spaces.

The areas chosen to undergo partial and gradual transformation were the connecting spaces of the Milan Due lower secondary school: the entrance hall/atrium, which provides direct access to a series of key educational/functional spaces (library, staffroom, coordination office, music room) and leads to the school's two separate classroom wings; the corridors internal to each of the wings.

The intervention was implemented over two distinct, but coordinated, phases. Taking advantage of the parents' association's offer to do painting work, priority was given to the entrance hall, the heart of the school's relational activities. The choice of colours took into account the two existing and original colours of the building, which was designed and built in the 1970s. Following a series of trials, the surfaces to be painted were chosen with a view to emphasizing the architectural volumes and planes defining the space of the atrium. The painting intervention, after being designed with the input of the students, was entirely financed and carried out by the parents outside of school hours (Fig. 2).

FIG. 2. *Transformation of the atrium following the parents' intervention and educational activities with students.*

Subsequently, educational expressive art workshops inspired by street-art were implemented under the *Programma Operativo Nazionale per la scuola, competenze and ambienti per l'apprendimento* [*National Operational Program for Schools, Competences and Learning Environments*]. The aim of these activities was to aesthetically enhance the school's connecting spaces (main atrium and corridors to the classrooms). The workshops ran for 30 hours outside of the normal school timetable and involved the decoration of grey metal cabinets already present along the corridors of the school, as well as the design and application of wall graphics with a view to marking out and lending character to key spaces. The students played an active role at each stage in the process of creating a product to be enjoyed by the entire school community. They were allowed a significant degree of autonomy, both in relation to organizing the work of their teams and in seeking new and original technical solutions, albeit under the supervision of their teachers (Fig. 3).

The activities were mainly practical, but nevertheless required the integrated deployment of operational and cognitive skills. The methodology adopted throughout was 'learning by doing', or learning to do something as opposed to learning contents, as is usually the case in laboratory/workshop activities. The laboratory work gave the students the opportunity to learn different techniques to those used during their regular curricular activities, but also to play a lead role in enhancing their everyday spaces, with their work remaining as a legacy to the entire

school community, present and future. Finally, the laboratory proved to be a valid setting for learning social and civic skills related to developing a sense of care for and belonging to places.

FIG. 3. *Storage cabinet and wall decoration during the extracurricular educational activities.*

Conclusions

In this paper, we have presented the case study of the A.B. Sabin Comprehensive Institute, which drew on a study of school buildings conducted in five lower secondary schools in Milan to design and implement a series of modifications to one of its schools. The key points emerging from this research project overall include: the need, before initiating renovation work, to analyse the current use of spaces by referring to floor plans, collecting the voices of all the actors involved, focusing on identifying the needs that any changes should serve, and involving the entire school community in the transformation process. It is also crucial to define an overarching strategy, rather than focusing on small, uncoordinated interventions. Even if renovations are implemented gradually, a holistic vision of the school should never be lost: the school should always be viewed as a single organic entity, within which the various actors can jointly implement innovative ways of experiencing it and enhancing participation, with positive implications for educational processes and learning outcomes.

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Peer Feedback and Peer Assessment as New Perspectives for Teaching and Learning

Mutual Feedback Exchange and Peer Assessment During Text Revision in Primary Schools

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ABSTRACT: *This contribution aims to highlight how text revision in primary schools, using collaborative approaches, may be an opportunity for promoting the development of peer assessment skills through mutual feedback exchange. Based upon the analysis of practices relating to text composition (audio and video recorded) collected by undergraduates in Primary Education Sciences (University of Milan-Bicocca) in contexts where writing is considered a socio-cultural practice, it has clearly emerged that both teachers and pupils can play a role in text revision, although it is a complex process. In order for this to happen, however, some conditions must be met. Firstly, there must be a climate based upon dialogue and collaboration within the class. Secondly, collective revision situations must be encouraged, during which the teacher works with the pupils to identify, in a given text, what can be corrected, how it can be corrected and what strategies must be implemented. Finally, multiple collaborative teaching situations should be designed. Text revision must therefore become a fully-fledged teaching subject, useful for developing evaluative literacy.*

KEYWORDS: *Text revision, Primary school, Assessment for learning, Peer review, peer feedback.*

Introduction

For more than forty years, in Italy, the role of formative assessment has been identified as a tool in the teaching-learning process for regulating teaching and supporting pupil learning (Vannini, 2019). The *Indicazioni Nazionali* for the curriculum of nursery schools and the first cycle of education (2012, 19) emphasise that «assessment precedes, accompanies and follows curricular paths. […] It has a pre-eminent training function, accompanying learning processes and stimulating continuous improvement». However, there is currently strong resistance from teachers to change their assessment practices to promote evaluative literacy that does not identify assessment as the final act of learning. This is precisely the background – resistant to change – to the new Order on periodic and final assessment in primary schools (M.O. 172/2020), which strongly ratifies the concept of formative assessment and assessment for learning (which appear to be used as synonyms in the Ministerial text). It

is a strong legislative act, in the Italian school context, which represents the first step in seeking to dismantle years of purely summative assessment practices.

In the national and international context, the debate around assessment for learning has significantly expanded, identifying assessment as an integral part of the teaching-learning process in a circular relationship (Doria, Grion, 2020) which also encompasses the responsible involvement of the pupil in his/her own learning, the objectives to be achieved and the criteria with which he/she will be assessed by the teacher. In order for pupils to play an active role in assessment processes, the teacher must not be the sole holder of the power of assessment; instead, there must be joint participation between all persons involved in the teaching-learning process (Dann, 2018). Furthermore, pupils must be educated in this assessment role, involving them in understanding and defining the assessment criteria and in situations where they can express evaluative judgments about themselves and the work of their peers (Doria, Grion, 2020).

In this context, feedback represents the glue in the circular teaching-learning process, being a 'device' that «allows pupils to recognise the success of their performance, or the error, and thus correctly to resume their own learning path towards the set objective» (Grion, Restiglian, 2019, 22). Furthermore, as highlighted by the relevant literature, peer feedback plays an important role in learning and responsibility processes for pupils (Boud, Soler, 2016; Topping, 2017; Grion *et al.,* 2017) and presents many advantages, as opposed to feedback provided by the teacher (Nicol, 2013). As emphasised by Nuzzo (2019), peer feedback is less formal than that provided by the teacher and, therefore, more comprehensible and negotiable: while a teacher's feedback can be accepted passively as it comes from an authoritative source or contains corrections whose nature the pupil does not understand, feedback received from a peer is provided in a very similar language to the pupil's own, encouraging the latter to ask for clarifications. Moreover, in providing feedback, students can improve their own self-correction skills. While several pieces of research emphasise the importance of giving and receiving feedback for the development of an evaluative culture (Crion, 2012; Topping, 2017; De Martino, 2017), there are fewer papers that highlight the advantages of peer assessment within primary schools, along with the teaching practices that facilitate the development of peer feedback (Giovannini, Boni, 2010; Restiglian, Grion, 2019). As emphasised by the research, text revision is an effective practice for creating opportunities for pupils to express evaluative judgments on the work of their peers, based upon established criteria, constructing and providing feedback. However, text revision is a very complex process, particularly for inexpert writers such as primary school pupils (Bereiter, Scardamalia, 1995). Revision is actually based upon a difficult operating procedure, requiring the activation of a multi-stage process that includes the re-reading and critical assessment of what has been written, the

identification of problems, the diagnosis of causes and the production of valid alternatives (Della Casa, 1994). The verification and self-assessment operations required during revision therefore involve meta-linguistic reflection and meta-learning processes that are not easily activated for some primary school pupils, particularly those at the beginning of their school career. Precisely due to this complexity, inexpert writers, when carrying out revision, often neglect semantic, organisational and pragmatic aspects found in the deeper dimensions of the text. Their revision is characterised by superficial interventions (editing) on spelling, grammar and punctuation (Mandelli, Rovida, 1997). In order for pupils to learn to provide effective feedback, revision must therefore become a fully-fledged teaching subject in order to reflect on who must correct, what must be corrected and what strategies must be implemented.

1. Purpose and methodology

The purpose of this work is to identify the characteristics of the learning environment for the development of assessment literacy and the promotion of peer feedback through text revision practices.
The data reported here were obtained from direct observation of teaching-learning practices on written composition carried out by primary school teachers. The observed contexts share an idea of the teaching-learning process that can be attributed to a mainly socio-constructivist approach in which writing is considered a socio-cultural practice. In these situations, opportunities for textual composition are offered from the first year class, even if the children do not yet possess conventional writing. Pupils are asked to write texts collectively, in small groups, in pairs or individually, for a precise purpose and recipient. Such practices are widely documented in Primary Education Sciences theses at the University of Milan-Bicocca. The observation and discussion protocols reported within the theses were analysed through a coding process: initially, significant units of text were identified in relation to the research objectives. Thereafter, synthetic descriptions of the previously selected parts were constructed only then to identify the recurring concepts and to attribute labels (Mortari, 2010).

2. Characteristics of the learning context

From the analysis of the observation and discussion protocols and coherently with the research on text revision, some characteristics emerge of the learning context which are fundamental for the development of peer feedback and evaluative literacy.

2.1. The class climate

When pupils review a peer's text and develop feedback, whether formative or summative, they necessarily express a judgment on the peer's production. When pupils are at the start of their school career, the teacher must guide this process, creating – primarily – a relational and emotional climate in which this judgment is not seen as a devaluing criticism but as a suggestion for improving the text. From the analysed protocols, it emerges that an effective climate for the production of peer feedback is based upon sharing a certain idea of the role of error in the learning process. In all observed contexts, error is not considered an element that must be eliminated as a problem and a deviation from the norm, but one that should be valued as it manifests a particular way of thinking and provides necessary indications to understand the pupil's cognitive process. This is a constructivist view of error which creates a climate of acceptance and collaboration. In this perspective, each text produced is not considered to be definitive, correct or incorrect, but simply improvable. The revision carried out by pupils on a peer's text is not considered a 'hunt for errors' in a competitive climate but a responsible and collective action to provide suggestions for improvement. Consider this situation in a first-year class.

> Manuel and Edoardo (authors of the text being corrected) appear to be offended as their peers are saying that there is something wrong with their story.
> T[1]: We have to find a way to make the reader see who 'everybody' is. The story by Manuel and his group is now no longer just theirs.
> N: It has now become everyone's.
> T: The classmates are not trying to ruin the story but to make it better.
> K: And to fix the things that don't work very well, those that aren't understood.

This discussion excerpt clearly shows that it is necessary to work on the class climate and to lay the foundations to achieve the successful collective revision and feedback exchange. Some pupils will of course be reluctant to change their text as this means losing part of their work. The teacher's role then becomes fundamental in explaining the role of the peers with respect to the revision (to improve the text and not to ruin it). Furthermore, the conditions are created for everyone to take responsibility for the text as if they were its authors, as confirmed by N. who says: «(The story) has now become everyone's». Pupils are therefore activated as resources – to the benefit of each other – in the teaching-learning process and are intentionally trained to make evaluative judgments through a critical discussion about the error.

2.2. The teacher as a model

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[1] From now on, the letter T refers to the teacher's interventions.

When we talk about peer assessment and feedback, one of the issues that most concerns researchers relates to the capacity of students to make assessments that are reliable and useful for the recipients (Liu, Carless, 2006). Such concern grows in parallel with the age of the students: the younger they are, the more likely it is that their judgments will not be so effective in helping their classmates to progress. Furthermore, as stated previously, revision is a very complex cognitive process in which pupils must consider and control many aspects of the text, be clear about the purpose of what is written, the recipient, etc. How is it possible, then, to educate pupils who are so young to provide feedback that is not superficial?

The analysed observation and discussion protocols reveal that another essential characteristic of the learning environment is the role played by the teacher, who must act as a model by way of group work on the blackboard. The teacher must discuss together with the pupils what it means to revise a text, demonstrate what needs to be done in order to correct the work of a classmate and identify the strategies to be used. In this way, when pupils revise a text – their own or someone else's – they will know what to do thanks to the tools they have constructed collectively.

> T: We are no longer working in small groups now but in large groups, that is, we are all working together. Look what I have brought you. This is a poster on which I have transcribed a text, which I chose from reading your workbooks, and we will try to improve it together.
> Firstly, we have to focus on the information in the text and how its sentences are organised; don't worry about spelling errors as there are none, I've already corrected them. I've chosen one of the texts that you wrote about the chestnut festival. I chose this text not because it was the best, but because it seemed the most useful for this task. I found many things that we can reflect upon.
> [The teacher reads the text aloud]
> F: It's my text.
> T: Yes, F. it's yours. Don't worry if we pick it apart a bit now
> F: No, no.
> T: Now, let's start to look at what is missing, what should be changed and, in general, what can be improved to enhance the text. Do you want me to re-read it?
> M: No, I already have something to say. I think it is lacking in emotions.
> T: The emotions of the writer you mean?
> M: Yes, the female writer. F. is a female.
> T: Well, yes, of course. I'll note here at the side the things you tell me and then we'll try to find a solution for each one.

This example clearly shows that the teacher is acting as a model, guiding these second year pupils in the revision. The teacher explains and displays all steps that are needed: to understand what is missing, what should be changed and what can be done to enhance the text. Furthermore, the teacher shows them what steps to take in order to carry

out the revision: «I'll note here at the side the things you tell me and then we'll try to find a solution for each one». It is not sufficient merely to identify the errors but it is also essential to try and find a solution. Thanks to this step, the task of revision does not become a hunt for errors but is aimed at improving the text collectively, developing the necessary skills to formulate evaluative judgments. Furthermore, in order to develop the capacity to provide constructive peer feedback, the teacher uses a very effective strategy, presenting to the pupils the text to be revised without spelling errors. As this is a second year class, it is entirely normal that there will be many spelling problems and that the pupils, during the correction, will focus mainly on these, implementing a 'cosmetic' and superficial revision (Della Casa, 1994; Mandelli, Rovida, 1997). However, if the aim is to develop, from early childhood, assessment capacity through text revision practices, skills aimed at correcting and assessing more profound aspects of the text, such as coherence, cohesion, pertinence of the text to the purpose, etc. must be encouraged. In this way, pupils are educated to construct more complex and formative feedback for the recipient.

Finally, the lengthy work carried out by the teacher with the entire class, acting as a model, must be aimed at formalising and systematising what has been done through the construction of guidebooks and questions, which will differ depending on the text type. Given that these tools are the result of the work carried out by each teacher with the pupils, there is no common model; some take the form of a guidebook indicating the stages to be completed during the revision process, others are formulated through questions, while others contain assessment criteria established with the students.

> T: Before asking you to start your work, I repeat once again the strategic points to assist in the overall revision:
> 1. Firstly, read the whole text, from start to finish, without stopping
> 2. Read it again from the start, focusing on each paragraph more analytically
> 3. Apply the correction procedure to each of the identified elements (deletions, replacements, additions, reformulations, movements, etc…)
> 4. After reading the text paragraph by paragraph, ask yourself if improvements can be made
> 5. Re-read it all again from the start for editing.

In this guide constructed in a fourth year class, point three indicates the different interventions identified and applied by pupils during the collective revision; in addition to the deletion of words or sentences, which is quite simple, some pupils attempted more complex interventions such as, for example, reformulation or movement of parts of the text. This requires more complex skills as it involves controlling broader elements of the text than just individual words.

While the indication 'read and re-read' the text is contained in all analysed instruments, the other points differ based upon the age of the pupils and the type of text in question.

> T: Now, before we start to work alone in small groups, let's re-read the poster that we have created together entitled: 'What have we done to fix the initial story?' so that you can remember the steps better. These are the phases we identified
> - Read the whole story
> - Re-read it carefully
> - Find the beginning, the middle and the end to be sure that it is a story
> - Understand the problem of the characters
> - Remove the useless parts that 'have nothing to do with it'
> - Adjust the story to resolve the problem, asking yourself: 'Is it clear what I have written? Does the story resolve the problem of the protagonists?'
> - Add new parts, if they are needed.
> -

In this second guide, created by some second year pupils, the steps identified are inevitably more general, given the age of the children; the importance given to the 'problem of the characters or protagonists' and to the breakdown of the text into the beginning, middle and end stems from the fact that the pupils revised narrative texts.

The effectiveness and variety of these instruments derives from the fact that they are constructed together with the pupils, based upon their texts, to make the students increasingly independent in the revision and assessment process.

2.3. The design of collaborative teaching situations

The third and final characteristic of the learning environment identified by the analysis of the observation and discussion protocols consists of the design of multiple collaborative teaching situations to educate pupils in writing feedback. The described and analysed practices clearly reveal the absence of a single model or teaching-learning method for the promotion of feedback. In the observed school contexts, the development of evaluative literacy through revision is an integral part of daily teaching and is encouraged through different situations. As previously described, these practices are based upon encouraging a collaborative, non-judgmental climate focused upon dialogue, with the teacher acting as a model. Thanks to the collective revisions led by the teacher and the instruments created (guidebooks, assessment criteria) pupils can start to attempt to give and receive feedback. In particular, all observed practices promote collaborative learning situations: in small groups, pairs, open classes or peer tutoring.

> In line with a reflective approach to the revision process, to encourage the development of arguments with respect to the potential criticalities

of a text, it is essential for pupils to talk to each other so that, through this exchange, they can grasp the different methods of explanations and justifications (Teruggi, 2019).

Collaborative learning situations are particularly useful for lightening the cognitive load required by text revision. In each class, those situations vary depending on the type of text, the reason why it was produced, the class climate, and the age of the children. In the examples given here, the design of teaching situations differs not only in the collaborative method but also in the choice of different instruments and strategies to promote feedback exchange.

FIG. 1. *Example of feedback in a small group. Second year class.*
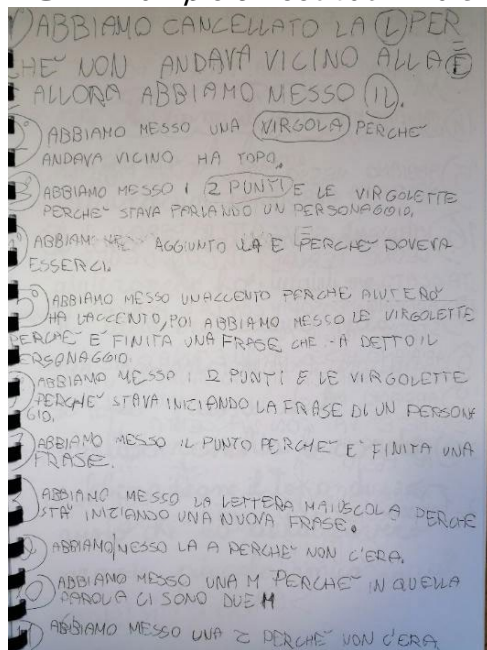
In this first example, the students are revising a peer's text in small groups. As can be seen from the interventions: «We added a colon and question marks because a character was speaking»; «we added a capital letter because it was the start of a new sentence», the feedback consists of a text correction with an explanation of the reasons. Although it is not actual formative feedback that allows the peer to reflect on his/her text in order to improve it, it can be considered an initial attempt at peer correction, preliminary to the development of a peer review. Although the pupils are in a second year class and therefore still very young, it is important to note both the quantity of the corrections identified and the effort to motivate the reason for them. Training such small children to provide explanations that are understandable to their peers is a preparatory exercise for playing the active role that is fundamental to the production of evaluative judgments.

While these pupils, from their earliest years, take part in peer revision and assessment practices, as their age and writing skills increase, their feedback becomes more articulated and refers to specific aspects of the

text. Furthermore, in correcting and in formulating feedback, the assessment criteria developed collectively by the whole class are considered.

FIG. **2**. *Example of feedback in pairs. Fourth year class.*

Nomi: ROBERTA - SOFIA

"IL TORO E IL LEONE": l'alfabeto

A LUNGO, un leone MEDITÒ di uccidere un forte toro.

BEN PRESTO decise di riuscire nel suo intento con l'astuzia.

COSÌ gli fece sapere di aver catturato un montone e lo invitò al banchetto.

DOPO aveva preparato tutto per assalirlo quando si fosse seduto a tavola.

E DUNQUE, il toro si recò all'appuntamento: vide molte pentole, lunghi spiedi, ma di montone nessuna traccia.

FU, senza proferir parola, se ne andò.

GIUNSE il leone, lo richiamò e gli chiese il motivo del suo comportamento, dal momento che nessun affronto gli era stato fatto.

-Ho una buona ragione per andarmene subito: vedo tutto pronto per cucinare non un montone, ma un toro – rispose il toro.

Insegna la favola CHE le astuzie dei malvagi non passano inosservate agli uomini prudenti.

[handwritten annotations:] qui vanno bene perché è coeso e coerente. x noi questo pezzo non va bene perché non concorde con quello precedente. (questo pezzettino non va bene perché x noi bisognava mettere overe ol posto di aveva) questo pezzo va bene perché è coerente e coeso ol posto della virgola bisognava mettere che de giunse, x noi Pezzi successivi vanno bene perché sono coesi e coerenti.

This pair of pupils is revising a peer's text (on the left of the sheet). Considering the criteria previously identified (in particular, coherence and cohesion), they identify both the parts that are, according to them, correct and those that should be improved. Compared to the previous feedback, it is definitely more selective, contextualised and balanced (Nicol, 2009) while the suggestions regarding how the peer can improve the text are weak.

While, in the examples described above, the author of the text received feedback from a group or from a pair of classmates, situations have also been analysed in which the author of the text receives numerous pieces of feedback from peers. Fig. 3 shows the post-it notes that peers attach to a classmate's text: the teacher's strategy is to stick the texts to the classroom walls and let classmates freely attach their feedback. The benefit of this teaching situation is that each author receives multiple critical and improving comments on his/her text.

By combining the content of the different post-it notes, articulated feedback is provided which touches upon the different elements of the text. In addition to positive reinforcement, some suggestions are given on the aspects to be improved and to be expanded and indications are given to identify errors.

FIG. 3. *One text, lots of feedback. Fifth year class*
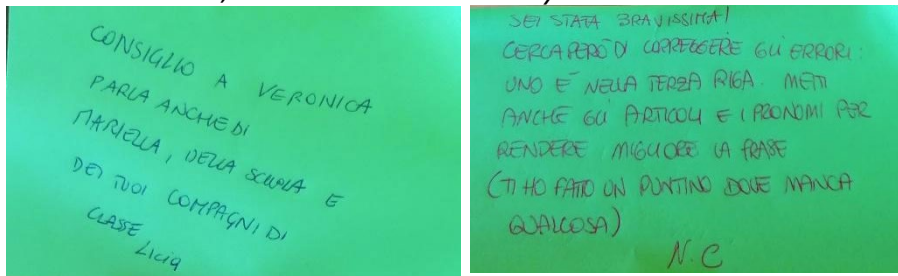
Concluding remarks

From this analysis, it can be seen that text revision can be a teaching situation favourable to promoting evaluative literacy through the formulation of peer feedback. From the earliest years of primary school, text revision has been considered a teaching subject and offered on an ongoing basis. The analysed observation and discussion protocols have highlighted that a climate based upon dialogue and collaboration is a common characteristic of the observed practices. A climate was created in which pupils could see that the teacher was not the only person holding the power to correct and evaluate but that each of them could play an active role in the revision and evaluation process. The acceptance of evaluative judgments made by peers was based upon the realisation that revision is a recursive practice and that any text can always be improved thanks to peer suggestions. However, in order to be able to produce complete and effective feedback for the recipient, a lengthy process must be followed in which the teacher acts as a model to demonstrate what it means to revise a text, how the revision can be done, and which instruments and strategies can be used. Furthermore, collaborative situations (in pairs, small groups, tutoring) were found to be particularly effective as they reduced the cognitive load required by revision, allowing for active negotiation and explanation of opinions. Text revision allowed pupils to talk to each other in order to establish the quality of a text and to construct joint assessment criteria. Furthermore, it gave the children the opportunity to train themselves in identifying what can be improved in a text and how to do it: these are fundamental experiences for developing evaluative skills that are required when providing feedback. Thanks to these contextual characteristics, text revision was carried out even with pupils in the first years of primary school, despite them being at the start of the acquisition process of the written language and not yet autonomous in text composition. All analysed practices, despite their diversity, considered writing to be a socio-cultural practice in which pupils were given the opportunity to write for a clear and explicit purpose and for different recipients.

The limitation of the presented work consists of the absence of a research design defined in advance aimed at identifying the effectiveness

of the text revision on the development of peer assessment and feedback literacy. Furthermore, no tools were designed to identify the advantages of the feedback for those who produced it, how it affected the improvement of the texts (their own and others) and self-assessment. This work must therefore be considered a reflection on practices, useful for identifying the characteristics of the learning environment that are necessary to develop evaluative literacy. It is a preparatory work for constructing a qualitative research design and instruments capable of identifying the effectiveness of these practices starting from primary school. To that end, the work presented here has shown that it would be beneficial to merge research on assessment and research on text composition: knowledge of the cognitive processes involved in revision, the difficulties encountered by pupils and the strategies used for promoting effective revision can guide the definition of a future research design on the promotion of feedback literacy.

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Peer Assessment and Peer Feedback to Foster Collaborative Learning and Consolidate the Writing Skills of University Students

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ABSTRACT: *According to national and international studies peer assessment and peer feedback have a major role in student learning processes (Topping et al., 2000; Moretti et al., 2015; Grion, Serbati, 2017). In the process of knowledge building the possibility of making use of peers can foster collaborative learning and the development of critical thinking. Within the university context providing writing activities in peer groups by introducing peer feedback and peer assessment allows to activate analysis, review and self-assessment processes of one's own paper, consolidating language skills (Boscolo, 2014; Piemontese, Sposetti, 2014). The paper provides the results of an exploratory survey conducted with 380 students from the Roma Tre University. The main goal was to investigate the effectiveness of peer assessment and peer feedback to help develop strategic skills, and to enhance collaborative writing skills in digital format. The peer assessment activities implied the formation of pairs of groups that mutually assessed the argumentative text produced, using a semi-structured grid. The students eventually answered a questionnaire. The analysis of the data showed that the work carried out in peer groups, through a process of collaborative learning, contributed to develop both metacognitive skills and the exercise of leadership of the students involved. The outcomes of the research confirm the importance of introducing writing tasks in the university context which, based on peer assessment and peer feedback, can improve the quality of the training.*

KEYWORDS: *Collaborative learning, University teaching, Peer feedback, Peer assessment, Digital writing.*

1. Introduction

In a complex social context marked by uncertainty there is now widespread awareness of the need to promote students' development of the skills and competences needed to become 'lifelong learners'. In the teaching-learning processes there are several variables to monitor in order to promote a student-focused approach that can ensure the acquisition of the most effective learning strategies for educational

success. The introduction of ongoing educational assessment practices into teaching activities that include self-assessment activities and the involvement of peers are essential to develop the ability to self-regulate one's learning (Harrison *et al.,* 2015). The studies by Hattie and Timperley (2007) that investigate through meta-analysis the effect size of different teaching tools and strategies, i.e., the magnitude of the effect of a variable on learning levels deriving from the difference between the mean of the experimental group and the mean of the control group, show how the use of feedback has a positive effect in improving student learning outcomes (high effect between 0.70 and 0.79). The authors underline how this result depends on the on the type and way in which the feedback is given, on the timing, as well as on the actors involved in the process. These aspects determine the effectiveness of the feedback. For example, the possibility of receiving ongoing feedback, theorized by the group coordinated by Novak (1999) as 'Just-in-Time Teaching' (JiTT) feedback, provided by the teacher during the lesson, immediately after tasks or activities carried out in class also making use of technologies, helps consolidate the knowledge acquired, and keeps the student's motivation and participation up (Novak *et al.,* 1999). Generally, in the national educational context the feedback is suggested by the teacher to the student in written or oral form, providing for different levels of customization, and depending on the activity or task under assessment. Nicol (2010) theorized the importance to overcome a concept of feedback intended as a tool aimed solely at trasmitting information on a particular product, moving from what he calls a 'monologue' to a 'dialogue', where feedback appears as a teaching resource through which active learning is promoted; those who receive feedback are involved in the construction of meaning, and can develop the ability to monitor, self-assess and self-regulate their own learning. Dialogue is characterized by: adaptability – i.e., the ability to respond to a student's specific educational need -, flexibility, interaction and reflexivity.

Winstone and Carless (2019) analyzed the old and new feedback paradigms. They used the term 'paradigm' somewhat informally to represent ways of thinking about feedback. The authors argue that in order to build the new it is necessary to reconsider and redesign the old, which is based on a predominantly transmissive cognitive approach, in which the teacher provides information to the student, limiting himself to considerations that do not include indications on how to act in a perspective of improvement. The practices referring to the new paradigm instead refer to the constructivist perspective which requires careful planning and systematic integration of feedback into the curriculum. New paradigm practices imply a so-called interactive 'partnership' between teacher and student, whose focus is on the shared construction of meaning. It is therefore necessary to focus less on the content that teachers provide to students, and more on how students generate, optimize and use feedback in their lifelong learning process (Winstone, Carless, 2020). In this same direction Nicol (2018) defined the so-called

'generative feedback', i.e. feedback capable of activating constructive learning processes in students starting from the analysis and review phase of one's own or others' product, both during the formulation phase of a judgement to be given to an individual and to a group of peers. In this respect, the strategic function of peer teamwork and the exchange of feedback to raise students' levels of achievement is widely recognized by national and international research, the results of which encourage their widespread use starting from the first cycle of education up to university (Topping *et al.,* 2000; Moretti *et al.,* 2015; Grion, Serbati, 2017; Restiglian, Grion, 2019). In fact, in the knowledge building process the possibility of using shared knowledge among peers promotes collaborative learning and the development of critical thinking. Among the educational devices that can be introduced in peer activities, the return of feedback appears to be effective for developing assessment and self-assessment skills, and improving the levels of achievement. Studies in the educational field show that involving the group of peers in assessment and mutual feedback activities appears to be particularly effective. Both in the giving feedback (GF) and in the receiving feedback (RF) phases it is interesting to analyze the processes implemented by the students in the two roles of evaluators and assessed (Li *et al.,* 2012; Li, Grion, 2019). Shared writing can be considered an effective educational device to consolidate language skills. Providing writing activities in peer groups by introducing peer feedback and peer assessment allows to activate processes of analysis, review and self-assessment of one's own work (Boscolo, 2014; Piemontese, Sposetti, 2014; Suryani *et al.,* 2019). The use of online learning environments and appropriate technological support also motivates students to carry out the production and revision of digital texts in a creative way (Guasch *et al.,* 2013; Liu, Lee, 2013; Bradley, Thouësny, 2017; López-Pellisa *et al.,* 2021).

Especially in the face of recent challenges in the educational field, imposed by the emergency situation, it is necessary to innovate university teaching, rethinking the theory of assessment and learning in higher education, implementing peer review and feedback practices, even ongoing ones (Nicol *et al.,* 2014; Grion *et al.,* 2017;Wisniewski *et al.,* 2020; Cecchinato, 2021), using mixed forms of feedback including both feedback in the classroom and in blended or completely remote mode (Topping, 1998; McCarthy, 2017; Serbati *et al.,* 2019).

2. Research methodology

The paper presents the results of an exploratory survey conducted within the Department of Educational Sciences of the Roma Tre University. The survey involved 380 students, enrolled in the first year of the course, who attended the course *Teaching organization and assessment processes* in the academic year 2020/2021. The main goal of the research was to investigate the effectiveness of peer assessment and peer feedback in the

university context to help develop strategic skills, and to enhance students' collaborative writing skills in digital format.

The students were involved in group activities aimed at consolidating digital writing skills through the production of short argumentative texts and mutual exchange of peer assessment through written feedback.

The first phase of the research consisted of splitting the 380 students into 40 groups who worked remotely using the Moodle platform of the Department of Education (formonline.uniroma3.it), and the environment set up for simultaneous Microsoft Teams communication. In this phase, instructions on the first activity of the peer-to-peer work were given, consisting of a digital paper of up to 600 words. During this very first phase the assessment grid was presented too, drafted by the research group, that would be used for peer assessment, with the aim of helping students write the argumentative text.

In the second phase of the research, students were asked to explain the choice of the keywords identified to build a concept map on the subject of assessment in the context of educational services for the age zero-six (Novak, 1991; Moretti, 2018). The text should also include references to scientific bibliographic sources and multimedia resources relevant to the argumentation developed.

The third phase involved peer assessment of the texts produced by the groups using the previously shared assessment grid and peer feedback activities. The paper produced by the groups was subject to peer assessment, and pairs of groups were formed to mutually assess each other using a semi-structured grid through which written feedback was given.

The assessment grid is divided into two sections (Table 1). The first one presents descriptors relating to the formal aspects of the text: the identity of the group, the layout used and any syntactic-grammatical inaccuracies; the second part focuses on the argumentative skills and ability to synthesize information, and on the use of sources and digital resources relevant to the text content.

The assessment was expressed on a scale from 1 to 4 where 1 is the lowest value and 4 the highest for each aspect assessed. The evaluators were also asked to write a short written feedback to justify the attribution of the value expressed by the scale.

Once they had the grid back, the groups in the fourth phase of the research were able to review and integrate their written papers on the basis of the feedback received from peers.

The fifth and last phase had the purpose to collect the students' point of view through a semi-structured online questionnaire, to understand if and how teamwork and the peer assessment and peer feedback activities had contributed to qualify the training course and, specifically, to develop strategic skills for educational success. The tool, consisting of 20 closed and 2 open questions, was administered online to all students who took part in the survey approximately 2 months after the end of the course. The closed questions were about the collection of ascriptive data (age,

degree course, year of course, type of high school diploma and year of the exam) as well as specific questions regarding: the organization of the remote writing task of the argumentative text, the use of the assessment grid during the writing phase, the potential difficulty in formulating written feedback for the assessed group, the grid size where the peer feedback was considered adequate, the skills that the peer teamwork helped develop more. The open questions focused on a brief description of the experience of remote peer teamwork, and the ways in which this type of activity helped qualify the students' training.

TAB. 1. *Peer assessment grid of the argumentative text*

FORMAL ASPECTS OF THE TEXT	In official documents it is important to:	Indicators	Feedback on the work done
Identity	first of all clarify your identity (description of the working group)	dichotomous scale: present/absent	
Layout	choose a suitable layout (check text font, size, use of bold, italics, underlined, highlighted and any colors in the text)	1-4 scale	
Syntactic-grammatical inaccuracies	read over to correct any syntactic and/or spelling inaccuracies	1-4 scale	
FORMAL ASPECTS OF ARGUMENTATION	In the proposed writing task it is important to:	Indicators	Feedback on the work done
Argumentative skills	discuss pertinently to instructions	1-4 scale	
Ability to synthesize	effectively synthesize what requested, respecting the word limit as per instructions	1-4 scale	
Use of relevant key words	identify and use key words that are relevant to the argumentation	1-4 scale	
Use of original key words	express and use original key words as required	1-4 scale	
Use of sources	explain the choice of key words referring to the sources	1-4 scale	
Use of multimedia	use multimedia (pictures, links to videos, useful websites or documents) to explain one's choices	1-4 scale	

3. Outcomes of the research

The students were divided into 40 groups of about 10 people. Specifically, the groups, divided into pairs, had to give each other mutual written feedback guided by the criteria set out in the grid. The outcomes of the research will mainly focus on the analysis of the data collected through the semi-structured online questionnaire on peer activity. The questionnaire was answered by 100 students with an average of about 2 members for each working group.

91.4% of the respondents were freshmen enrolled in the academic year 2020/21 between the age of 19-21. The students who declare that they have attended more than 75% of the *Teaching Organization and*

Evaluation Processes course are 69%, while 18% have attended between 50 and 75% of the lessons.

The research group shared the peer assessment grid with the students from the beginning of the course with the aim of helping them write the argumentative text. 89% of the respondents said they started using the grid at the moment of writing the digital text. Knowing that the writing work would be subject to peer assessment, most of the working groups took into consideration the elements included in the assessment grid during the text drafting phase. The possibility of knowing in advance the elements under assessment allowed the students to focus on all the aspects considered fundamental to write a digital argumentative text (layout, syntactic-grammatical inaccuracies, argumentative skills and ability to synthesize information, correct use of bibliographic sources and multimedia resources).

During the drafting of the text 39% of the students took into consideration the elements included in the assessment grid 'a lot', 49% 'quite a lot', and only a small percentage made little use of the grid (Fig. 1).

FIG. 1. *How much the assessment grid was taken into consideration during the text drafting phase*
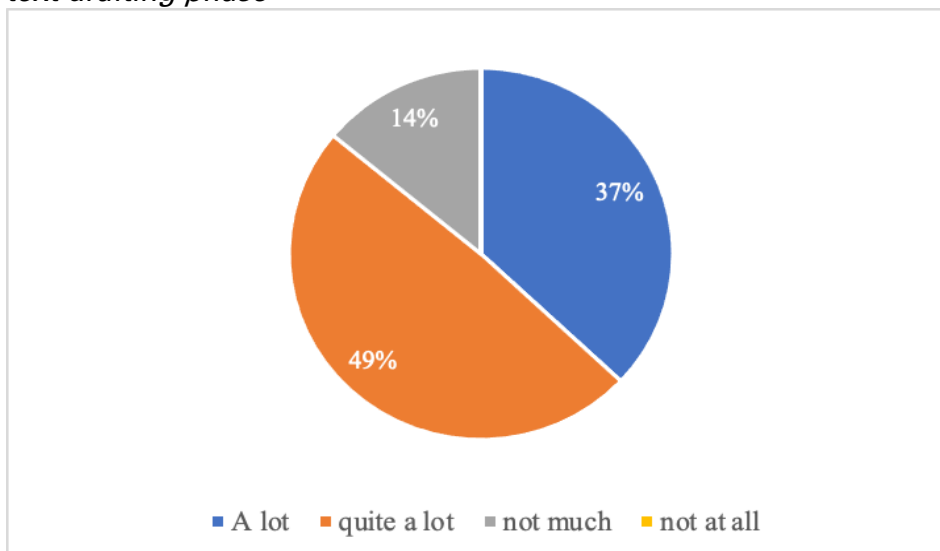
A further question was useful to examine in depth the *giving feedback* (GF) phase, verifying any difficulties encountered by students in assigning the score for each descriptor in the grid and in giving written feedback to the assigned group. At this level 90% of the students said they have not encountered any difficulties in peer assessment. The organizational dimension of intra-group work was analyzed too. Specifically, the writing mode of the argumentative text was investigated: whether it was carried out by only one member of the group and reviewed by all; whether it was carried out in a shared and simultaneous way (e. g. collective writing) or in a shared and asynchronous way (e. g. everyone wrote a part that was then shared at a later time). 43% of the

students said they used collective, shared and simultaneous writing using the Microsoft Teams and Formonline Department platform. A good percentage (30%) used shared writing in the asynchronous mode, and only a smaller percentage (22%) chose to delegate the writing of the argumentative text to another member and then review it all at a later time. During the production phase of the text, the possibility of using technological tools enhanced peer work in the university context (Fig. 2).

FIG. 2. *Organization of the digital, intra-group writing mode.*
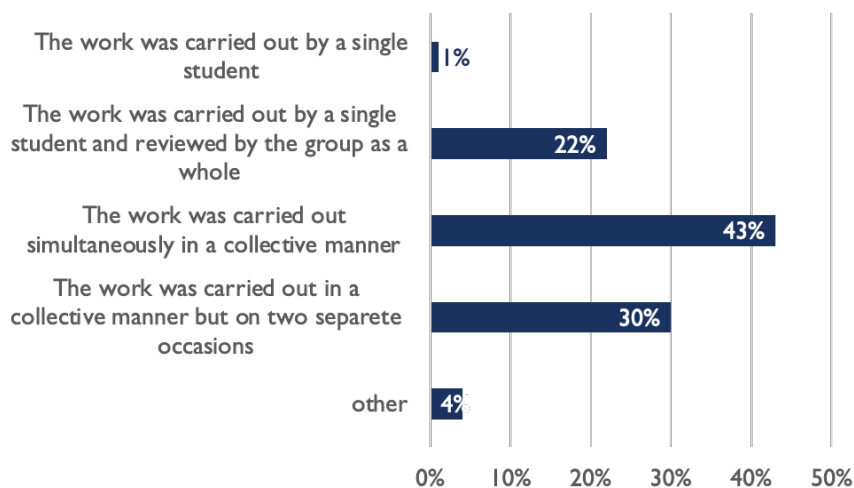
The research group also investigated the 'receiving feedback' (RF) phase, asking students to examine the quality of the feedback received, particularly if it was appropriate compared to their own perception of the quality of the work performed. The answers of the students revealed that 24% considered the feedback adequate with regard to the ability to synthesize, and 23% for the argumentative skills shown. Reporting the use of bibliographic sources incorrectly was considered adequate by 19% of respondents.

The grid was used by the groups to examine their own products first, and then those of others they assessed. This double activity of examining the assessment process has allowed to compare the two different works performed. The peer assessment phase of the assigned group's writing work stimulated critical self-assessment in most of the students regarding collective digital writing activities. The skills that the students believe they have developed most after peer assessment and peer feedback concern communication skills (49%) and interpersonal skills (42%) considered essential for working in a group, and meta-cognitive skills (48%) considered essential for university studying. Digital writing skills (14%) were perceived as less developed by freshmen accustomed to using communication and information technologies (Fig. 3).

FIG. 3. *Skills developed after peer work.*
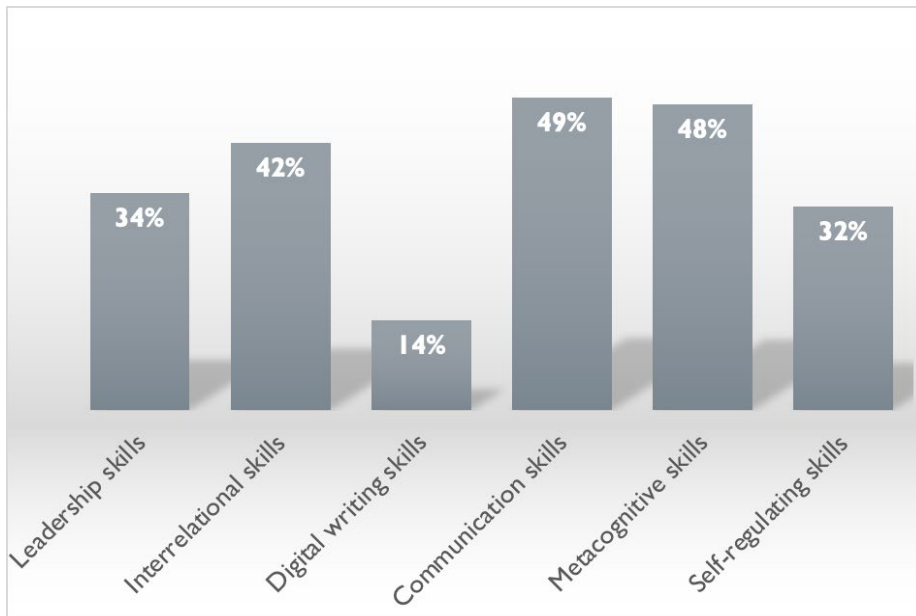
The answers to the open questions of the questionnaire administered to the students highlighted that overall the remote teamwork was an opportunity to qualify the students' training by consolidating some cross-cutting skills such as the communicative, relational and self-assessment skills of the students involved:

> There was a lot of collaboration within the group, no arguments, only exchange of ideas, mutual aid and clarifications on unclear topics.

> The remote group activity has improved the relational aspect in my training and the exchange of views in the careful search for reliable scientific sources in order to complete the job.

Regarding peer assessment and feedback, students said that

> the feedback we received from the other group made us understand the writing mistakes in our argumentative text and was very useful to improve it later

> The feedback helped me a lot, it highlighted inaccuracies that I had considered irrelevant

> e encountered difficulties when we got an assessment from the other group that seemed inappropriate to us, but we sorted it out by using teaching materials to improve our text anyway.

The data analysis showed that peer teamwork, resulting in collaborative learning, helped develop both meta-cognitive skills and the exercise of leadership of the students involved.

Final conclusions and future prospects

The adoption of a dialogic dimension, based on the idea that assessment facilitates students' learning processes, allowed to focus our survey on the dynamics that is typical for shared construction of meaning and peer knowledge starting from the analysis or review of one's own or others' product (Nicol, 2018; Windstone, Carless, 2020).

In general, the research confirms how relevant peer assessment and peer feedback are for the qualification of university students' learning processes (Topping *et al.,* 2000; Moretti *et al.,* 2015; Grion, Serbati, 2017). In particular the survey highlights the importance of introducing writing tasks in the university context, based on peer assessment and peer feedback to help improve the overall quality of the training. In fact, the exploratory research interestingly shows that collaborative argumentative text processing in digital format allowed the students to improve their writing skills (Boscolo, 2014; Piemontese, Sposetti, 2014; Suryani *et al.,* 2019), but especially strengthen and develop personal communication, relational and meta-cognitive skills.

Apparently, the effectiveness of collaborative activities relating to the development of a plurality of skills, mainly depends on the attention paid to three different dimensions that appear to be closely linked to each other: clarification of assessment criteria, organization of giving feedback (GF) phase and organization of receiving feedback (RF) phase (Li *et al.,* 2012; Li, Grion, 2019).

Teacher's early clarification of the assessment criteria of the writing tasks as well as the organization of discussion and sharing sessions are crucial in maintaining the peer group's focus on the assigned task and in reconciling its positive outcome with the expected learning goals.

Students' reflection on how to manage the giving feedback (GF) phase underlines the importance of involving them in the formulation of targeted, contextualized and useful information in a peer context. The activities at this stage imply the need for students to further examine the assessment criteria used, and adopt a new perspective aimed at facilitating the understanding of the feedback by the recipients.

The analysis of the receiving feedback (RF) phase also highlights the dialogical and generative value of student active involvement in activities that require students to examine the degree of adequacy of the feedback received as far as individual assessment criteria are concerned, and to appreciate its quality and usefulness in relation to the established learning goals. The results of the research highlight some challenging aspects characterizing the phase of receiving feedback, in particular the gap between the individual or group perception of how the task was carried out, and the feedback received.

The research confirms that collaborative work and feedback exchange are not educational activities by themselves, but that they can foster learning in cases where they are the result of carefully designed trainings, taking care of the relationship between teachers and students and that with peers; making sure that feedback is the product of a dialogue and

not a one-way process. In this perspective we can say that the formulation of peer feedback is strategic for the activation of processes of analysis, revision, integration and processing of knowledge in students (Grion, Tino, 2018; Moretti *et al.,* 2015). The ongoing emergency situation and the new educational challenges, especially among freshmen, suggest to implement peer review and peer assessment in higher education, and to enhance feedback both in the classroom and in the blended mode, or even in remote teaching (McCarthy, 2017; Serbati *et al.,* 2019; Wisniewski *et al.,* 2020).

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School System and Daily school. Learn about Practices and Make Sense of Evaluation to Promote Innovation

Measuring the Mathematics Abilities of Students with Special Education Needs through a Computer-Based Multilevel Adaptive Test

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ABSTRACT: *In this paper we present results on the estimation of mathematics skills of Italian grade 10 students with special educational needs The estimation was carried out by means of a computer based multilevel adaptive test 1 – 3 – 3 (MST) constructed within the framework of a doctoral research in Social, Developmental and Educational Research Psychology. An item bank was used to construct the MST test. Verification of the unidimensionality of the bank was done through exploratory factor analyses (EFA) and analysis of model fit indices with Rasch's model (Rasch, 1960) being calibrated. Verification of the best measurement properties of the test compared to a linear test was performed by comparing information functions. It is shown that this type of test is able to provide estimates of the ability of students with a considerable level of accuracy, even at the extremes of the range of abilities and not only in a neighborhood of the mean value. In particular it was observed that the test is also suitable for students with special educational needs Such students are distributed across all ability levels, although the majority of them are in the low ability range.*

KEYWORDS: *Adaptive test, MST test, mathematics, special educational needs*

Introduction

The results reported in this brief article are a deepening of those of a research focused on the realization of an adaptive multilevel model for the estimation of mathematics skills of Italian grade 10 students (Botta, 2021).

Previous experience as a mathematics teacher in different kinds of secondary schools (vocational, technical and lyceum), has allowed me to observe the significant diversity that exists in the student population, from different points of view, such as social, cultural, economic status, and citizenship. In our school system, normatively speaking, the basic math skills acquired by students in grade 10 should be the same, but in reality, the situation varies greatly from one type of school to another.

The wide and varied nature of student population means that, even if we believe that the INVALSI[1] tests are a valid tool for system surveying, they have a structure that is not adequate for the population we wish to study. These tests in fact, although computer based, have a substantially linear structure that does not allow to estimate the ability in mathematics of the individual student with a satisfactory accuracy for that part of the population that differs significantly from the national average.

Therefore, an adaptive instrument with characteristics better suited to this type of population was tested as part of the research.
Among the different types of adaptive tests, in which the difficulty of the test is progressively adapted to the student's ability, the choice fell on computer based multilevel tests because they not only provide greater precision of measurement along the entire continuum of ability, but also ensure good control over content validity (Weiss, 1985; Luecht *et al.,* 2006).

1. Multilevel test design

The design of a multilevel test may vary with respect to the number of levels, the number of modules that make up each level, the number of items per module, and the paths one is allowed to take in moving from one level to another.

The most appropriate settings for each of these variables depend on the objectives of the test, the specific features desired, and the expected level of measurement accuracy (Zheng *et al.,* 2014; Veldkamp, 2014), but are also influenced by the characteristics of the bank, particularly in relation to the availability of items with given psychometric or content characteristics.

In multilevel testing (MST), subjects receive different sets of items from pre-assembled tests that correspond to the predicted estimate of their skill level. Although this has many potential benefits, assembling MST tests presents new challenges compared to assembling traditional linear tests because there are many different paths possible within the test for which adequate differentiation in terms of measurement accuracy must be ensured (Zheng *et al.,* 2014)

A popular framework for multilevel testing is based on the construction of parallel panels, i.e., having identical characteristics in terms of test specifications and comparable measurement characteristics (Samejima, 1977; Lucisano, Salerni, 2007), each consisting of a single MST test. The need to develop multiple panels in large-scale administrations obviously stems from the need to reduce the degree of exposure of each test, to

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[1] INVALSI (National Institute for the Evaluation of the Education and Training System). The Institute has the task of preparing and carrying out periodic and systematic checks on the learning outcomes of Italian students in grades 2, 5, 8, 10 and 13, as regards Italian, Mathematics and English.

reduce the possibility of cheating and to increase the opportunities for test administration.

Each panel is divided into a number of adaptive levels, each of which consists in turn of one or more modules.

Modules of the same level are centered on different levels of difficulty. During the test, subjects are directed to the most suitable module of a given level based on their performance in the set of previous levels.

The set of modules that a given subject receives is called a pathway (or path).

Each pathway is equivalent to a form of a linear test, but the different paths that make up a panel are never parallel forms because they are centered on different levels of difficulty.

In the context of this research, a single panel was constructed and administered.

2. The built MST and its characteristics

In order to carry out the test, a bank of items (Choppin, 1976) consisting of 497 items, well distributed in relation to the mathematics framework and the level of difficulty, was constructed through two distinct phases of pre-testing. A total of 29 forms were pretested, anchored to each other, on a sample of 234 schools and 10493 students, distributed throughout the country. Verification of the unidimensionality of the bank was carried out through two exploratory factor analyses, one for each pretest, and analysis of model fit indices with Rasch's model, under calibration.

Two factor analysis were carried out for each form: one before the calibration of the bank, to identify the items that did not have a good loading with the factor, and one after the calibration to verify that the unifactorial solution was acceptable.

Considering the composition of the item bank, in particular the availability of items in relation to the parameter of difficulty, it was considered appropriate to divide the set of items into three classes of difficulty, which are sufficient to obtain three distinct profiles of skill level.

In order to define the number of levels of the MST test, two elements were essentially taken into consideration: the time available for the administration of the test (1 hour and 30 minutes), which was a constraint that could not be overcome, given the availability of schools, and the level of precision of the estimate of the ability that one wished to obtain. Furthermore, in a study by Luecht and Nungester, it was found that for a number of operational, psychometric, and safety reasons, one of the most efficient configurations is the 3-level MST model (Luecht, Nungester, 1998).

Therefore, it was decided to implement a 1 – 3 – 3 MST model, such as the one shown in Figure 1, consisting of a single panel, in which each path was composed of 46 items and balanced with respect to the

framework. For the optimization of the measurement properties, we chose to maximize the Information function $I(\vartheta)$, defined as

$$I(\theta) = \sum_{j=1}^{N} \left(P_{ij}\right)^2 \times \frac{Q_{ij}}{P_{ij}}$$

where

$$P_{ij}\left(\theta_j, b_i\right) = \frac{e^{\left(\theta_j - b_i\right)}}{1 + e^{\left(\theta_j - b_i\right)}}$$

is the function expressing the probability that a student of given ability θ_j will give a correct answer to item i, according to the 1-parameter IRT model.

The cardinality of the modules was defined in such a way as to ensure that the information curves of the modules of each stage were sufficiently different from each other to ensure real differentiation of the paths within the test. The cardinality of the initial module was defined so as to be appropriately proportionate to that of the level modules: an initial module that is too small does not allow for a good initial estimate of ability, one that is too large does not allow for good information on each level of ability because it leads the test to have characteristics more similar to a linear test than to an adaptive test.

The basic idea is that the initial form provides an initial estimate of the student's ability and that the intermediate form, intentionally more substantial, allows for correction of any errors in the initial estimate and a significantly more refined estimate. The final module provides further refinement of the ability estimate within the class of ability (High, Medium, or Low) identified for the subject in the previous steps.

This balance between the cardinality of the modules of the different levels averted the risk that the estimation of ability, and therefore the classification of the subject, was predetermined by the initial module and at the same time ensured an excellent measure of information for each level of ability.

FIG. 1. *MST 1-3-3 model*
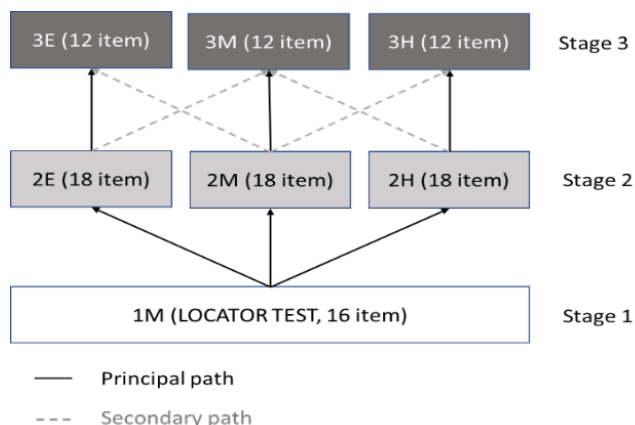
The letters E, M and H indicate the average difficulty of each module (E: low difficulty, M: medium difficulty, H: high difficulty).

The design also provides that in passing from one level to another, it is not possible to take steps forward or backward that are longer than a single level of difficulty, and that within each level it is possible to move around by reviewing the items and modifying the answers, a feature inhibited instead between one level and another.

The paths that the student can take within the test are indicated by arrows. Each student makes only one pathway consisting of the initial module, a module of level 2 and a module of level 3. As can be seen in figure 1 there are two types of path, the main path, indicated by the continuous lines, for which in the passage from level 2 to level 3 the class of assignment of the subject does not change, and the secondary ones, for which instead the class of assignment changes going from level 2 to level 3. It can be observed that some pathways are precluded, for example, one cannot move from module 2E to module 3H. This does not significantly affect the effectiveness of the test because extreme changes in ability are unlikely, and if there were they could be reported as outliers (Luecht, Nungester, 1998).

The administered MST test consists of 7 paths, each of which results in an estimate of the student's ability within a given range of the ability continuum.

In the design phase of the test, we provided three ability ranges, from which the adaptive modules that constitute the test itself were constructed. The ranges were constructed from the average ability of our pre-test population, $\theta_\mu = -0.406$, each amplitude one standard deviation, $\sigma = +1.224$, as can be seen in Table 1.

TAB. 1. *MST Paths*

Path	Modules	Range of ability θ	Lower bound	Upper bound	Center
Path 1	1M+2E+3E	Lower	-2.243	-1.018	-1.631
Path 2	1M+2E+3M	Medium	-1.018	+0.206	-0.406
Path 3	1M+2M+3E	Lower	-2.243	-1.018	-1.631
Path 4	1M+2M+3M	Medium	-1.018	+0.206	-0.406
Path 5	1M+2M+3H	Upper	+0.206	+1.430	+0.818
Path 6	1M+2H+3M	Medium	-1.018	+0.206	-0.406
Path 7	1M+2H+3H	Upper	+0.206	+1.430	+0.818

2.1. Verification of MST test properties

During the test assembly it was possible to set and comply with stringent constraints covering the framework which guaranteed the validity of the test content. For each content area there are 26 or 27 items in the complete MST test. The distribution of items in each path is balanced with respect to the content areas.

Verification of the test's measuring capacity, in terms of its information function, was carried out by comparing the adaptive test with linear tests constructed on the same item bank. In particular, a comparison was made

with a linear test consisting of the same number of items as the MST test and centered on the average ability of the pre-test sample. The comparison performed showed that the MST test is more informative across the range of abilities of interest, as can be seen in Figure 2 and Table 2.

FIG. **2**. *MST vs Linear*
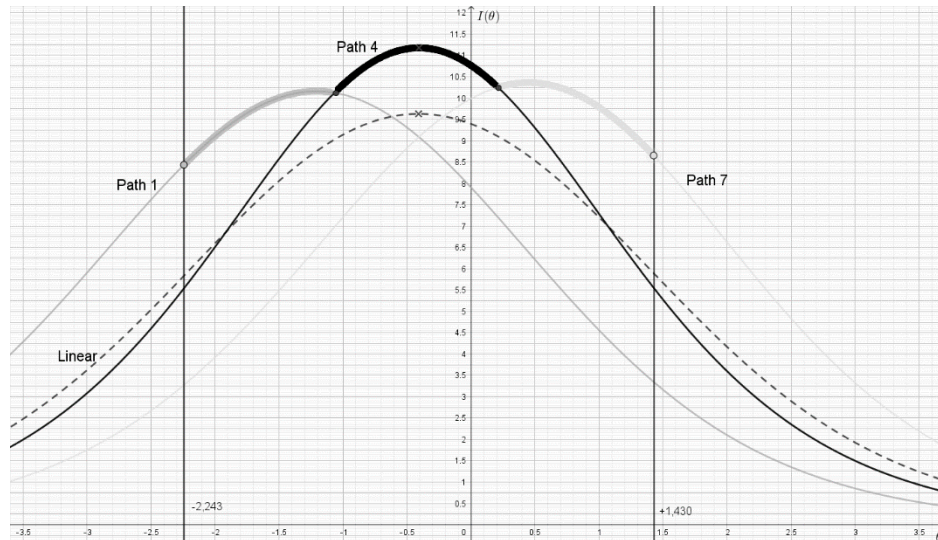
Table 2 reports the values of the Information function of the main paths of the MST test and of the Linear 46 test, at the extremes of the interval, $\theta = -2.243$ and $\theta = +1.430$, at the center of the interval, $\theta = -0.406$, and around at the decision nodes, $\theta = -1.06$ and $\theta = +0.21$.

TAB. **2**. *Information function of MST path vs Linear test.*

θ	Path MST	Linear	MST – Linear
-2.243	8.43	5.54	2.89
-1.060	10.12	9.04	1.08
-0.406	11.12	9.63	1.49
+0.210	10.24	9.10	1.14
+1.430	8.64	5.54	3.1

2.2. Routing rules

Of fundamental importance is the definition of routing rules within the test (Luecht *et al.,* 2006). In our test design, the following rules were defined:

- entry rule: performance of the 1M entry module, based on which to estimate the student's skill level against which subsequent estimates will be made;
- exit rule: the test ends for all with the development of a module of level 3;
- internal routing rules: at the end of each level, an estimate of the student's ability is made (or equivalently, the calculation of the true score) on the basis of the answers given overall to all the items that

have been administered so far, necessary to determine the next module to be assigned.

In the design that has been defined, as already mentioned, there are forbidden paths, at each passage of level a student can make a jump forward or backward from the previous module equal to only one range of ability, for example from a module of low difficulty, 2E, you can go to a module of medium difficulty (3M) but not to one of high difficulty (3H).

At the end of the test, the candidate's ability is estimated on the basis of the answers to all the items of the course taken.

Considering the administration software available, it was decided to use the true score as the discriminating parameter for the assignment of the next module at each change of level. Only at the end of the test, on the basis of the answers given to all the items administered, was an estimate of ability made. This choice greatly simplified the test administration algorithm, because it avoided the need to perform an actual skill estimate at each decision point, which would have required the presence of a specific dedicated component in the administration software.

The equivalence between the estimation of skill and the calculation of the true score is not literally, but Luecht and Nungester (1998) empirically verified that the number of correct responses is probably sufficiently accurate for the purpose of selecting the next testlet.

The process for identifying cut-off values for assigning the most appropriate module in the transition from one level of the test to another is called number-correct scoring and consists of incrementally calculating the extremes, lower and upper, of the number of correct responses associated with a given navigation decision. For example, in the adaptive transition from stage 1 to stage 2 we will need to know three pairs of values, corresponding to the lower and upper extremes of the number of correct responses to module 1M to move to module 2E, module 2M, and module 2H, respectively, as shown in Figure 3.

FIG. 3. *Score ranges in the transition from Level 1 to Level 2*
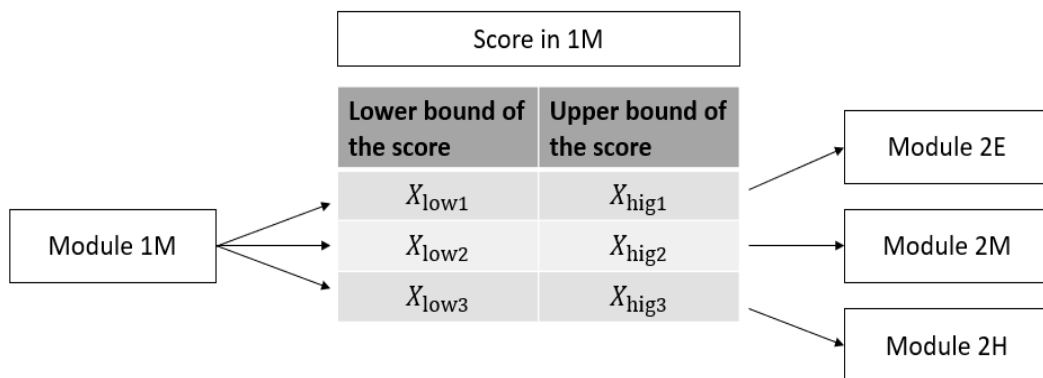
Once the intervals have been identified, it will be sufficient to predict in the navigation algorithm that if the score obtained by the student belongs to a given interval in the next level, he or she will be assigned the corresponding module.

At this point we proceed with identifying all the score intervals necessary to move from a module of a given level to a module of the next level by adopting the process outlined by Luecht, Brumfield, and Breithaupt in 2006 (Luecht *et al.,* 2006).

Given the value of the skill corresponding to a certain decision node, θ_d, and the item difficulty parameters for the set of modules that compose the test, defined $k = 1, 2, \ldots 7$ as module number, defined n_k as the number of items in a given module k and defined $i = 1, 2, \ldots n_k$ as the number of items, if M is the number of modules administered up to the decision node, then the corresponding true score estimate is:

$$X_d = \sum_{k=1}^{M} \sum_{i=1}^{n_k} P(\theta_d, b_i)$$

where

$$P(\theta_d, b_i)$$

is the item response function for the one-parameter IRT model.

The calculated value can be approximated to the score corresponding to the number of correct answers given.

The following is the routing table as a function of true scores.

TAB. 4. *Routing table*

Stage to be accessed	Completed modules	Lower end of the score	Upper end of the score	Module to be assigned
1		0	0	1M
2	1M	0	6	2E
2	1M	7	10	2M
2	1M	11	16	2H
3	1M,2E	0	17	3E
3	1M,2E	18	24	3M
3	1M,2M	7	12	3E
3	1M,2M	13	22	3M
3	1M,2M	23	28	3H
3	1M,2H	11	17	3M
3	1M,2H	18	34	3H

3. Field test administration and results

3.1. The sample
The administration of the field test took place, with the support of INVALSI, in the period from September to December 2018 and involved a sample of 4195 students representative of the population of pupils attending in Italy the third class of secondary school in the school year 2018-19, in technical institutes, vocational institutes and high schools.

The choice of administering the test to pupils at the beginning of the third year, instead of at the end of the second, was dictated by the need to finish the administration and analyze the data in times compatible with those of carrying out the PhD. It is also believed that in the first period of the third year, skills and knowledge acquired in a consolidated manner in the previous two years can be effectively observed.

The sample was selected using a two-stage method.

At the first stage, a judgment sample of schools (82) was identified in each of the three major Italian geographic areas, North, Central, South, and Islands. At the second stage, a sample of classes was selected in each school, at least two per school.

Students who, for technical reasons, could not finish the test, and therefore did not take the Level 3 module, 59 students, or had unresolvable login difficulties, 4 students, were then eliminated.

Analyses were performed on an actual sample of 4132 students, including 278 students with BES or disabilities.

The following table shows the breakdown of the sample into geographic macro-areas.

TAB. 5. *Distribution of the sample in geographical macro-areas*

Geographical macro-area	Percentage distribution	Sample size
North	34	1408
Center	34	1406
South – Islands	32	1318
Italy	100	4132

Table 6 shows the distribution of the sample across the various school categories.

TAB. 6. *Distribution of the sample among school categories*

School category	Percentage distribution	Sample size
Vocational	30.3	1253
Technical	31.1	1286
Lyceum	38.6	1593
Total	100.0	4132

3.2. The outcomes of students with special education needs
In this research it was decided to keep within the sample students with special educational needs (SEN), often neglected in this type of research. The basic idea is that, since it is an adaptive test, it should be able to

accurately estimate the ability of these students, also considering the fact that the test was structured in such a way as to be carried out in a more extended time compared to a classic linear test.

The sample includes 278 students with special educational needs for whom we analyzed the distribution by course of study and the distribution across paths on the MST test.

The bar chart in Figure 4 illustrates the distribution of students by school category, comparing, within the overall sample, the distribution of students with SEN with that of all students.

FIG. 4. *Distribution of students by school category, comparing the distribution of students with SEN with that of all students*
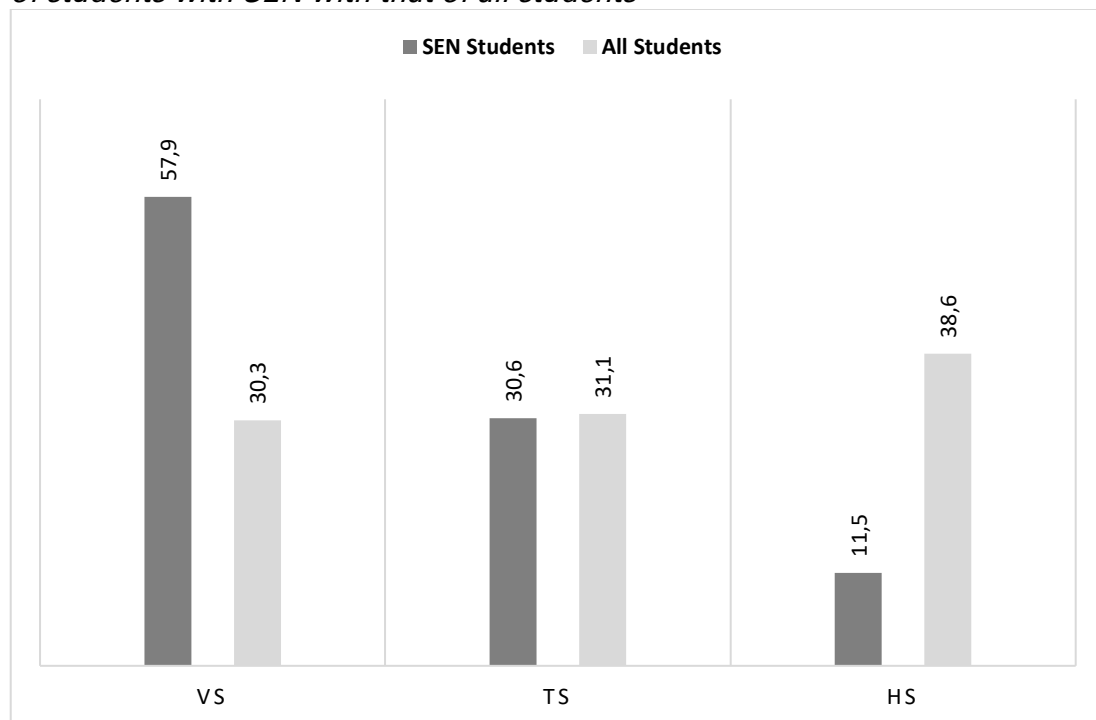
As can be seen, the two distributions are significantly different since the majority of students with special educational needs attend vocational institutes and only slightly more than 10% attend high schools. In technical institutes the two distributions have almost equal values. The distribution substantially reflects the national data.

Table 7 and the relative bar chart in Figure 5 show the distribution of students with special educational needs within the MST test pathways, again in comparison with the distribution of the general sample.

It can be observed that the majority of students with SEN are assigned to pathways 1 and 3, which insist on the left skill interval and end with the module centered on the lowest level of difficulty, with a marked difference from the general distribution of students. In contrast, the two distributions differ very little in pathways 2, 4, and 6, which insist on the middle range of abilities.

TAB. 7. *Distribution of students among MST test pathways – Comparison of students with SEN and entire sample*

Path	Modules	Number of students	Percentage	Number of students with SEN	Percentage SEN
Path 1	1M+2E+3E	1065	25.8	156	56.1
Path 2	1M+2E+3M	226	5.5	15	5.4
Path 3	1M+2M+3E	162	3.9	18	6.5
Path 4	1M+2M+3M	1023	24.8	59	21.2
Path 5	1M+2M+3H	97	2.3	5	1.8
Path 6	1M+2H+3M	371	9.0	10	3.6
Path 7	1M+2H+3H	1188	28.0	15	5.4
		4132	100.0	278	100.0

Finally, the difference is very marked in relation to paths 5 and 7, which insist on the right range of abilities and end with the module centered on the highest level of difficulty. Even here, however, we find about 7% of the sample of students with SEN.

FIG. 5. *Distribution of Students with SEN across pathways on the MST test compared with that of all students in the sample*
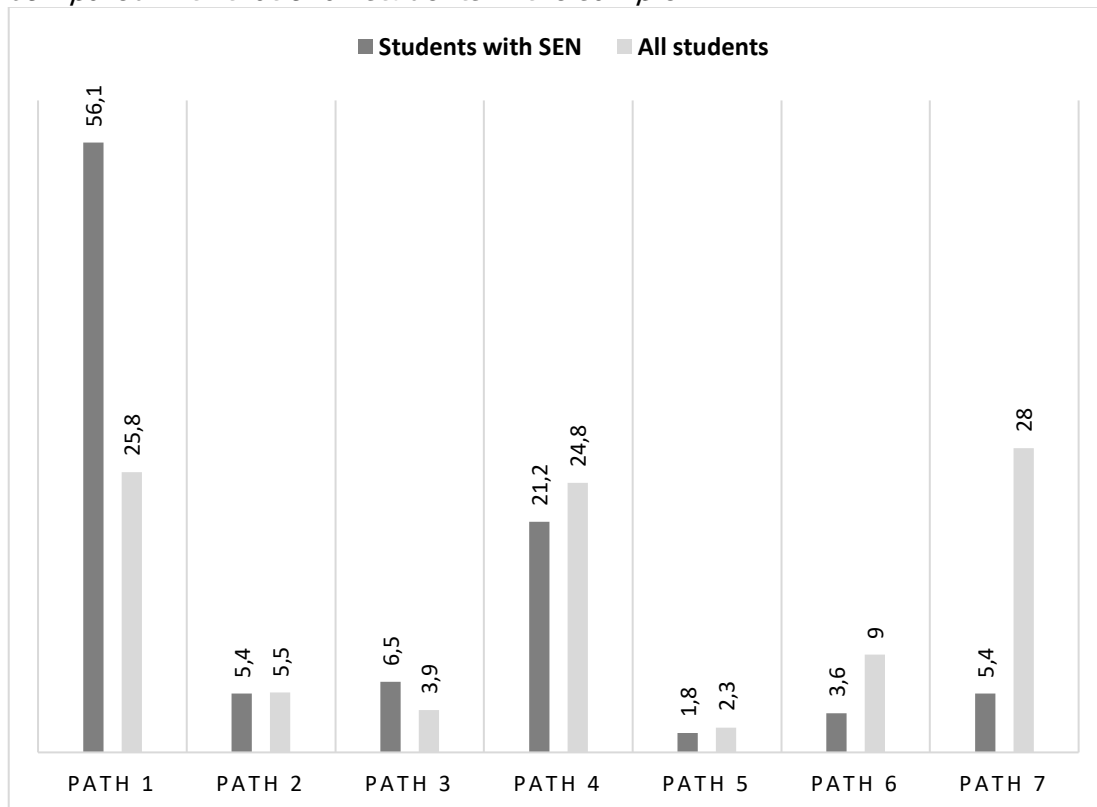
Another interesting analysis is that of the average skill level of the students who took each pathway.

As can be seen in Figure 6, students in Paths 1 and 3, which end with the 3E module, are in distinct areas of the reference ability range ($\theta_1 = -1.631 \; and \; \theta_3 = -1.431$), specifically path 1 students have an average ability closer to the lower end of the range and path 3 students have an average ability closer to the upper end.

FIG. 6. *Average ability of students with SEN*
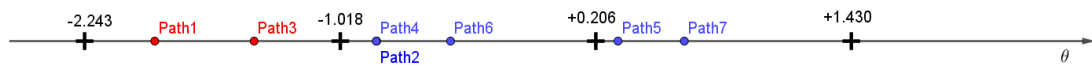
A similar situation occurs for paths 5 and 7, which end with the 3H form, although in this case they are both closer to the lower extreme than the upper extreme ($\theta_5 = +0.312$ and $\theta_7 = +0.360$).

What happens for the three paths that end with the 3M module is peculiar.

In fact, the average abilities of students in pathways 2 and 4 are substantially overlapping and very close to the lower end of the average range of abilities ($\theta_2 = -0.844$ and $\theta_4 = -0.846$), while the average ability of path 6 students is very close to the middle of the reference range ($\theta_6 = -0.490$), and thus to the average ability of the entire population $\theta_\mu = -0.406$.

It is interesting to observe the same trend also from the point of view of the number of correct answers provided by students with SEN within each pathway.

TAB. 8. *Distribution of students among MST test pathways – Comparison of students with SEN and entire sample*

Path	Modules	Theoretical minimum of the number of correct answers	Theoretical maximum of number of correct answers	Minimum number of correct answers of students with SEN	Maximum number of correct answers of students with SEN
Path 1	1M+2E+3E	0	29	7	25
Path 2	1M+2E+3M	18	36	21	25
Path 3	1M+2M+3E	7	24	11	21
Path 4	1M+2M+3M	13	34	13	29
Path 5	1M+2M+3H	23	40	25	31
Path 6	1M+2H+3M	11	29	15	22
Path 7	1M+2H+3H	18	46	20	36

As can be seen from Table 8 the maximum number of answers given is always less than the theoretical maximum, on average the difference is 7 correct answers, except for path 3. In the case of the minimum number of correct answers the average difference is less and equal to 3 correct answers more than the theoretical minimum.

Conclusion

As is extensively illustrated throughout the research as a whole, the MST test generally allows for more reliable estimates of student ability within a wide range of the continuum, improving estimates in general for all students and particularly for those at the extremes of the range. All of these elements show that the test, thanks to its adaptability, is also

effective in estimating the abilities of students with special educational needs, and it is clear that, from the point of view of greater equity in the system, it is essential to have a flexible instrument that can also investigate the characteristics of that part of the population for which other types of tests are able to provide only limited information and a low level of measurement accuracy.

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Innovating the School: Comparing the Point of Views of Students, Teachers and Head Teachers

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ABSTRACT: *The aims of this paper is to investigate the innovation processes taking place in schools, in order to understand the perception of change from a point of view of students, teachers and headteachers. The evaluation by all parties is the first step towards improvement with a view of 'Evaluation for Empowerment' (OECD, 2012). The study involved a sample of 52 schools, 1880 students, 144 teachers and 52 school leaders of secondary schools belonging to the Movimento Avanguardie Educative for at least two years. Two types of quantitative tools were used: questionnaires about four dimensions of innovation framework developed by researchers of INDIRE (Nardi et al., 2020); standardized psychological tests on students aspects (such as study strategies, metacognitive sensitivity (Mori et al., 2020) and on teaching practices and job satisfaction. The correlations that emerge at school level between the different actors are reported here. The results will be discussed as evaluation elements to stimulate the rethinking of the school in an attempt to give voice to the three main subjects of change (Oliva, Petrolino, 2019).*

KEYWORDS: *Evaluation, innovation, Data-drive process, School and class level.*

Introduction

The contribution focuses on the theme of evaluating innovation processes as an empowerment tool, which aims to involve all the actors of the school both at the class level, to improve and innovate teaching processes in order to make them more 'supportive' and 'activating', and at the school level, to improve the ability to report and use the results of the training action to direct decision-making flows (Integrated multilevel model, Scheerens, 2018).

The theme of evaluation is an ever-present theme that presents us with difficult choices between what can be evaluated; what you really need to evaluate and how to evaluate. Today, a new way of thinking about evaluation as a tool for continuous improvement is emerging, based on self-evaluation (School Self-Empowerment – SSE), which aims to

promote school improvement through a systematic change in internal processes (Capogna, 2018).

The main intent of evaluation empowerment is to improve the internal processes of the school (Harris, 2001), supporting the capacity for positive change through the enhancement of self-assessment tools as Hopkins tells us (2001), with the hope that it will be functional to the professional development of school leader, middle management and teachers, in order to promote both the overall advancement of school as a learning organisation and the educational success of pupils. The main objective of evaluation as an empowerment tool is to empower people and organization through accompaniment and facilitation, in order to improve their self-sufficiency (Fetterman, Wandersman, 2007).

Improvement is a 'data driven' process, the starting data and the results are measurable and comparable. The dissemination of the use of data in education is a rather recent practice: in fact, decisions in the educational field have always been derived mainly from perceptions and sensations based on the direct and detailed observation of the current event by teachers or school leaders (Slavin, 2012).

The need for greater transparency and accountability of the choices (Messelt, 2004) has made it possible to understand the importance of the use of data for the design and monitoring of interventions. The data alone, however, are not able to guide decision-making: in order to become 'talking' and useful it is necessary to intervene by the various actors involved. If the teachers, with regard to the teaching dimension, and the manager and middle management, as far as the organizational dimension is concerned, working in synergy, they will have the ability to compare the information, understand it and transform it into elements of evaluation for the design of the actions themselves (Faggioli, Mori, 2018). The ability to measure innovation is a fundamental improvement strategy for the educational system and evaluative research becomes fundamental as 'evidence-based research' for continuous improvement (Calvani, Marzano, 2020).

1. Reference framework and survey objectives

The survey stems from the need to read innovation in schools through the perception of the main actors: teachers, students, headteachers and parents, and to understand what didactic and organizational changes have occurred and what are the facilitating and impeding factors of innovation of schools. The variables that affect student satisfaction, study approach and metacognitive strategies are also investigated, at the level of: School, Headteacher, Teacher and Student.

In order to give a voice to all actors involved, this study aims:
- on the one hand, to capture the perception of internal stakeholders with respect to the four dimensions of innovation that make up a framework developed by INDIRE researchers:

- on the other hand, to detect aspects of skills that are imperceptible in a traditionally understood school situation, through standardized psychological tests such as: study strategies, metacognitive sensitivity, motivation, attitude towards one's future, the ability to face problems, self-efficacy (Mori *et al.,* 2020).

The recognition and comparison of different validated theoretical frameworks allowed to build the foundations of the «Framework for the evaluation of innovation processes» (Nardi *et al.,* 2020), where the indicators were designed and adapted to the specific Italian school context, and to the INDIRE's vision of school innovation gained over the years.

What are the key aspects I need to observe to evaluate the school in its improvement and innovation process? Which areas have been analyzed? What indicators?

In particular, the two frameworks that inspired and guided the design of our framework were:

- The Framework of the 'Innovative Learning Environments' [ILE] (OECD, 2017): this project is characterized by a holistic and systemic perspective. The construct of 'innovation' is combined with that of changing the learning environment: the innovation of educational and teaching practices requires a change in the entire educational ecosystem around the student.
- The Framework for innovation, School Learning Organization -SLO where OECD describes school like ecosystem and every didactic, organizational, relational process must develop around its core business: student learning. «A school as a learning organization has the capacity to change and adapt routinely to new environments and circumstances as its members, individually and together, learn their way to realising their vision» (Kools, Stoll, 2016).

As a result of these studies, it was born the Framework INDIRE for the evaluation of innovation (Fig. 1) that is organized in 4 macro-dimensions and relative sub-dimensions (Nardi *et al.,* 2020):

1. Propensity for change: that is the school's aptitude to catalyze improvement and innovation actions starting from the analysis of the data in its possession.
2. Transformation of teaching and learning practices: that is the change in teaching methodologies, the use of spaces, new technologies and student evaluation methods.
3. Leadership and organizational development understood as governance styles of the school and how they support and promote innovation processes through collaboration between teachers and staff organization.
4. Openness and interrelation with the outside world: that is the ability of the school to expand the boundaries of learning environments integrating formal, informal and non-formal

learning and activating networks with the territory and other institutions.

FIG. 1 *Framework INDIRE for the evaluation of innovation*
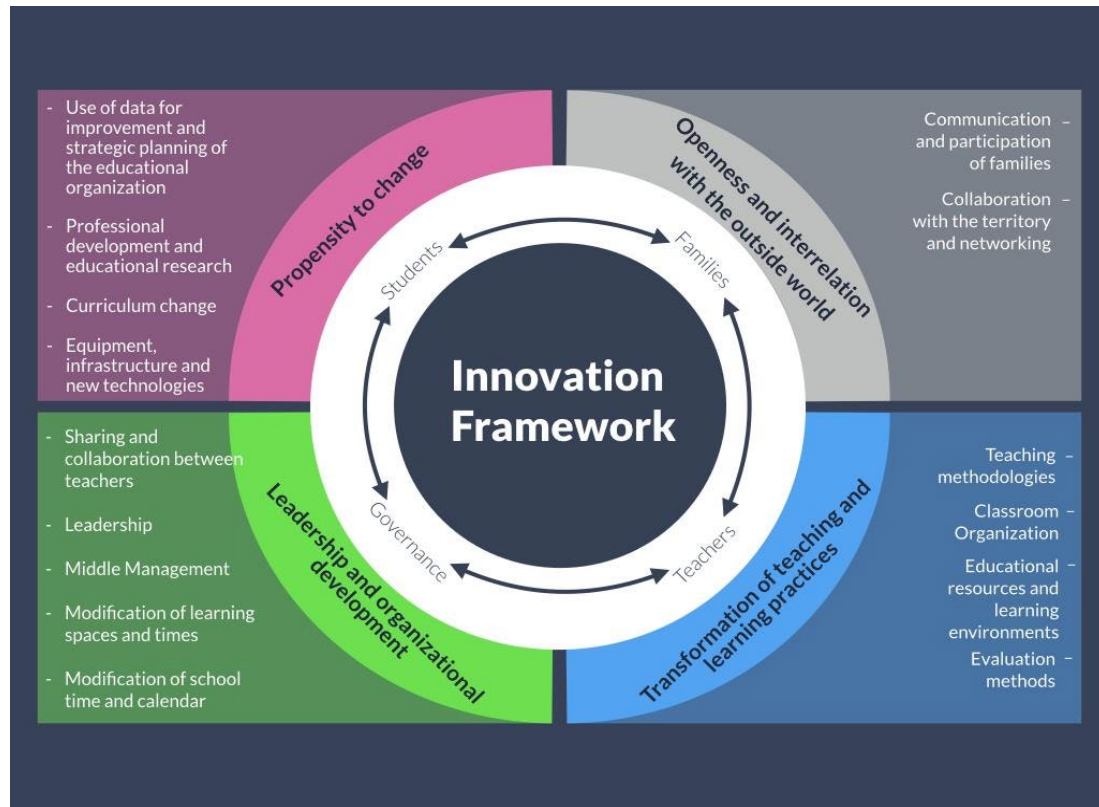
This supporting architecture should make it possible to intercept the innovative forces and the elements of change within and outside the schools examined. The Macro-dimensions and sub-dimensions are common and transversal to the various data collection tools (questionnaires addressed to the headteachers, teachers, students, and the President of the Institute Council and protocol for the interview with the Head teacher). This will allow triangulation and comparison during the processing of the results, managing to provide more points of view on the same issues investigated.

2. The sample

Avanguardie educative is an INDIRE project that promotes the propagation and systemisation of innovation in the Italian school through the sharing of experiences aimed at rethinking the organization of Didactics, Time and Space of 'doing school'. This network of schools was born in 2014 with an initial core of 12 institutions until it became a Movement open to all school levels which at the time of the survey had 800 schools. The research on the 'evaluation of innovation processes' examines the schools belonging to the Avanguardie Educative

movement, in particular secondary schools, to investigate and evaluate how these processes modify the organization of the school and the type of repercussions that occur on three subjects mainly involved: students, teachers and headtechers.

The survey, which is configured as an explanatory type (Creswell, Plano, 2017), was carried out during the 2019/20 school year. From a wider universe of schools belonging to the AE Movement (more than 800), the sample was selected with the following criteria: secondary school which had been experimenting with at least 2 ideas for at least 2 years. From the first selection, were identified 243 schools, after a second analysis were confirmed 89 schools with all the research requirements, 28 did not join the research. In the end, the research was carried out with 52 schools that responded to all the tools (questionnaires, tests, interview) provided by the survey. For each institute were involved:

- the headteachers;
- at least 2 to 3 teachers who have been experimenting ideas for at least two years.
- students from at least 2 to 3 experimental classes (of different years, mainly III, IV and V);
- the President of the School Council, representing the parental component.

Below we will present some data that allow to better understand the characteristics of the sample on the various levels of investigation: Schools, Classes, Headteachers, Teachers and Students.

2.1. Schools

The 52 schools that participated in the research differ in the type and number of students. The number of students enrolled are reported in Table 1.

TAB. 1 *Students in each schools*

School size	Schools in the sample
<500	5 schools
501< 999	27 schools
1000<1499	12 schools
1500 <<1999	5 schools
2000 < 2500	3 schools
Total	52 schools

The schools are distributed throughout the country as shown in Table 2: it compares the sample data with the percentages at national level.

TAB. 2 *Census Region*

Census Region	Sample	Italy
North	32,7% (=17 schools)	36,7%
Center	19,2% (=10 schools)	18,9%
South	48,1% (=25 schools)	44,5%
Total	100,0%	100,0%

All level school are represented even if in different forms (Tab. 3).

TAB. 3. *School tipology*

School tipology	Sample	Italy
20 high schools	38.5% (=20 schools)	28,8%
10 technical institutes	19.2% (=10 schools)	21%
3 professional institutes	5,8% (=3 schools)	16,7%
19 higher education institutes with various addresses	36,6% (=19 schools)	33,4%
Total	100,0%	100,0%

With regard to the dropout rate, the comparison between the average dropout rate of the institutions in the sample compared to the national one in the three-year period 15/16-17/18 shows a trend in line with the national one but the sample dropout rate is on average a percentage point lower than the national one (Tab. 4).

TAB. 4 *Average dropout rate trend for the 15/16 – 17/18 years of the Campione and in Italy*

Drop out	Sample	Italy
aa15/16	3.1	4.3
aa16/17	2.6	3.8
aa17/18	2.8	-

The analysis of the data also shows the dynamism of schools with regard to the search for European funding used in particular for staff training and for the improvement of infrastructures. 45/52 schools participated in the ESF (European Social Fund) European Calls 2014-2020. The European 'Structural Funds', namely, the ERDF (European Regional Development Fund), funded 379 schools projects, 1669 training courses. The average number of projects presented by the sample is always higher than the national average for any territorial division. The total amount requested exceeds 13 million euros, of which 99.4% has been authorized. The average amount authorized for each project is about 35 thousand euros, higher than the national average.

With the 'Structural Funds', namely, ERDF (European Regional Development Fund), focusing more on infrastructure school improve the LAN (Local Area Network) and digital environments/laboratories. The average amount requested by each school is € 29831.8, authorized € 27258.4 equal to approximately 91% of the average amount awarded per school.

2.2. Classes and Students
Regarding the classes, there were 2 for each school that experimented with AE's ideas, the sample was composed as follows (Tab. 5):

TAB. 5 *Territorial distribution*

	High school classes	Technical classes	Vocational Classes	Total by geographical area
North	15	17	2	34
Center	6	13	6	25
South	39	6	9	54
Total	60	36	17	113

Considering then the distribution of the Institutes by type of address of the sampled classes and Territorial Distribution, it is observed that in the Southern Institutes the prevalence of the classes comes from education schools while in the North and even more in the Center come from Technical Institutes. It should be noted that almost one of the institutes of the Center has classes from a Vocational address.

Finally, as regards the students present in the sample classes, the sample was composed as follows: the students who participated in the research are 1,880, 98.5% are in the 15-19 age group. More than 95% of the sample have Italian nationality, while among the parents more than 18% of the mothers have no Italian nationality.

Regarding the educational qualification of parents, 17.4% of fathers have a qualification higher than or equal to the upper secondary school, less than mothers who are 23.2% (Tab. 6).

TAB. 6 *Students and parents*

Gender	Males 49.7% Females 50.3%	
Age	From 15 to 19 years: 98% From 12 to 15 and from 20 to 24 years: 1,5%	
Nationality	Italian: 95.69% Foreigners: 4,31%	
Parents nationality	Father: 90% Italian 10% foreign	Mother: 82% Italian 18% foreign
Parent educational qualification	Father: 17.4% university degree (or higher) 42.93% diploma	Mother: 23,2%. university degree (or higher) 47.98% diploma
Professional situation	Father: 60% employed on a temporary basis 15% employed on a permanent basis	Mother: 46,5% employed on a temporary basis 14% employed on a permanent basis 29% housewives

Compared to the profession of parents, 75% of fathers are employed on a permanent basis, while for mothers this percentage drops to 46.5%.

2.3. Headteachers and teachers

The headteachers who took part in the survey were actually 50. The breakdown by gender sees 34% men and 66% women. Approximately 40% of head teachers are concentrated over the age of 50, the share below this age is very low: the headteachers has an average age of about 56 years.

98% have a role as acting headteacher and 40% have been in service in this school since the school year in which they took part in the research. On average, the length of service is about 10 years, in the same school it is about 7 years and about 20 are the years of teaching preceding the management (Tab 7.)

TAB. 7 *Headteachers*

Respondents	Age	HT – Holder	HAT Acting	In service in AE school since 18/19 (interview year)	Length of service in AE school (average)	Length of service as a HT (average)	Teaching years prior to management (average)
50	56,4 (56 n.a)	49	1	20	7,4 (max 17 years)	10,5	19,6

The sample is made up of 144 teachers, on average about 3 teachers per school. More than half are aged between 50 and 59 with an average age of 52. On average they have been teaching for about 23 years but almost 70% have been teaching for more than 20 years. In addition, they have been teaching in the school where the interview takes place on average for 12 years. With regard to the distribution of teachers by subject area, there is a greater concentration in the humanistic-artistic area (54.9%) (Tab. 8).

TAB. 8 *Teachers*

Respondents	Age	Years of teaching	Subject area
144 (on average 3 teachers per school)	52.2 (49 n.a)	22.9	Humanistic-artistic area 54.9% Mathematical-scientific area 22.2% Technical-technological area 11.8% Socio-economic-legal area 9.0% Other 2.1%

3. Methodology and procedures

The survey was carried out as part of the research already started by INDIRE in relation to the introduction of methods and tools to innovate the teaching model in first and second cycle schools that have adopted the methodologies and ideas proposed by the Educational Avant-garde Movement. The approach used is that of mixed methods (Ponce et al, 2015; Creswell, Plano Clark, 2011; Teddlie, Tashakkori, 2009) with an explanatory sequential design where the quantitative phase preceded the

qualitative one. This choice is closely linked to the main research objective aimed at understanding how much the introduction of innovative methodologies, adopted in the context of joining the Movement, has affected innovation in terms of perceived change from the point of view of the dimensions investigated by the framework by internal stakeholders (DS, teachers, students). The qualitative phase represents a valuable in-depth study and will take place at a later stage than the quantitative phase. In this contribution, only the data relating to the triangulation of the questionnaires will be reported. The procedure used for the quantitative analysis followed three main phases:

1. Survey of the schools for the construction of the sample in the INDIRE DB and construction of the reference framework for the survey.
2. Drafting of guidelines for the administration of tools in schools and pre-test phase in four schools.
3. Field survey on the 52 schools in the sample

The first phase involved a selection of schools that met the required criteria as described above for the identification of the sample (secondary schools that had experimented with at least two ideas for at least two years). The screening was not carried out only through INDIRE's DB, but telephone calls were made to the schools to verify the actual testing of the methodologies adopted, interviewing the teachers who followed the classes involved in the research. With regard to the construction of the theoretical framework for the investigation, the researchers made a comparison between the different international reference frameworks. This study formed the basis for identifying the dimensions and sub-dimensions of innovation from which the indicators that guided the creation of the questionnaires were derived. In the second phase, guidelines were also drawn up for use by a group of specially selected and trained external collaborators, who subsequently conducted field surveys in the 52 schools. The document was composed of two sections: an introductory part that illustrated the theoretical framework, the objectives, the research questions and an operational part: a protocol of scheduled actions, to be carried out for the administration of the tools to guarantee the uniformity of the survey. The guidelines were also used in the pre-test phase, which had a twofold objective: to verify the stability of the survey in terms of timing and methods of administering the tools to the various actors; to receive information with respect to understanding of the items, the consistency with the research objectives and the length of the questionnaires. The pre-test phase was carried out by the research group in four schools that were part of the Movement but missing the two-year criterion of experimenting ideas with an explicit request by the research group to receive feedback on the questionnaires. From the analysis of the data deriving from the pre-test, a revision of the tools was carried out in terms of modifying some items and the temporal order of administration of the tools in the classes. The last phase was that of the

field survey on the 52 schools, that took place in the period between September and December 2019.

This contribution reports the results relating to the triangulation of the questionnaires of student teachers and head teacher with respect to all the dimensions of the questionnaire. This approach made it possible to obtain an overall vision of the school; by comparing the opinions of students, teachers and headteachers, it was possible to analyze in a comparative way the interactions between the actors and to deepen the different perspectives.

4. Results

The correlations' results of the scores to the questionnaires for the different dimensions are reported in this paragraph.

Regarding the 'Propensity for change' the correlations are made comparing the scores of teachers and head teachers. There is a significant correlation concerning how the school documents best practices for innovation ($r=.260$, $p<.05$). With respect to the use of best practices on innovation, teacher and head teachers agree on the fact that documentation is done to share with other schools what has been done; it is also stated that schools are a reference point for other realities (Fig. 2). There is also strong agreement between the two actors in recognizing the school as well equipped with new technologies: all have internet connection; half say they have PCs and tablets available to students; still, few have 3D printers or viewers ($r=.555$, $p<.001$) (Fig. 3).

FIG. 2. *Responses from teacher and headteacher with respect to the use of best practices of innovation in the school*
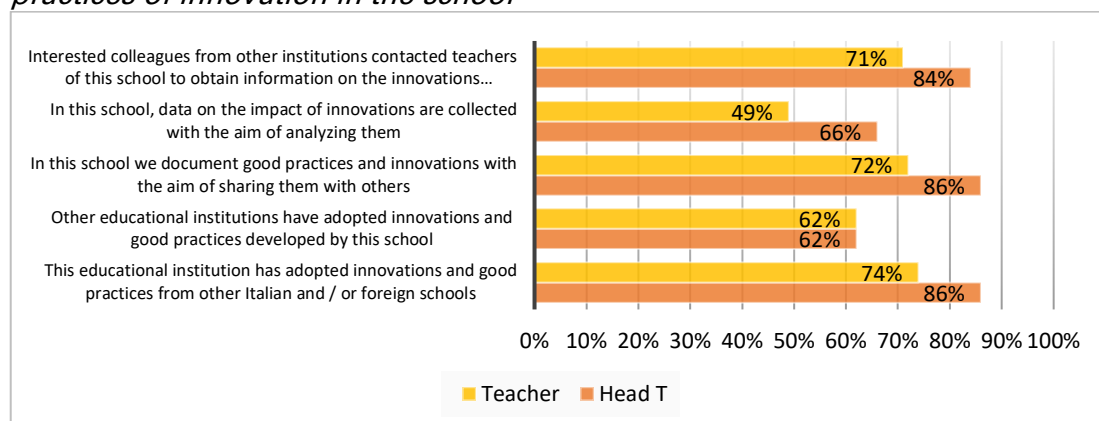
More disagreement emerges regarding how school planning is done: how the school's goals are identified ($r=-.006$, $p>.05$), how teacher training is planned ($r=.017$, $p>.05$) how the curriculum is designed ($r=.157$, $p>.05$)

Regarding the 'Leadership and organizational development' dimension, the most significant finding, with a good level of agreement

between head teachers and teachers, is that schools have good internal communication: communication flows are clear and roles are defined (r=.380, p<.05) (Fig. 3).

FIG. 3 *Responses from teacher and headteacher with respect to new technologies in the schools*
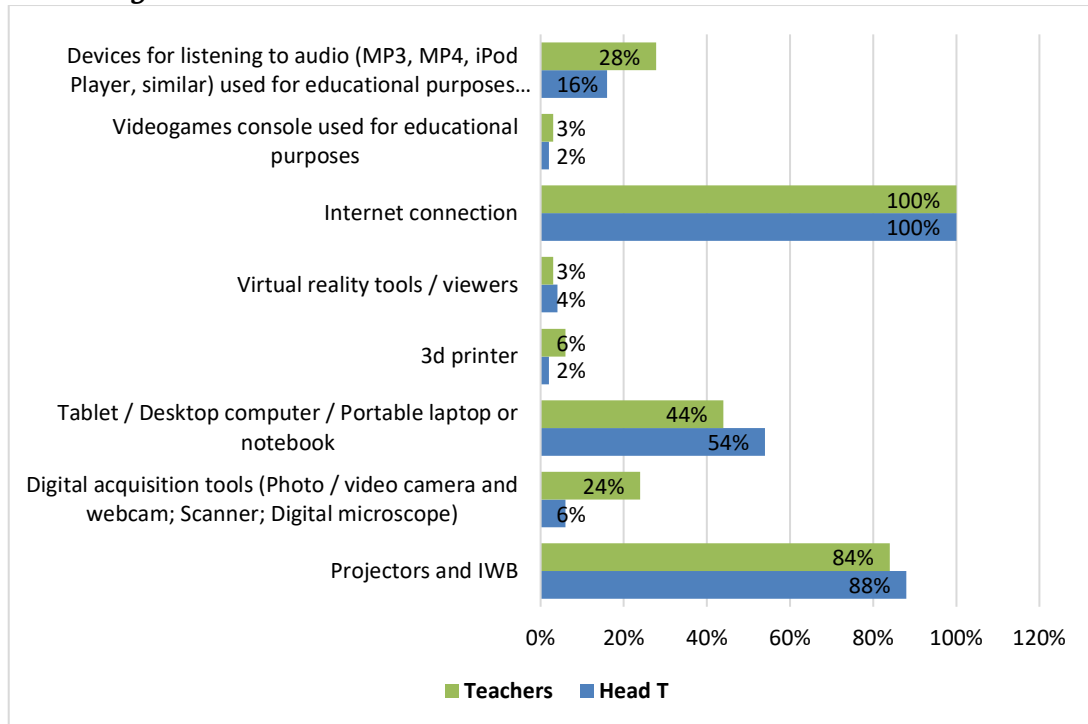
FIG. 4 *Responses from teacher and headteacher with respect to the efficacy of the internal communication*
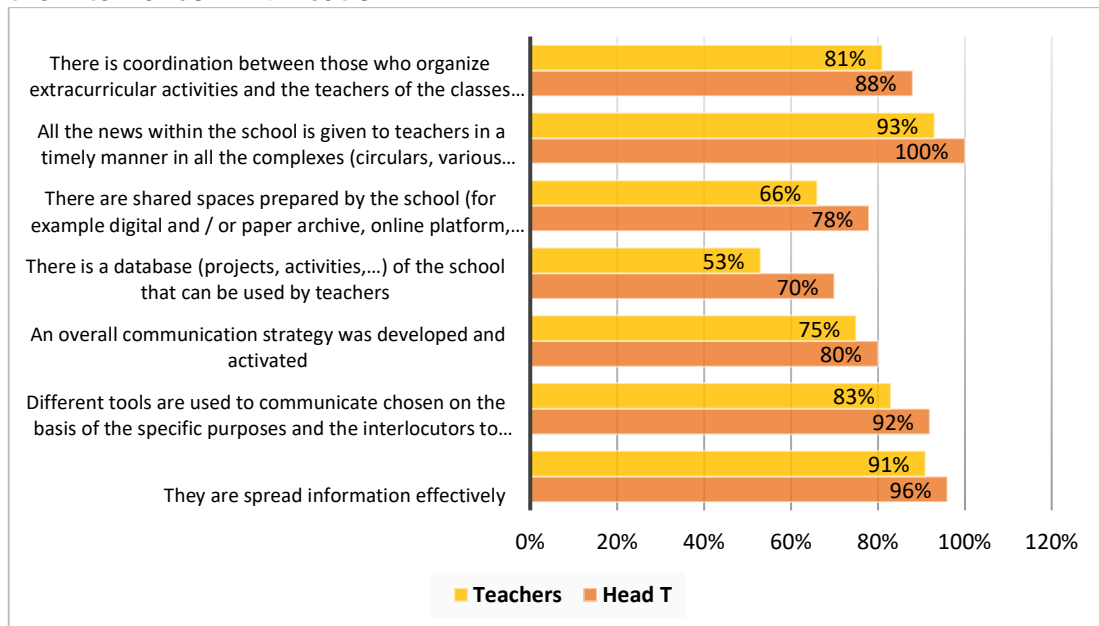
Correlations between teachers and head teachers regarding the level of sharing within the school (r=.119, p>.05) and internal collaboration were

not significant: in this second case the strength of the relation is even inverse (r=-.136, p>.05).

Regarding the 'Transformation of teaching and learning practices' dimension. About the frequency on the use of teaching practices in the classroom aimed at active student participation, there is no significant correlation between the opinions of teachers and school principals (r=-.233, p>.05), neither between students and teachers: in this case the relationship is even negative (r=-.120, p>.05). The same trend is seen in the frequency of new technology use in the classroom. Teacher and student evaluations continue to have a negative relationship (r=-.057, p>.05). Similarly, again in a negative sense, a significant correlation emerges with respect to the frequency of group work during classes (r=-.332, p<.05).

Regarding the 'Openness to the outside and to the territory' dimension. This dimension is the one with the greatest level of agreement between the three different actors. All correlations have a positive value, thus finding a common view about openness of the school to the territory. The correlation between school leaders and students is significant with regard to the fact that the school makes a good promotion of the image and identity of the institution trough the presentation of the activities of the school to the outside (r=.331, p<.05).

There are also statistically significant correlations between teachers and head teachers regarding whether there is good participation and collaboration of families in school life (r=.376, p<.05), whether the school actively participates in other networks (r=.246, p<.05) and in projects of the own area (r=.419, p<.05).

Figure 4 shows how the school participates in networks aimed at disseminating innovation, according to the opinions of head teachers and teachers: as we can see, teachers highlight participation in networks for experimenting innovative practices with students, while for head teachers, training is the main reason for collaborations (Fig. 4).

FIG. 4. *Responses from teachers and headteacher with respect to the participation in network for innovation projects*
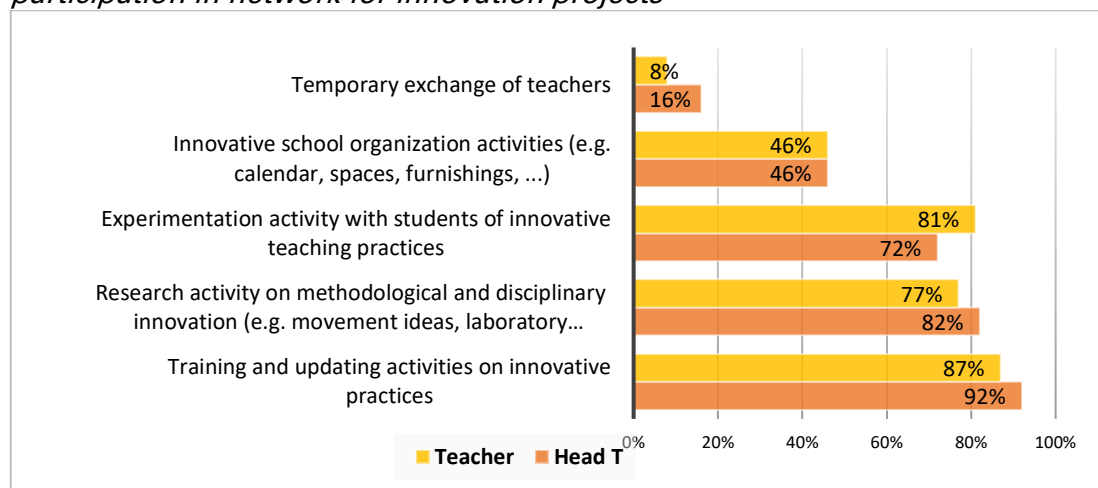
The questionnaire also included two summary questions with respect to school effectiveness and innovation.

Interesting that there is a statistically significant relationship between teachers and headteacher with respect to the level of innovation ($r=.388$, $p<.05$). In contrast, the relationship with student opinion is not significant.

On the other hand, there is significant agreement between head teachers and teachers ($r=.309$, $p<.05$) and between head teachers and students ($r=.320$, $p<.05$) with respect to the level of school effectiveness.

5 Discussion

The correlations from the questionnaires among teachers, headteachers and students highlight different aspects on each of the four dimensions considered by the innovation framework. Regarding to 'propensity for change': there is an association between head teachers and teachers regarding disseminating good practices and technology equipment and use. The correlation is less evident on aspects regarding culture of change and sharing inside of the organization. The dimension 'Leadership and organizational development' paints a picture of schools with a good internal communication, according to principals and teachers but with a different level of collaboration and sharing. The dimension that concerns 'Transformation of teaching and learning practices 'is the one that encounters the lowest level of correlation between the different actors: the opinions of students and teachers have a negative value with respect to the frequency of group working. The greatest agreement regards the dimension 'Openness to the outside and to the territory': between head teacher and teachers about school participating in networks and projects for the dissemination of innovation; also, for the three actors, the school has a good reputation externally. The agreement that emerged regarding the dissemination of best practices related to innovation is confirmed by a significant correlation between faculty and Headmaster regarding the overall assessment of the school's level of innovation. This is combined with student evaluation of the level of school effectiveness.

Conclusion

The aim of this contribution was to describe the level of agreement between students, teachers and head teachers with respect to some dimensions that refer to the innovation of schools. Considering the sample schools, the results show a good level of agreement on some innovation indicators identified by the framework (Nardi *et al.,* 2020). In particular, it emerges that these schools are organizations that maintain good relations with the territory and participates in networks and projects to support and disseminate innovation. This aspect aligns with the idea

of innovation proposed by the Framework of the 'Innovative Learning Environments' [ILE] (OECD, 2017). Moreover, schools seem to be points of reference for other schools about innovation tools and methods: this is in line with one of the objectives of the Movement that aims at creating a network of schools capable of exchanges and comparisons. However, there is little agreement on how much teaching practices have actually been changed: teachers and head teachers are more unbalanced, while students less express this perspective. The dimension of innovation appears to be a language that belongs more to the headteacher and the teachers, rather than to students. However, an association emerges about the evaluation of school effectiveness by the students as well. This information may be useful to schools from a reflective perspective (Calvani, Marzano, 2020): on the one hand, continuing the innovative process of interrelation and openness to the outside; on the other, to improve the transformation of teaching practices and the awareness of organizational identity, aspects that are crucial for a School as Learning Organization' (Kools, Stoll, 2016).

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Assessment, Power, Subjectivation Processes. Biopolitical-Transdisciplinary Hypotheses

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ABSTRACT: *Our main aim is to present very briefly a set of six hypotheses regarding the nature of a dispositif, its role in a process of learning assessment, the need to understand and control related processes of subjectivation. The most important conjecture is the sixth one. In the scenario drawn by Giorgio Agamben's studies, this hypothesis affirms that contemporary assessment dispositifs have a biopolitical nature. This statement probably concerns every learning assessment dispositif: it is not limited to the market-oriented ones. In this perspective, perhaps the diffusion of authentic tasks and the investment in the assessment of inner dispositions have an ambivalent meaning: at the same time, they represent both technologies of power and technologies of the self. These hypotheses have to be refined and additional studies should be carried on. In particular we think a transdisciplinary and foucaultian critical research program is necessary.*

KEYWORDS: *Learning assessment; Disposition assessment; Subjectivation; Biopolitical dispositifs; Democracy.*

Introduction

Our main aim is to investigate the relation between learning assessment and biopolitical *dispositifs*. We prefer the original French word – *dispositif* – that Michel Foucault used in *The Will to Knowledge* (1978) because English translations are different. English edition of *The Will to Knowledge*, translated by Robert Hurley, for example, uses two words: *deployment* and *apparatus*.

When we say 'learning assessment', we think about large-scale survey assessments such as PIRLS, TIMMS, PISA. On the other hand, we refer to the classroom assessment and its various tools. If we use a competence-based learning, for example, we can assess the students' learning through tests, psychometric questionnaries, authentic tasks *et similia*.

Here we will present very briefly a set of three hypotheses. In the following paragraphs we will discuss other three conjectures.

1. We assume as postulate the Agamben's definition of *dispositif*: «literally anything that has in some way the capacity to capture, orient, determine, intercept, model, control, or secure the gestures,

behaviors, opinions, or discourses of living beings» (Agamben, 2009, 14).

2. From this postulate, we can deduce a corollary: a *dispositif* «must always imply a process of subjectification, that is to say, they must produce their subject» (Agamben, 2009, 11). We are educationist; I assume – really, I believe – that processes of subjectification are the core of our mission.

3. Our first hypothesis was suggested by Michel Foucault's studies. It affirms that the learning assessment, both within micro – and macrosystem, is a *dispositif* of disciplinary power (see, e.g., Foucault, 1977, 135-169 and 184-194).

Our second and third hypothesis are related to the previous one.

4. The second one asserts that assessment *dispositifs* enable processes of subjectivation.

Before we go any further, here is an example.

In his *Human Characteristic and School Learning* (1976), Benjamin S. Bloom writes about the hidden curriculum. What is it? A frequent negative assessment develops a negative attitude towards school subjects, school and learning. It may also affect students' self-esteem as a learner; finally, we can observe a pathological consequence in some cases. This very limited example is important because:

– it shows what a *dispositif* is;
– it clarifies the meaning of the statement 'a *dispositifs* implies a process of subjectification';
– it seems to confirm our first and second hypotheses about the relationship between *dispositifs*, assessment and process of subjectivation;
– moreover the example has an added value: it shows also the relationship between assessment, *dispositifs* and hidden curriculum.

After the digression, we return to our hypothesis.

5. The third one states that processes of subjectivation are ambivalent (see, e.g., Bazzicalupo, 2013). It is impossible to argue the conjecture in this context. Therefore we show its meaning through an example. Students learn basic symbolic skills through the 3Rs program – reading, writing, and arithmetic. This program activates a process of normalization. The outcomes will be ambivalent. On one hand, the process of normalization can develop as a process of a desubjectification; on the other, it may activate a process of liberation. This outcome is very partially predictable.

We don't show our fourth and the fifth conjectures; but we will present them later.

1. The biopolitical nature of assessment *dispositfs*

Finally we can present our sixth hypothesis. It affirms that assessment *dispositifs* have a biopolitical nature. This statement hasn't a universal value, but it has an historical value. Why do the assessment dispositifs have today a biopolitical nature?

Probably we are living in a state of exception. «The Paradox of Sovereignty» is that the sovereign power affirms itself by its withdrawal (Agamben, 1998, 15-29). This process establishes the state of exception. Two very clear examples are the nazi state and the «legislation by emergency executive degree» (Agamben, 2005, 16). The juridico-political laboratories to organize this process were the Seven Years' War (the first world war) (Agamben, 2005, 7) and the Italian political practices. The particular consequences underline two universal characters of the state of exception. Effects of the massive use of law-decrees are that, on one side, «the democratic principle of the separation of powers has today collapsed» and, on the other, «the executive power has in fact, at least partially, absorbed the legislative power» (Agamben, 2005, 18). A remark. It is perhaps an exception to the Weber's principle of the ethical neutrality of researcher. «In a technical sense, – Agamben wrote – the Italian Republic is no longer parliamentary, but executive [governamentale]. And it is significant that though this transformation of the constitutional order (which is today underway to varying degrees in all the Western democracies) is perfectly well known to jurists and politicians, it has remained entirely unnoticed by the citizens» (Agamben, 2005, 18). What is a third historic example of the state of exception? It's the pandemic state. It needs to underline that the state of exception has become the rule (Agamben, 2005, 6).

A forms-of-life is approximately the way of live from which the happiness of human being depends. It is destructured by the state of exception. Into this oxymoronic and aporetic paradigm of government, the human being becomes existentive being; his life is reduced to *bare life*; the human being becomes *homo sacer*, «in the sense that this term used to have in the Roman law of the archaic period: doomed to death» (Agamben, 2000, 22). In other words, as Foucault said, «life, at the beginning of the modern age, comes to be what is at stake in politics» (Agamben, 1998, 119). This is the modern biopolitics. In *The Will to Knowledge* Foucault affirms: «For millennia, man remained what he was for Aristotle: a living animal with the additional capacity for a political existence; modern man is an animal whose politics places his existence as a living being in question» (Foucault, 1978, 143). And Agamben adds:

> And only because biological life and its needs had become the *politically* decisive fact is it possible to understand the otherwise incomprehensible rapidity with which twentieth-century parliamentary democracies were able to turn into totalitarian states and with which this century's totalitarian states were able to be converted, almost

without interruption, into parliamentary democracies. In both cases, these transformations were produced in a context in which for quite some time politics had already turned into biopolitics, and in which the only real question to be decided was which form of organization would be best suited to the task of assuring the care, control, and use of bare life (Agamben, 1998, 122).

It's very probable that Agamben's hypotheses describe a scenario that includes educational processes and therefore the assessment processes. In other words, we suppose that education and assessment can't escape the influence of biopolitical *dispositifs*.

2. Human capital, soft skills and the biopolitical nature of assessment

Now we present the other hypotheses that we mentioned in the introduction. They are organically connected with the previous ones. In an exploratory perspective yet, they try to extend the historico-philosophical Agamben's conjectures to the educational domain and, in particular, to learning assessment *dispositifs*.

The first hypothesis is about the human capital theory where political power and scientific knowledge are strongly intertwined as Foucault showed in *The Birth of Biopolitics* (2008, 215-289). In particular, the relationship is probably between the North American neo-liberal governmental practices and the economic knowledge. The human capital theory promoted different large-scale survey or made secondary analysis of their data. The goal of many of these surveys was to assess the efficacy of educational program. We know that our scientific community is still interested in these surveys and in their results. Into the scenario described by Agamben's hypotheses, the large-scale surveys seem to increase the grasp of biopolitical *dispositifs* on bare life.

Foucault shows that theory of human capital extended the economic analysis to domains previously considered to be non-economic (Foucault, 2008, 221-270). Today Giorgio Vittadini affirms that James K. Heckman, John E. Humphries and Tim Kautz wrote a new revolutionary page of human capital theory (Vittadini, 2016). Indeed, more simply the micro-economists increase the explicative and predictive power of their models by introducing character skills among independent variables (Heckman *et al.,* 2014, 12-13). However, this kind of skills was operationalised especially by the *Big Five* questionnaire (Costa, McCrae, 1992) without a real theoretical reason. In addition, economists do not explain why the factors – agreeableness, conscientiousness, emotional stability, extraversion and openness – have opposite effect on the *explicandum*.

Finally we arrived at our second hypothesis. We tried to show that competence-based teaching is one of the operators through which the biopolitical *dispositifs* influence the bare life (Giacomantonio 2016a,

2016b). Here we develop, at last partially, this hypothesis. A competence seems to have different components. Competent performances depend on their well-balanced activation. A component of the competence is probably represented by inner dispositions. Since the late1980s onwards, the production of *dispositifs* to assess and develop students' inner disposition has been increasing. What do these *dispositfs* probably represent?

Foucault wrote that:

> For a long time, [the confession] remained firmly entrenched in the practice of penance. But with the rise of Protestantism, the Counter Reformation, eighteenth-century pedagogy, and nineteenth-century medicine, it gradually lost its ritualistic and exclusive localization; it spread; it has been employed in a whole series of relationships: children and parents, students and educators, patients and psychiatrists, delinquents and experts. [...] It was enough to make one's voice tremble, for an improbable thing was then taking shape: a confessional science (Foucault, 1978, 63-64).

The Likert scale is probably a more refined tool of this science. In other words, these assessment *dispositifs* seem to represent a sort of non-religious and structured confession. We assume that they are deeply effective in increasing the grasp of biopolitical *dispositfs* on the subject and its soul.

Moreover, we think that the authentic assessment doesn't falsify our hypothesis. As David C. McClelland (1973), Grant Wiggins (1993), Heckman, Humphries and Kautz (2014), also Howard Gadner underlines the limits of testing concerning, on one side, content and predictable validity, on the other side, emotional and ecological validity. Gadner is sensible to students' interests, skills and multiple intelligences, on the other hand, to the context and its characters. But, at the same time, he would like to increase the predictive power of science (Gardner, 1993, 179 and 189). This assessment *dispositif* probably represents the attempt to find a new ambivalent equilibrium between technologies of power and technologies of the self (Foucault, 1988, 18-19) by which, according to Agamben:

> processes of subjectivization bring the individual to bind himself to h is own identity and consciousness and, at the same time, to an external power. [...] the modern Western state has integrated techniques of subjective individualization with procedures of objective totalization to an unprecedented degree [...] (Agamben, 1998, 5).

Conclusion

The aforementioned hypotheses do not apply immediately. In other words, they cannot influence both the contemporary educational and evaluative processes.

But if our conjecture are, at least partly, conceivable, thus, as we said, it would be appropriate to involve them in a piagetian transdisciplinary and foucaultian critical (Foucault, 1996) research program. We think that the core question is the following: which are the operators of the grasp of the biopolitic on both education and learning assessment *dispositifs*?

The aim of this program is to shed some light on «the movement through which the subject gives itself the right to question truth concerning its power effects and to question power about its discourses of truth» (Foucault, 1996, 386). Such a program should investigate the mutual legitimation between power and knowledge and, more specifically, between power and docimological knowledge. Research findings are unpredictable. They would clearly deal with assessment and, more generally, paideia, as a whole. In this respect, it will be essential to define the meaning of 'biopolitics', as it could challenge the relation between *Education and Democracy*.

What is at stake here? The Foucault's answer is incisive:

> We know that the great promise or the great hope of the eighteenth century, or a part of the eighteenth century, lay in the simultaneous and proportional growth of individuals with respect to one another. [...] we have been able to see what forms of power relation were conveyed by various technologies (whether we are speaking of productions with economic aims, or institutions whose goal is social regulation, or of techniques of communication): disciplines, both collective and individual procedures of normalization exercised in the name of the power of the state, demands of society or of population zones, are examples. What is at stake, then, is this: How can the growth of capabilities be disconnected from the intensification of power relations? (Foucault, 1984, 47-8).

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Assessment and Inclusion. The Teachers' Experience of Emergency Remote Teaching During the Lockdown Period

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ABSTRACT: *In March 2020 the emergency situation forced the suspension of all in-presence teaching activities for all levels of school in Italy. In its first operational indications, the Ministry of Education underlined that distance learning had two meanings: keep alive the classroom community and avoid the interruption of the learning process. Collecting data from experience (Lucisano, 2020) is essential to verify not only whether these results have been achieved by the schools, but also what are the meanings they acquired in different territorial contexts (Save the Children, 2020). The Emergency Remote Teaching (ERT) exacerbated the socio-cultural learning gap among students. This could raise the risk of school dropout and less satisfying learning outcomes (Save the Children, 2020). Among the major weaknesses of ERT, related to inclusive processes, there are the difficulties of evaluative processes that strongly characterized the distance learning (Batini et al., 2020; Ferritti, 2020). This paper aims to show the outcomes of the questionnaire's qualitative analysis used in the national research SIRD entitled 'A comparison of the approaches to distance learning adopted in Italian schools in the period of the COVID-19 emergency'. This research aimed to detect useful information to describe and understand the ways in which teachers dealt with distance learning during the lockdown. The questionnaire involved a sample of over 16,000 teachers from all around Italy. We explored the data from the region of Lazio (1,918 teachers) with the aim of analysing the contents of the categories related to inclusion and assessment. We took into account all answers to the open-ended questions that underlined the main strengths and weaknesses of the ERT, the main difficulties encountered by the students and the reports of the teachers. The inclusion category emerged across the four open-ended questions of the questionnaire, with a high percentage distribution of occurrences in the reports of teachers of all levels of school. The assessment category concerned the teaching difficulties related to the new learning environment, bringing out the main difficulties of teachers in the evaluation process. The study's results show that the critical issues does not only concern the difficulties related to the network access, the possession of devices and digital skills – that always caused digital inequalities – but also didactic problems.*

KEYWORDS: *Assessment, Emergency remote teaching, Inclusion, Italian national survey, Qualitative analysis, School.*

Introduction

During the first wave of the pandemic, schools immediately took action to ensure distance teaching and the Ministry of Education, with the note prot. 388 of March 17, 2020, issued the first operational guidelines for distance activities, emphasizing that:

> Distance teaching, during these difficult weeks, had and still has two meanings: on the one hand, it is necessary to keep alive the community of class, school and the sense of belonging, fighting the risk of isolation and demotivation. On the other hand, it is essential not to interrupt the learning process.

These words emphasized that the ERT intended to maintain continuity in education and learning and to offer tools to prevent isolation. It is essential to draw on experience and evidence (Lucisano, 2020) to verify not only how much these results have been achieved but also what meanings they took in different territorial contexts (Save the Children, 2020). The change that affected everyone's daily lives, in particular affected schools, causing complex teaching issues linked to docimological and inclusive problems (Batini *et al.,* 2020). In the school context, the situation of emergency and uncertainty required adaptability, flexibility, resilience and capacity for redesign (Ali, 2020; Moretti, 2021) causing significant changes in terms of teaching and ordinary and school life with a greater impact than in other realities of the economic and social system.

The teachers did not have the opportunity to train in technological innovations and new learning environments adequately. On the one hand, this led to a process of self-training, on the other hand, online teaching became, in some cases, a trivial transposition of traditional methods without a functional adaptation to the new context (Di Nunzio *et al.,* 2020; Ferritti, 2020; Lucisano, 2020).

The difficulties did not only concern access to the network, possession of devices or computer skills that highlighted the already known digital inequalities (Leto *et al.,* 2016; ISTAT, 2019; Commissione Europea, 2020), but also the specific educational activities and strategies, in particular the assessment processes.

The socio-cultural disadvantage, exacerbated by the remote teaching, led to a high risk of school dropout and less satisfying learning outcomes (Bettinger, Loeb, 2017; Save the Children, 2020). One of the most important weak point of the ERT related to inclusive processes was the assessment, an element that characterized more than others the level of criticality of teaching emergency (Batini *et al.,* 2020; Ferritti, 2020).

The above-mentioned ministerial note (N. 388 of March 17, 2020) stressed the importance of the link between distance learning activities and assessment, encouraging teachers to use constant evaluation modes

and referring to 'educational common sense' of the teacher who must define forms, methodologies and most suitable tools for learning.

This docimological freedom caught many teachers unprepared. As shown by the national research conducted during the emergent period, the reorganization of assessment practices was the second most critical issue that emerged during distance learning, preceded only by increased workload (SIRD, 2021). Before the health emergency, only 17.8% of the teachers practiced forms of ERT, and only 17.3% participated in training courses to develop the skills necessary to deliver ERT (Lucisano, 2020). A preference for traditional methods of evaluation adopted in presence, such as questions, written assignments, questionnaires, worksheets, and workgroup, also emerged (Ranieri *et al.,* 2020; Lucisano *et al.,* 2021).

Regarding to future perspectives, there is a strong awareness that the forms of assessment in integrated digital education or the various blended methods that will be implemented, which are the result of this period of innovation, cannot be a simple transposition of the traditional teaching to a simple digital teaching.

Considering evaluation and inclusion as constantly interrelated, this contribution aims to show the results of the qualitative analysis of the questionnaire used within the national research SIRD entitled *A comparison of the approaches to distance learning adopted in Italy schools in the period of the COVID-19 emergency* developed to detect valuable information to describe and understand how teachers of all levels of school have addressed the ERT during the lockdown period (March 2020), to face the health emergency. Specifically, an in-depth study of collected data from the region of Lazio will be shown with the aim of deepening the contents of the categories related to inclusion and evaluation, which emerged in the qualitative analysis of the responses of the questionnaire's open-ended questions that asked teachers to specify the main strengths and weaknesses of the ERT, the difficulties encountered by students, and any free comments.

1. Research Methodology

This study was conducted as part of the SIRD national survey *A comparison of the approaches to distance learning adopted in Italy schools in the period of the COVID-19 emergency*. The SIRD research involved teachers from all over the country. SIRD researchers drew up a questionnaire administered online, composed of 122 closed questions and four open questions. The questionnaire included ten thematic areas: the impact on the remodeling of the teaching programme; the technological tools used; how teaching was carried out (synchronous and asynchronous); the teaching strategies used; the preparation of teachers to carry out ERT; the quality of the forms of collaboration activated; the problems encountered in the evaluation of students; the interventions implemented for students with learning disability and special education

needs; and the overall evaluation of the experience. The four open-ended questions were about the strengths and weaknesses of the ERT, the main difficulties encountered by students, and additional reflections from teachers. A complex categorical structure was constructed to analyze the open-ended questions via the framework method (Gale *et al.,* 2013). The model emerged from the bottom-up reading of the evidence was identified with specific election criteria and triangulation by the research team involved (Batini *et al.,* 2020; Batini *et al.,* 2021). The final model consists of 40 categories and 175 subcategories. In this study, the focus was on qualitative data collected from the four open-ended questions analyzed with the aforementioned categorical model. The aim of this in-depth study is to identify the characterizing and common elements between evaluation and inclusion. These two themes emerged in a transversal way in all the questions within many of the categories. The transversality of the topic suggested to do a specific in-depth study. Therefore, all the evidence related to the theme of assessment and inclusion were selected and reread. The intention is to offer a cross-section of the national SIRD research that outline those aspects of the experience lived during the emergency period. The purpose is to focus on aspects that can contribute to school innovation, starting with the main element that is assessment.

2. Analysis and interpretation of results

2.1. Unit of analysis
The evidence considered in this contribution refers to the sample of the region of Lazio. In this region, 1,918 teachers responded to the questionnaire (the total number of respondents to the SIRD questionnaire is 16.133). The number of teachers who participated corresponds to 2.5% of the teacher population in the region. The unit of analysis of Lazio is composed of most primary school teachers (43.4%), followed by middle school (25.8%), high school (21.4%), and kindergarten (9.5%). About the residence, almost all of the students come from the municipality of Rome (93.7%). The majority have a regular curricular position (73.3%), 10% are regular support teachers, 9.6% are substitute curricular teachers, and the remaining 7.1% are substitute support teachers. The age of teachers is predominantly between 45 and 55 (39.8%), followed by the group of teachers over 55 (27.6%) and aged between 35 and 45 (25.2%). Younger people appear to be less represented, with those under 35 making up only 7.3%.

2.2. Analysis of the categories that emerged from the qualitative analysis
This study included a cross-sectional analysis of the categories that emerged in the overall model representing the responses given by teachers of all grades to the four open-ended questions posed in the questionnaire. The categorical model presents 40 categories about ERT

critical issues, ERT points of strength, student problems, and teachers' reflections. Several subcategories allow to differentiate the main elements that characterize the category. In the present study, the categorical structure was analyzed to verify whether and in what form the concepts of inclusion and evaluation were represented. The analysis showed how for each question, it is possible to find these two themes. These elements can be found in the evidence both as critical points, problems encountered by students, and strengths. For this reason, the interest of this research was to investigate the nature of these constructs further to gain insight into the teachers' point of view. The intention is to focus on the qualifying and critical aspects of the experience lived in the emergency period to reflect on how we can contribute to educational innovation. As far as the concept of 'inclusion' is concerned, the category is named in the same way in all the questions. With respect to critical issues, student problems, and teacher reflections, the category is articulated in several subcategories that mainly report the criticalities related to the risk of school dropout, especially in the cases of students with previous difficulties or with families unable to provide support in didactic activities carried out entirely at distance; the specific difficulties of students with certified problems, for example, with disabilities or specific developmental disorders, who found more significant difficulties in the use of the ERT, as they should have been followed by a reference figure to actively participate in distance lessons; the difficulties of students or families with health problems, which represented an obstacle to the possibility of following online learning; the discomfort of the students; the socio-cultural and economic factors that have been amplified during the ERT experience; the psychological consequences of the emergency situation, which made students insecure, disoriented and unstable; the language difficulties which, in some cases, have contributed to increasing the difficulty of communication between teachers/students and with families; the difficulty, more generally, of reaching all students. The inclusion category is also present in the strengths identified by teachers and is made up of three subcategories including evidence that shows how distance learning activated virtuous mechanisms that positively affected the relational dynamics among students. For example, a decrease of negative relationships among peers or forms of prevarication, the reduction of obstacles for students in particular conditions such as in the case of students living abroad or in a health or rehabilitation facility.

On the other hand, elements related to 'evaluative processes', can be found in the categorical model in all questions within different categories.

Concerning the ERT critical issues question, aspects related to evaluative processes can be identified in the category 'Teaching difficulties related to the new learning environment' (48.5% of occurrences); there are three subcategories related to: 'Difficulties in evaluative processes', which refers to the problems encountered in the formative and summative evaluation; 'Difficulties in monitoring and

control', which collect evidence by teachers who manifested difficulties in generic monitoring of education processes and in student's background such as attention, emotional state, and participation; and also in the category defined as 'Poor quality of communicative exchange, interaction and feedback': teachers experienced difficulties in communication and interaction due to absence or scarcity of feedback and instant feedback from students and/or families.

TAB. 1. *The categorical model of the four open questions of the questionnaire*

ERT critical issue	%
1. Critical issues related to technological tools	13,4%
2. Problems related to IT skills	2,8%
3. Teaching difficulties related to the new learning environment	48,5%
4. Difficulties related to the reorganization of the school structure	8,0%
5. Attitudes and roles in the new learning environment	9,3%
6. Inclusion	12,3%
7. Negative effects of DaD	3,9%
8. Other responses	1,8%
Student difficulties	%
1. Issues related to technological tools	44,5%
2. Issues related to computer skills	5,3%
3. Issues related to life contexts	8,1%
4. Problems related to lack of relationship/social interaction in presence	1,4%
5. Problems related to lack of/poor collaboration	7,8%
6. Problems related to the new learning environment	3,3%
7. Student attitudes towards the DaD	11,6%
8. Inclusion	11,1%
9. Other responses	6,9%
ERT points of strenght	%
1. Emergency Response	10,1%
2. Development of new IT skills	8,0%
3. Relational benefits	7,9%
4. Organizational improvement	13,7%
5. Teacher professional development	4,3%
6. ERT-related students' competencies	3,0%
7. Student attitudes toward DaD	5,1%
8. Generic learning gains	8,4%
9. Enrichment of educational offerings	30,4%
10. Inclusion	3,6%
11. Teacher disposition/approach	0,9%
12. Classroom management	0,9%
13. Other Responses	3,8%
Teachers' reflections	%
1. Teaching Professionalism	12,1%
2. Roles and attitudes toward ERT	5,9%
3. Effects of ERT on teaching	13,6%
4. Emergency response	13,7%
5. Difficulties related to the new learning environment	16,8%
6. Organizational Difficulties	9,3%
7. Personal negative consequences on teachers	2,9%
8. Inclusion difficulties	8,1%
9. Criticality of precariousness	0,1%

In the question about strengths, the category 'Enrichment of educational offerings' (30.8% of occurrences), we find two subcategories. These subcategories specifically note how teachers' perceptions were positive

about the methods introduced for monitoring, evaluation, and student self-reflection during ERT. In the subcategory 'individualized teaching', there are the experiences of teachers who managed to improve the quality of some teaching-learning processes using innovative resources.

2.3 The concepts of inclusion and evaluation in the analysis of the evidence

Conforming to the first analysis of the categorical structure, it turns out how the two dimensions related to evaluative processes and inclusion may be considered transversal. Therefore, the main point of this in-depth study is to analyze the evidence in order to frame some valuable elements that can be helpful for schools of all levels, both as critical elements and as strengths. To investigate the evidence of the subcategories, we decided to propose a new bottom-up and cross-reading of the findings of the researchers and triangulating points of view, we found out the recurring concepts from the content analysis. In order to summarize our findings, we developed a graphic representation of the primary outcomes of the analysis. In Figure 1 it is possible to observe how the two dimensions, Assessment and Inclusion, are both marked by some critical issues and points of strength. According to teacher's experience with the ERT, the concept that binds these two dimensions is the possibility to determine a teaching-learning path. It means adapting and diversifying teaching strategies, even at a distance, depending on students' characteristics, pre-knowledge, skills, abilities, competencies, cognitive styles, and learning rhythms to ensure educational success to all students. Specifically, about evaluation, if on the one hand, the most critical issues concern difficulties related to the lack of a physical and social context in which to operate in terms of monitoring and control and also can cause adverse effects on students' behavior, on the other hand, the responsible use of new technologies allowed the implementation of strategies that made it easier for example a formative evaluation *in itinere* and forms of self-evaluation. IT resources have not only been useful for immediate and strategic feedback and address one's learning but also for empowering students and encouraging them to be more self-reliant. In certain circumstances, technological tools responded more effectively to students' individual needs and it helped to differentiate easily the activities performed and evaluated remotely. In this logic, the processes of inclusion were encouraged by the possibility of using resources that promote individual interests and skills.

In some cases, the decontextualization of the learning environment apparently promoted the emergence of student profiles that generally, due to personal factors, could not be valued in presence. For example, shyer or more reserved students who remotely found their dimension to be more open with the class group. In this sense, teacher's reports also pointed out how, in some ways, relationships among peers improved, perhaps because they had to face together an emergency that created a better connection among them and because some dynamics of

prevarication that characterized classroom relationships disappeared. However, it must be emphasized that the advantages of individualized teaching cannot be applied to all those cases in which ERT has profoundly amplified the socio-cultural disadvantage of students and families. Throughout the country, ERT had to deal with its most significant limitation, that of failing to ensure the right of a fair and equal access to education.

FIG. 1. *Graphic representation of the main findings of the study*

Individualized teaching

Assessment

Inclusion

Critical issues

Points of strength

Points of strength

Critical issues

Critical issues (Assessment)	Points of strength (Assessment)	Points of strength (Inclusion)	Critical issues (Inclusion)
1. Absence of control and monitoring; 2. Absence of context (physical and social environments and peer group); 3. Effects on behavior/attitude as a result of guarantee promotion; 4. Teachers questioning what aspects were to be evaluated.	1. Use of flexible tools; 2. Formative assessment; 3. Rethinking assessment strategies and tools; 4. Technology resources for self-assessment and individualized outcome reporting.	1. Use of individualized tools; 2. Enhancement of individual interests and skills; 3. Improvement of peer relationships; 4. School-family co-responsibility.	1. Amplifies the socio-cultural divide and disadvantage; 2. Scholastic dispersion; 3. Amplifies prior difficulties; 4. Difficulty in personalizing instruction.

2.4. Evaluation and inclusion: teachers testimonials from the field

In order to exemplify with some evidence what is summarized in the graphical representation, here are some excerpts that, in an emblematic way, we believe can help define the framework related to evaluation and inclusive processes during the ERT.

Concerning the critical issues of the evaluation process, according to teacher's testimonials, the most significant difficulty is related to the lack of monitoring: «The assessment must take into account the technical difficulties encountered by students and the fact that you are never sure how they do their homework (independently or helped by friends or parents)». Obviously, this relates more to written assignments than to oral tests. Classic 'class tests' are unfeasible with ERT, while 'questions' are quite doable' and to control in the assessment phases: «There remains the problem of assessment: figuring out whether the student is really working on his own/seeking help intelligently/copying without understanding». However, the emerged strengths are related to the possibility of improving assessment practices through the delivery of personalized feedback («I think teachers give more individual attention/feedback to the homework handed in online in respect to that given to daily assessments») and the use of new technologies in order to promote forms of self-assessment («The possibility to use tools, such as Google forms, that allow for self-assessment as well as, at the same time,

teacher evaluation of individuals and the class as a whole»). Another aspect emphasized, concerns the transversality of content not only in the teaching proposal but also in the assessment phase: «The opportunity to make greater use of original and multidisciplinary content for student assessment». This aspect is considered very important to consolidate students' knowledge and skills and develop critical thinking skills.

As anticipated in the initial summary with the graphical representation, it is essential to take into account all the critical issues that the ERT emphasized by failing to bridge the gap among families from different socio-cultural backgrounds. In Italy, as underlined by multiple national surveys and reports, for many students, the ERT meant the impossibility of accessing education, amplifying the disadvantages deriving from individual backgrounds. In this respect, there wasn't an educational strategy capable to react to the structural problems of a country that was facing an emergency of this magnitude. Despite the commitment and efforts by schools to provide the necessary equipment to develop a distance learning, in some places, the internet connection was absent or very poor and it made impossible the right to access education. Furthermore, in situations in which digital skills were inadequate, the ERT wasn't able to guarantee quality education for students:

> The first task of the public school is to include different realities: socioculturally and economically and psychologically. The educational relationship concerning the inclusion of these differences and the fight against school discomfort in any shape and form have been severely penalized by the ERT teaching style that has as its starting point a good digital literacy that is not present to date in many families and teachers. It also requires good knowledge and understanding of the ill-suited language to multi-ethnic and multicultural territorial situations.

In the specific cases of students with special educational needs, teachers testified that they had difficulties in providing remote support. The assistance offered in attendance at school inevitably fell on the families. Despite the unquestioned possibility of maintaining a remote connection and a relationship even with the class group, in terms of inclusion capacity, the limits expressed by the ERT seem to be challenging to curb:

> As far as my experience in this period is concerned, I think that students with disabilities and low autonomy, are damaged by this kind of teaching, because the support work that we teachers used to offer them during the school hours on site, falls on the families. The synchronous group lessons aimed at inclusion with the peer group. While these lessons had the effect of maintaining a thread of continuity and maintenance of the classroom-teacher relationship and fostering learning, they do not compare to the superior quality of the physical classroom lessons.

Despite these critical issues, several evidences highlight strengths of both assessment processes and inclusive practices. These evidences report positive experiences in using new technologies to actively engage all students: «Another strength is the possibility of using more 'appealing' multimedia materials in learning activities: similar to the difference between having an interactive whiteboard in the classroom and having the traditional blackboard or only the latter». On the one hand, the use of multimedia resources was attractive and appealing, able to motivate students to participate and on the other hand it was efficient for the construction of knowledge responding to the special educational needs of students: «Having the ability to connect to the internet and use materials such as videos, images, documents with a highly readable font, allows for greater inclusion, at least in terms of learning. This possibility also applies to some aspects of assessment activities, at least those such as written tests».

Concerning specific learning needs, teachers pointed out that the ERT fostered the use of resources that facilitate specific processes, such as «Easier to use recorded lessons for students with special needs» and «The inclusion of resources and tools that help students to cultivate special interests». They report in general the «Possibility of personalizing activities, making children protagonists, even with new forms of inclusion». For teachers, it was also an opportunity to experiment new educational and didactic strategies that used to be prejudiced or which, more generally, in everyday teaching, they were unable to put into practice, such as: «The possibility of flipped-classroom with the use of videos».

Conclusion

The study of transversal thematic analysis, conducted as part of this research, allowed us to collect testimonies of teachers during the ERT, limitations but also strengths of distance learning. In particular, the thematic analysis represents an opportunity to reflect on evaluative processes and issues related to inclusion as part of the nature of the ERT. The link between assessment and inclusion is the identification of strategies that both in face-to-face and distance activities can promote individualized teaching.

In order to promote individualized remote teaching, it is necessary to design activities and interventions that enhance the needs of the individual student, individual characteristics and cognitive styles. Because of the health emergency, teachers were forced to adjust their teaching method to a new type of education that they weren't ready to deliver. However, thanks to their direct experience, they succeeded to grasp some elements that in the future can be helpful to re-design remote or blended learning activities or to integrate face-to-face teaching. In particular, the use of new technologies contributed to meet student's

individual needs: identify a formative assessment with personalized feedback and attention to the individual training needs of the student. In this regard, teacher training plays a crucial role in order to teach them how to introduce and consciously use technologies in teaching. The risk of transposing traditional didactics remotely contributes to the de-qualification of the educational proposal. Identifying the limits of technologies and distance learning allows us to focus on the obstacles to be faced. To fight against the socio-cultural differences that the ERT risk to amplify, there shouldn't only be institutional intervention, even remotely, to guarantee an equal access to education but also build strategies to bridge the gap constituted by the physical absence of the teacher, the class group and the school background. So, among the future perspectives, it is important to take into account what emerged during the ERT period, not only as a memory of an extraordinary experience and a response to an emergency, but in order to address the future training of teachers with a view to continuous professional development, which is a strategic element.

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Didactic Strategies and Methods During the COVID-19 Emergency: A Comparison Between Data Obtained from the Qualitative Analyses of SIRD Survey

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ABSTRACT: *The aim of this paper is to describe the results obtained from the qualitative analysis of the answers given by teachers to the open-ended questions of the SIRD national questionnaire on distance learning, widespread during the COVID-19 global lockdown. The focus of the present work is on regional data of primary and secondary schools of Tuscany and Umbria, for which the occurrences and the relative percentages by Regional sample were calculated in order to be compared with National results. In addition, a content analysis of teachers' responses was conducted. Some categories which showed more relevant results were selected in order to compare Regional and National results in relation to the use and the effectiveness of certain didactic strategies and methods. The comparison is also made with the quantitative data of the questionnaire to analyse a possible match between different outputs. First, the study revealed that the Tuscan teacher's sample has identified the innovation of teaching methods as a strength of distance learning, compared to the Umbrian and Italian samples. The analysis of the content of the answers has shown, in fact, how distance learning has represented for teachers the opportunity to propose new activities, different from those usually carried out in the classroom, and to revolutionize their teaching strategies mainly thanks to the new potential of the learning environment. The answers also highlighted teachers' intention to use these new strategies even in future. On the other side, we have found in the Umbrian sample the perception of inadequacy of the distance learning environment for practical and group activities, such as the practising of a musical instrument or laboratory subjects, as a weakness of online teaching. The aforementioned results appear to be particularly evident for upper secondary school teachers, while, for primary school teachers, data are very similar to the other two samples, showing a lower perception of inadequacy of the learning environment for these grades. Another weakness of the didactic remodulation is related to difficulties in design and achieving objectives and it was found mainly in the answers of primary school teachers of the Umbria region. These critical issues are related mainly to the expansion of time requested for preparing and carrying out activities, to the difficulty of effectively following all the pupils effectively and the inability of planning activities that involve also the weaker students. Furthermore, in line with the quantitative data, it was found that the percentage of primary school teachers reporting comments related to the implementation of innovative didactic strategies appears to be higher for the Umbrian sample than for the Tuscan and National samples. The*

percentage of answers related to education innovation that emerged for Umbrian data decreases for higher school levels. The purpose of this contribution is therefore to highlight, not only the difficulties encountered by the teachers, but also their ability to adopt new and effective teaching strategies. The use and the implementation of multimedial methods and the multiplicity of teaching tools made the learning process more innovative and engaging for students.

KEYWORDS: *COVID-19; SIRD survey; Distance learning; Teaching strategies; Assessment.*

Introduction

The Italian Society for Educational Research (SIRD) promoted a national survey in order to reflect on the remote education methods adopted during the COVID-19 emergency. The research was conducted by means of a questionnaire answered by more than 16.000 teachers from all schoolgrades of schools and at all educational levels throughout the country (Lucisano, 2020; Lucisano *et al.,* 2021). The open questions of the survey investigated the strengths and weaknesses of distance learning and the difficulties encountered by students. Furthermore, a space for comments and reflections made it possible to investigate in depth the teachers' point of view.

The following contribution comes from the idea of deepening the quantitative data already presented by the same research group in a recent work (Scierri *et al.,* forthcoming).

The aim of this contribution is to examine data from the Umbria and Tuscany regions and compare them with the national sample in order to find out eventual similarities and differences related in particular to the teaching and assessment methods and strategies used during remote education. In particular, the main focus will be on the positive aspects, in relation to the new teaching methods and strategies adopted and experimented. However, we will also describe the difficulties encountered with respect to the methodologies and strategies that were proposed pre-COVID.

Given the peculiarity of the variables analyzed, teachers of the C.P.I.A (which covers Adult Education), of the preschool and Support Teachers were excluded from our sample. In relation to the use of teaching and assessment strategies, in fact, these teachers present peculiarities that we do not intend to go into here. The sample is not probabilistic, with the limitations and cautions in interpreting the results that follow. Another limitation is the number of the Umbrian sample, which is much smaller than the others (Table 1).

TAB. 1. *Distribution of the sample by school order and geographical location (different letters in subscript indicate a significant difference between the categories at least at p ≤.05 level)*

	Italy	Tuscany	Umbria
Primary	47.5_a	32.3_b	26.0_b
Lower Secondary school	28.2_a	25.1_a	32.8_b
Upper Secondary school	24.3_a	42.6_b	41.2_b
Total	100	100	100
(N)	(11.828)	(848)	(131)

1. Methodology

The qualitative analysis of the answers to the open questions of the questionnaire administered in the national SIRD survey responds to the need to deepen some aspects related to the teachers' experience regarding the DL (Distance Learning). The work of categorical analysis allowed a bottom-up modelling of the open questions which, without a priori references, led to the construction of a structure starting from the texts themselves. The elaboration of the categories and subcategories required a process of individual reading and re-reading of the evidence, accompanied by periodic meetings and comparisons on online platforms of the researchers among themselves and with the coordinators, following a bottom-up process (Batini et al. 2020; 2021). The work therefore allowed the identification of neutral and non-evaluative categories, guided by the evidence and not by the interpretation of the researchers, proposing alternative aggregations, offering new possible readings and verifying the sustainability of the proposed categories in order to ensure the methodological rigor of the processes (Braun, Clark, 2006; Gale *et al.,* 2013).

Table 2 provides a summary of the categories identified, which gives a synthetic snapshot (one of the possible ones) of the plurality of experiences in different contexts[1].

The analysis reported here is limited to reporting results for some categories and sub-categories. Specifically, for the 'strengths of distance learning', the category 'Enrichment of the training offer' was examined in the following two sub-categories: 1) 'Innovation and teaching strategies/methodologies', 2) 'Monitoring, assessment and self-assessment'. For the 'weaknesses of distance learning', the category 'Didactic difficulties related to the new learning environment' was examined in the following sub-categories: 1) 'Inadequacy of the learning environment for carrying out practical/laboratory activities and collaborative group activities'; 2) 'Difficulties in designing and achieving objectives'; 3) 'Difficulties in the assessment processes'; 4) 'Difficulties in monitoring and control'; 4) 'Inadequacy of teacher training'. For the *comments,* the category 'Effects of distance learning on teaching' was

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[1] For further methodological insights, see Batini et al., 2020; 2021.

examined in relation to the sub-category 'Discovery of new teaching strategies'; while in relation to the category 'Difficulties related to the new learning environment' the sub-category 'Difficulties in assessment and monitoring' was analysed.

We started with the categories already defined and counted the occurrences of categories and subcategories for each question at both national and regional level. The percentage data for questions with a double response (strengths and weaknesses) were combined by means of a statistical average. In addition, a content analysis of the teachers' answers was conducted. Some categories that showed more relevant results were selected in order to compare regional and national results in relation to the use and effectiveness of teaching strategies and methods, compared to what the quantitative data showed. The analysis of the answers concerning students' difficulties was excluded because of the focus of the present work.

TAB. 2. *Summary of the categorical structure of the four open questions (Batini et al., 2020)*

Comments and reflections of the teachers	Student Difficulties
1. Teaching professionalism	*1. Problems related to technological tools*
2. Negative personal consequences on teachers	*2. Problems related to technological skills*
3. Criticality of the precariat	*3. Problems related to life contexts*
4. Effects of distance learning on teaching	*4. Problems related to the lack of social relationship/interaction in presence*
5. Difficulties related to the new learning environment	*5. Problems related to lack of/poor cooperation*
6. Difficulty of inclusion	*6. Problems related to the new learning environment*
7. Emergency response	*7. Students' attitudes towards distance learning*
8. Roles and attitudes towards distance learning	*8. Inclusion*
9. Organizational difficulties	*9. Other responses*
10. Other responses	
Strengths of distance learning	Weaknesses of distance learning
1. Emergency response	*1. Problems related to technological tools*
2. Development of new technological skills	*2. Problems related to technological skills*
3. Relational advantages	*3. Didactic difficulties related to the new learning environment*
4. Organizational improvement	*4. Difficulties related to the reorganization of the school structure*
5. Professional development of teachers	*5. Attitudes and roles towards the new learning environment*
6. Students' skills related to distance learning	*6. Inclusion*
7. Students' attitude towards distance learning	*7. Negative effects of distance learning*
8. General learning benefits	*8. Other responses*
9. Enrichment of the training offer	
10. Inclusion	
11. Disposition/approach of teachers	
12. Classroom management	
13. Other responses	

2. Results

2.1. Didactic remodelling, teaching methods and strategies

From the analysis of the answers to the open question which asked the teachers to indicate two strengths of the DL, regarding the sub-category 'Innovation and teaching strategies/methodologies', it is possible to observe how the qualitative data of our sample is in agreement with the quantitative data (Scierri *et al.,* forthcoming). In fact, from the results it emerges that the percentage of subjects who identified among the strengths the positive influence of DAD on teaching innovation through the use of new teaching strategies and methodologies is higher for the Tuscan sample (9.43%) than for the national sample (6.43%) and the Umbrian sample (4.58%) (Table 3).

TAB. 3. *Innovation and teaching strategies/methodologies*

	% On National sample	% On Tuscan sample	% On Umbrian sample
Answer 1	6.43	12.62	3.82
Answer 2	6.42	6.25	5.34
Mean	6.43	9.43	4.58

Data shows, therefore, a greater effort of Tuscan teachers in the didactic remodulation. However, investigating the trend of the regional answers divided by school order, we can see an opposite trend as far as Tuscany and Umbria are concerned (Figure 1). The percentage of answers in which a renewal of the teaching methods in the primary school is reported is higher for the Umbrian regional data (7.35%) compared to both the national data (6.46%) and the Tuscan data (3.83%). This difference is reversed when we look at the higher grades of school: for Umbria the percentage decreases for lower secondary school teachers (5.82%) and is drastically reduced for upper secondary school teachers (1.85%). Thus, in Umbria, the higher the level of school considered, the less the remodulation of teaching and the use of innovative strategies. Data from Tuscany show an inverse trend, in line with the national data: Tuscan teachers who have identified the didactic remodulation as a strength of the DAD increase in percentage terms if we consider the lower secondary school (5.90%) and even more in the upper secondary school (7.18%), coming to exceed even the national data (6.41%).

This result is coherently linked to what emerges from the answers to the question that provided the opportunity to highlight two weaknesses of the DL.

FIG. 1. *Innovation of teaching methods*
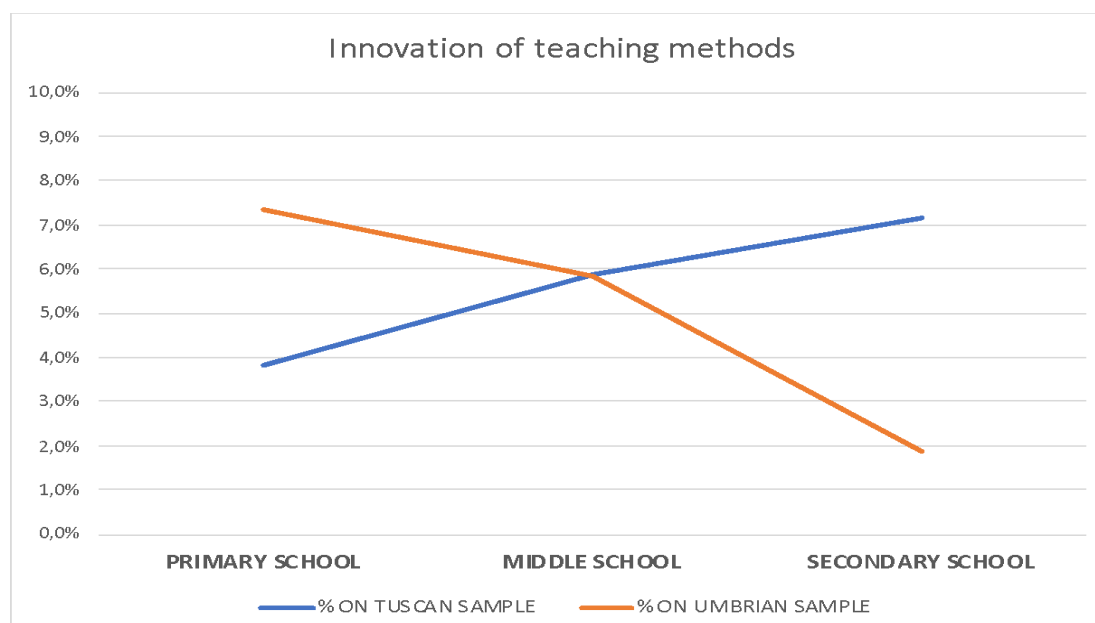
The perception of 'Inadequacy of the learning environment for carrying out practical/laboratory activities and collaborative group activities' is generally greater for Umbrian teachers (3.31%) than for the Tuscan (2.67%) and national (2.45%) figures. This difference remains when we look at the higher school levels: with reference to the secondary school, the percentage of answers that pointed out an inadequate environment for teaching is again greater for Umbria (4.36%) in comparison to the national (2.25%) and Tuscan figures (3.18%) (Table 4).

On the contrary, the Umbrian qualitative data for primary school teachers is in line with the other samples, so there is a lower perception of inadequacy of the learning environment. This data can probably be interpreted in the frame of reference of the data described above: a lower remodelling of the teaching strategies can lead to a higher perception of inadequacy of the learning environment. The analysis of the content of the answers shows a weakness of online teaching, that is the perception of inadequacy of the distance learning environment for practical and group activities such as the practising of a musical instrument or subjects that involve laboratory activities.

TAB. 4. *Inadequacy of the distance learning environment – Secondary school*

	% On National sample	% On Tuscan sample	% On Umbrian sample
Answer 1	1.64	2.21	5.56
Answer 2	2.86	4.14	3.70
Mean	2.25	3.18	4.63

Remaining on the weaknesses found by the teachers, it is important to pay attention to the response frequencies concerning the 'Difficulties in designing and achieving objectives'. It is possible to hypothesise that the didactic remodelling has led to greater difficulty in the designing of teaching activities. At a general level, the data emerged are comparable

between Italy (3.98%) and the two regions considered (Tuscany: 3.54%; Umbria: 4.20%). However, as far as primary schools are concerned, the percentage of teachers who highlighted critical points in their teaching designing is higher in Umbria (7.35%) than in Tuscany (4.74%) and Italy (4.92%) (Table 5).

TAB. 5. *Difficulties in designing and achieving objectives – Primary school*

	% On National sample	% On Tuscan sample	% On Umbrian sample
Answer 1	4.91	4.01	8.82
Answer 2	4.93	5.47	5.88
Mean	4.92	4.74	7.35

This is in line with what was observed in the strengths results, which showed a greater remodelling of teaching at primary school for Umbria. In this case the critical points are linked above all to the extension of time required for the preparation and execution of activities. Another critical issue is related to the difficulty of following all students effectively and equally and the inability to plan activities. The 'Difficulties in designing and teaching activities' seem to be particularly crucial when it comes to the inclusion of weaker students. Moreover, in the last section of the questionnaire, in which the teachers expressed comments or personal reflections on the DAD experience, a relevant aspect emerges in line with what has already been described regarding the strengths and the quantitative data. The percentage of primary school teachers who reported comments on the discovery of new teaching strategies was higher in Umbria (2.94%) than in Tuscany (1.09%) and at the national level (1.48%) (Table 6).

TAB. 6. *Implementation of innovative didactic strategies by school order*

	% On Tuscan sample	% On Umbrian sample
Primary school	1.09	2.94
Lower Secondary school	1.42	2.33
Upper Secondary school	1.10	1.85

The percentage of evidence relating to didactic innovation that emerges from the Umbrian data decreases by considering higher grades of school: for the secondary school the Umbrian percentage goes down (1.85%) (Figure 2). For Tuscany the reverse trend (observed for the strengths) is not observed, so there is no increase in frequencies as a function of school grade. This is probably due to the nature of the question itself, which asked for a further in-depth examination of what has already been said in the previous ones.

But what is meant by innovation in teaching and didactic strategies? The analysis of the content of the answers has shown how distance learning has represented for teachers the opportunity to propose new activities, different from those usually carried out in classrooms, and to revolutionize their teaching strategies mainly thanks

to the new potential of the learning environment. The answers also highlighted teachers' intention to use these new strategies even in future.

FIG. 2. *Implementation of innovative didactic strategies*
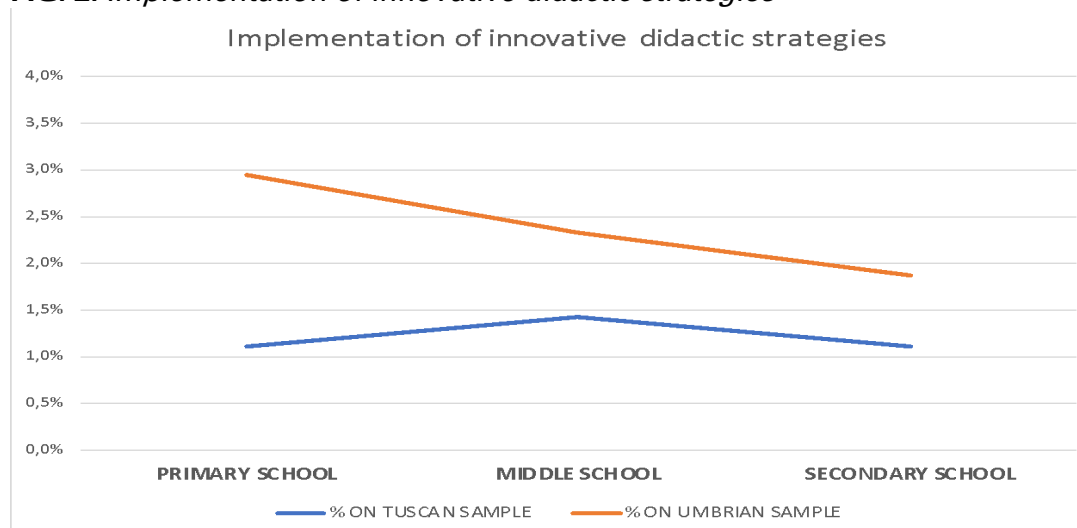
2.2. Modalities of Assessment

National data (1,83%) concerning the sub-category 'Monitoring, assessment and self-assessment', related to the strengths question, is almost similar to the regional data, both from Tuscany (2.00%) and Umbria (1.53%) (Table 7). Teachers, in fact, underline a greater speed in correcting the verifications or the written texts, an immediacy of the results with the written tests and also a better return of the papers and the possibility to correct them with the students themselves. With this new mode, students were also monitored and helped more on an individual level. However, it is relevant to note that Umbrian primary school teachers do not seem to have found any strengths in the diversification of monitoring, assessment and self-assessment methods (0%) (Table 8).

TAB. 7. *Monitoring, assessment and self-assessment*

	% On National sample	% On Tuscan sample	% On Umbrian sample
Answer 1	1.12	1.18	0.76
Answer 2	2.54	2.83	2.29
Mean	1.83	2.00	1.53

TAB. 8. *Monitoring, assessment and self-assessment by school order*

	% On National sample	% On Tuscan sample	% On Umbrian sample
Primary school	1.90%	1.28%	0.00%
Lower Secondary school	1.87%	2.36%	2.33%
Upper Secondary school	1.64%	2.35%	1.85%

Qualitative data of the secondary schools of Tuscany are instead in agreement with the quantitative data on the greater effort of

remodulation of the methods of assessment implemented by the teachers (Scierri *et al.,* forthcoming). In fact, teachers, albeit with greater effort, seem to have diversified more the methods of monitoring, assessment and self-assessment compared to the national and regional data on lower (2.36% Tuscany; 2.33% Umbria; 1.87% National) and upper secondary schools (2.35% Tuscany; 1.85% Umbria; 1.64% National).

Teachers from Umbria (12.98%) also showed more weaknesses with respect to the sub-category 'Difficulties in the assessment processes' in comparison to the National (8.04%) and Tuscan sample (8.43%) (Table 9). This difference does not emerge in relation to the 'Difficulties in monitoring and control'. These data are partly in contrast to what emerges in the same sub-category 'Difficulty in assessment and monitoring' in relation to the comments question. Data show less difficulty in assessment and monitoring than reported in the same subcategory on the weaknesses question. Most probably most respondents did not feel it necessary to stress this aspect again in the question on general comments.

TAB. 9. *Difficulties in the assessment processes*

	% On National sample	% On Tuscan sample	% On Umbrian sample
Answer 1	5.39	6.37	9.16
Answer 2	10.69	10.50	16.79
Mean	8.04	8.43	12.98

The lack of opportunity to implement an adequate assessment of the didactic gain emerged from the quantitative data, concerning the secondary school teachers of Tuscany, is in line with the data emerging from the sub-category of the comments concerning the 'Difficulties in the assessment and monitoring'. In fact, Tuscan teachers are those who reported a higher percentage (3.30%) than the Umbrian teachers of the first level secondary schools, where the percentage is 0 (Table 10). The Tuscan figure, however, seems to be more in line with the National figure, which stands at 2.78%. Tuscany has a higher percentage (4.70%) compared to the National (2.37%) and to the Umbrian figure (3.70%), even for upper secondary schools.

TAB. 10. *Difficulties in the assessment and monitoring*

	% On National sample	% On Tuscan sample	% On Umbrian sample
Lower Secondary school	2.78%	3.30%	0.00%
Upper Secondary school	2.37%	4.70%	3.70%

Of particular interest is the result of secondary school teachers of Umbria since this is the only school grade where difficulties were found reported by teachers (3.70%). This result was found analysing the category 'Difficulties in assessment process' of the question related to weaknesses of distance learning.

2.3. Assessment of the quality of the experience in relation to the teachers' previous experience

We tried to relate previous experience and thus familiarity with technology to the sub-categories relating to assessment. The results that clearly emerge is that neither the National nor the Regional data, differentiated by grade, show significant percentages of previous training. The only teachers who reported a previous preparation as a strong point, with a slightly higher percentage compared to the National and Tuscan data, are Umbrian teachers of first degree secondary schools (1.16%). From the qualitative data therefore it is not possible to sustain that those who have a previous training, realize an adequate assessment of profit, perhaps associating this data to a greater diversification of assessment methods, self-assessment and monitoring.

The same reasoning also applies to perception of effectiveness of the students' learning in relation to the previous training, which can be found in the sub-category 'Effectiveness of the didactics' (on the learning results and attitude of the students) within the 'Comments' question. The data that is confirmed is always that relating to the Umbrian teachers of the lower Secondary Schools who declared as a strength point their previous experience to a greater extent than the other samples. They also perceived a greater effectiveness of teaching on learning outcomes and student attitudes (2.33%) compared to the National data (1.20%) and the Tuscany data, that is attested with occurrences equal to 0. At this point we have analysed instead those who reported the lack of previous experience and training as a negative datum to see how this could affect the assessment practices. Teachers from Tuscan primary schools are those who reported with a greater extent, as a point of weakness, the difficulty given by the inadequate training of teachers (2.19%). This data, unlike the quantitative data, is not reflected in the subcategory 'Difficulties in assessment processes' within the weaknesses. In fact, teachers from Tuscan primary schools, although reporting a poor previous training, seem not to have found difficulties in the assessment processes (4.20%) or at least to a lesser extent than the Umbrian teachers (8.82%) who report a percentage of 1.47% in the sub-category relating to 'Inadequacy of teacher training'. However, it is interesting to note that for the teachers of upper secondary schools in Umbria there are no weaknesses related to inadequate training of teachers (0%), an aspect that is instead reported significantly more by the same Umbrian sample (4.65%) within the sub-category of comments about teachers' lack of training and skills, compared to both the Tuscan (2.83%) and the National data (1.95%).

Conclusions

The contribution aimed to present an in-depth analysis of some data from the national SIRD research on Distance Learning, relating in particular to the regions of Tuscany and Umbria. Specifically, the answers to the open-ended questions of the questionnaire concerning the strengths and the weaknesses of the DL experience were examined, taking into consideration the categories related to the didactic and assessment aspects.

Firstly, the study revealed that the Tuscan sample of teachers identified innovation in teaching methods as a strong point of distance learning to a greater extent than the Umbrian and Italian samples. According to some teachers, distance learning represented an opportunity to propose new activities and to revolutionize their teaching strategies, especially thanks to the new potential of the learning environment. Teachers' answers also highlighted the intention to use these new strategies in the future. Secondly, in the Umbrian sample, a perceived inadequacy of the distance learning environment for practical and group activities, such as the practice of a musical instrument or laboratory subjects, was found as a weakness of online teaching.

In particular for upper secondary school teachers. This aspect may depend on the type of school, given that it is often reported by technical institutes that perhaps often provide for laboratories or practical activities in their organization. Another weakness detected is related to the difficulties in planning and achieving objectives. This fact was found above all in the answers of the primary school teachers of the Umbria region. These critical points are linked above all to the extension of the time required for the preparation and carrying out of the activities, to the difficulty of effectively following all the pupils and to the inability to plan activities which involve even the weakest pupils. Moreover, it emerged that the percentage of primary school teachers who reported observations concerning the implementation of innovative teaching strategies appears to be higher for the Umbrian sample than for the Tuscan and National ones. The percentage of answers related to didactic innovation emerged for the Umbrian data decreases for the higher school levels. In summary we can say that both the Tuscan and the Umbrian samples have found some positive aspects with opposite tendencies between primary and secondary schools.

Teachers' answers show the importance of adopting new and effective teaching strategies to make the learning process more innovative and involving. The use of interactive teaching strategies seems to have been, at a national level, a determining aspect for a better evaluation of the DAD experience in terms of both effectiveness for student learning and adequate assessment of student achievement (Scierri *et al.*, forthcoming). In general, collaborative strategies were accompanied by a positive evaluation of the online teaching experience (Trinchero, 2021).

In conclusion, the need to innovate teaching strategies was seen by some teachers as a strong point of the distance learning experience. Moreover, as emerged from the quantitative data analysis, teachers who

used 'active' teaching and assessment methods were the same ones who provided a higher evaluation of the experience. Furthermore, according to teachers' answers, the use and implementation of multimedia methods and the multiplicity of teaching tools made the learning process more innovative and engaging. It is important to consider, among others, these aspects as a starting point for restarting and designing a 'new' post-COVID-19 didactics.

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Quality ECEC in Italy: Teaching and Learning in the New 0-6 System

Educating in the Cooperative Model through a Structural Dialogue Between Face-to-Face and Digital Environments

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ABSTRACT: *This abstract presents the European Coopcamp project, launched in March 2020 in 5 countries: Belgium, Italy, Poland, Spain and Sweden. The project aims at proposing a training course in high schools to improve the knowledge and values of the cooperative model (mutuality, democracy, participation) and related skills (Fazzi, 2019). Very rarely, a cooperative economic model is a choice for young people. However, they are a particularly suitable target group for a business model that focuses on personal skills rather than on the availability of capital. In a preliminary research phase, a questionnaire was administered to some of the project partner schools, based upon the experiences of previous projects and the EntreComp framework. The analysis of the results contributed to the design and implementation of a training package, taking into account three main conceptual pillars: 1. a narrative framework on cooperative values in line with young people's imagination; 2. a gamified structure eliciting interest in content and training activities; 3. the design of experiential learning activities based on problem-solving, challenges and simulations, to be carried out either face-to-face or online. All this, by using a digital tool created specifically for the project, with the function of providing teaching materials, guiding groups of students and teachers in scheduled meetings and keeping track of the training process. The choice of this approach is due to two main reasons. On the one hand, the choice was made to stimulate students' interest by going towards their habits and imagination (Bolin, 2017), betting on the meaningfulness of learning experiences (Ausubel, 2000). On the other hand, it is necessary today to rethink training interventions in media education and media construction of reality framework (Couldry, Hepp, 2017). To facilitate learning, technological tools are embedded into a constructivist and collaborative logic, focusing on the quality and quantity of interactions: between students and teachers and between students themselves. In concrete terms, the digital tool consists of an online learning environment that gradually indicates the activities to be carried out, guiding teachers and students in their learning process. The online environment is not seen as a 'mere' expansion and continuation of what happens in the face-to-face context; it enhances the offline experience by guiding the educational process, just as a dashboard to refer to in order to conclude the learning path. The project is currently in a pilot phase. Actual testing will take place in schools in the project partner countries by April*

2021. So far, about 150 groups of students and 50 teachers registered in the online environment, exploring sections and functions of the digital tool.

KEYWORDS: *Storytelling, Gamification, Cooperation, Entrepreneurship, Digital.*

Introduction

The Coopcamp project started in March 2020 in 5 European Countries: Belgium, Italy, Poland, Spain and Sweden. It aims at improving the knowledge of cooperative model values and competencies among scientific and technical secondary high school students. Since this working model focuses on personal skills rather than the availability of capital, the idea is that young students should be put in a position to understand its peculiarities, because it fits particularly well this specific target. Nevertheless, the cooperative economic model is very rarely a choice for young people. The result is that, after leaving school, they often enter weak and precarious forms of employment. Research carried out in May 2019, when the project was being written, showed relatively high youth unemployment rates in the project partner countries (between 12% and 34%). Since then, the rate has increased further (between 13% and 40%). A second problem concerns the quality of employment itself, both in terms of the quality of the contracts offered to young people and in terms of satisfaction: in 2016, 16% of employed 15-34 year-olds stated that their main job did not correspond to their wish and level of education. Furthermore, students in technical high schools are a particularly vulnerable group in terms of risk of unemployment, low quality or unsatisfactory employment pathways. Although they possess relevant technical skills and competencies, they often lack a sense of entrepreneurship (specifically of cooperative entrepreneurship) and need a business infrastructure requiring relevant financial capitals to get started. The central point of the project is to enable these students to get to know and understand concretely an alternative model to the dominant capital-based way of doing business.

Answering this question has meant first of all a rethinking of the cooperative theme within educational systems. This rethinking is based on two main guidelines: the methods of communication best suited to the target audience, and the most effective teaching methods for achieving the educational objectives. Schools were chosen to facilitate the integration of the learning experience into the standard education process. The design of the activities took several issues into account. Firstly, they should not interfere negatively with existing educational pathways. Therefore, emphasis was placed on an approach that gradually progressed from theoretical and notional elements to concrete and contextualised tools, such as the business plan and the development of the business model, going so far as to ask for the use of specific

instruments (e.g., the business model canvas). The learning experience made use of a gamified digital environment, which acted as a guide to the training process. The Coopcamp project is a first attempt to connect young people with alternative and sustainable business models.

1. The methodological framework

The first action of the project was a preliminary local questionnaire addressed to teachers in the target schools. The objective was to assess the gaps in local educational programmes about the available cooperative training courses, to have an adequate picture of the situation in which the training programme will be delivered. The construction of the questions was based on the EntreComp framework and the results of previous projects (ECOOPE, EMISE+), investigating different aspects: the presence of curricular or extracurricular training programmes dealing with cooperative and entrepreneurial topics, the use of active methodologies/approaches (e.g., cooperative learning, mind mapping, team building, peer education, flipped classroom, game-based learning), the treatment of cooperative values (mutuality, democracy, participation), the presence of internship activities, the collaboration with organisations, institutions or companies, the development of some soft skills (e.g., communication, teamwork, problem-solving, creativity, leadership, time management). Seventy-five schools participated in the survey, reporting experience from 94 different courses or teaching modules. The results were unexpected in many ways, as the vast majority of schools (between 80% and 90%) stated that they already have courses on cooperative entrepreneurship and use cooperative teaching methodologies. The situation was very heterogeneous in the different partner countries, and, after the experimentation, it became evident that the criticalities were wider than declared. The percentages drop considerably concerning the presence of practical internships in enterprises (47%) and cooperatives' involvement (52%), one of the strengths of the project, at least in theory, because then the pandemic situation greatly reduced the possibilities for practical training.

In addition to the analysis of these results, the training course was also designed taking into account the most common youth imagination. Collective imagination can be defined as a symbolically and socially shared configuration of meaning (Ragone, 2016), built on a cycle of constant reformulation of individual and collective memory. To work on it is necessary to consider the composition of the archive of images in the present time (Durand, 1972), narratives capable of giving new meanings to archives of archetypes and myths (Tarzia *et al.,* 2020), and the recurring social and symbolic representations (Santambrogio, 2006), as well as the aspects that could become part of the imagination and replace common sense (Jedlowski, 2008). These aspects were discussed with university students slightly older (23-24 years old) than the target group of the

project, who participated in brainstorming and operational meetings, contributing to an initial definition of the story's characters, the first draft of the narrative structure and its subsequent development. The cooperative model was the approach of this work, with weekly internal meetings and a monthly discussion with the other project partners, who provided constant feedback on the storytelling, gamification, and training activities. This was partly due to the context of the project, partly to the need to move the meetings online: the digital and networked medium somehow induced participation and sharing, providing the infrastructural and conceptual framework (De Kerckhove, 1991).

2. Face-to-face and digital environments: a mutual support

The core of Coopcamp action is the development and implementation of a course that takes into account three main conceptual pillars:
1. an interactive training based on a specific narrative framework on cooperative values understandable by young learners and in line with their imagination;
2. a blended experience (online and offline), under the form of a gamified structure eliciting interest in content and training activities;
3. the design of concrete experiential learning activities based on problem-solving, challenges and simulations, to be carried out either face-to-face or online.

The reason for this approach is two-fold. On the one hand, the choice was made to stimulate the students' interest by matching their habits and imagination, betting on learning experiences' meaningfulness (Novak, 2002; Ausubel, 2000). On the other hand, we believe that, in today's society, any educational initiative must use a media education framework (Rivoltella, Rossi, 2019), where old and new media are used consciously and wisely (Prensky, 2011). Different media are incorporated within a constructivist and collaborative instructional design (Rosen, Salomon, 2007; Hattie, 2009), focused on the quality and quantity of interactions: among students, and between students and teachers. The training framework is experiential and encourages peer activation to foster knowledge retention and sedimentation.

The course makes use of a digital tool, designed and realized within the project, consisting of an online learning environment that guides teachers and students in their learning journey. Here they can find teaching materials, learning verification activities, monitoring tools and spaces for uploading the training activities' outputs. The activities were designed to be carried out both in face-to-face and online situations through synchronous communication tools, depending on the schools' possibilities and the pandemic restrictions. Online and offline activity dialogue constantly, in an experiential continuum between the virtual and physical dimensions, making explicit the close relationship between

them. Today we don't live online and offline, but 'onlife' (Floridi, 2015): the distinction between the different environments is no more useful nor effective and it is no longer reasonable to ask whether you are online or offline. The traditional logic of blended learning takes on a particular value for learner involvement (Halverson, Graham, 2019; Hrastinski, 2019). The online environment is not seen as a 'mere' expansion and continuation of what happens in the face-to-face context; it reinforces the offline experience by guiding the educational process. Not a repository. Not an additional action space. But a structural part of the process.

The activities in the digital environment must be conducted in a group, to let students directly experience the cooperative dynamics. The group makes its decisions together but delegates a representative who loads the students' outputs, responds to the questionnaires and takes the quizzes.

2.1. First pillar: the narrative

The cooperative narrative is the first conceptual pillar. The story is divided into seven chapters and is focused on a group of students, designed on their proximity to the project's target audience. They are the protagonists of a journey (Vogler, 2007) that takes them from a familiar context (their school and homes) to a wider context, moving from specific actions to actions that affect and involve the whole local community in which they live. The initial scenario refers to narrative situations reminiscent of teen dramas, a theme that has become very popular in recent years, especially on recent production and distribution platforms (e.g., Netflix, PrimeVideo, Sky, DisneyPlus, ApplePlus). As the story evolves, the narrative action shifts towards situations more related to cooperative themes, trying to meet the educational needs of the project without losing the main theme of the adventure.

The storytelling has two main functions: thematic and structural. The first is to provide historical and conceptual information on the distinction between the cooperative model and the capitalist model, taking into consideration aspects such as the involvement of people (cooperation), mutual support (mutuality), the relationship with the territory (territorial rootedness), and the valorisation of differences (multiculturalism). The second function is to provide coherence (Bruner, 2003) between the various dimensions of the training package. Both the gamified approach and the training activities have a close relationship with the story; at some points, they depend directly on it, in a logic of gradual discovery and progression from theoretical notions to practical tools.

2.2. Second pillar: the gamified learning path

Each chapter of the story corresponds to a phase of the learning process and a challenge. The challenges are based on key topics of the cooperative model: Cooperative values, Team working, Mutuality, Community development, Democracy, Entrepreneurship, Planning and management.

The digital environment is thus divided into seven sections, plus one dedicated to the Final Event at the end of the course, with a certificate of participation to download. The work sections are structured as follows:

- The storytelling chapter.
- *Support material for student activities*: links and resources for students.
- *Support material for the teacher/facilitator* (not visible to students): resources for guiding teachers in the training activities.
- *Students' outputs*: the place to upload the training activities' output, designed as challenges/games. Depending on the situation of the school where the training is conducted, there are:
  - two face-to-face challenges/games related to the section topic;
  - an online challenge/game as an alternative to face-to-face ones.
- *Experience evaluation maps*: for each training activity, there is a quick survey to gather students' evaluation in terms of Engagement, Participation, Fun, Emotional Involvement.
- *Assessment Test*: a short quiz on the primary study resources.
- *Training Diary* (not visible to students): a logbook for teachers/facilitators to note the activities done by their groups of students.

All these elements take into account both the digital tool and the training experience carried out in face-to-face or online situations over nine meetings (the presentation of the project and the tool, the seven challenges, the final event). Whenever possible, on-site visits were made to the cooperatives, but unfortunately the pandemic has greatly reduced this possibility. The preliminary questionnaire showed a general absence of internships in the surveyed courses, and the possibility to see live how cooperatives work would have allowed to situate learning in a real context, facilitating the beginning of a process of direct observation of competencies in action in co-operative workers (Lave, Wenger, 1991). Experience is a testbed for pedagogical design and must be planned, conducted and subsequently observed in a way that can be integrated with student development. The experience is not meaningful in itself: it must be embedded in a developmental plan that gives it meaning, through analytical and reflective moments to integrate it with what has gone before and what develops after. As well as being enjoyable, the experience must be able to influence subsequent experiences and actions (Dewey, 1938).

This is one of the reasons why it was decided to use the gamification logic for the Coopcamp digital tool, referring to game design's structural elements: levels, scores, rankings, rewards, rules (Kalmpourtzis, 2019). Each resource and activity are associated with points. The digital environment is the same for all schools in the five partner countries,

although there is the possibility of downloading a package to install in your own school. The more the groups of students interact with the environment, the more they can increase the score and climb the ladder of all the teams participating. After performing the evaluation test of a section, the system issues a badge. In addition to the 7 section badges, the system allows the acquisition of 10 extra badges, associated with some playful or merely informative micro-activities (i.e., glossary terms on cooperative themes, videos, games based on cooperative topics). The collection of all the badges is a further boost to explore the environment and discover new information. However, it should not be assumed that the gamified experience is reduced to these elements (Kapp, 2012).

2.3. Third pillar: the experiential training activities

The whole training package takes into account the game design approach, even in its different activities, because it is in the coherence of the whole that it is possible to facilitate and stimulate involvement. The training activities are designed for face-to-face situations, although the pandemic situation required the alternative of online versions. They consist of active educational challenges linked to the topics of each section. There are two games for each topic: the first one is based on a fantasy context, the second one tends to a real situation. For example, in Challenge 5 (Democracy), the first game requires students to play the town councillors of Lone Island (location of the story), whilst, in the second game, they must present and democratically choose the community development project for their school/territory from those developed in Challenge 4 (Community development). In this way, students are called upon to apply theoretical notions and tools in the real contexts in which they live, increasing the meaningfulness of their learning (Novak, 2002).

The role of the teachers is fundamental in this stimulating action. They have the function of accompanying students in a reflection on the educational content of the activities and of stimulating the achievement of the learning outcomes. Every game is provided with a guide for teachers and material to print or share with students. The structure of this material is more or less the same: Before starting, Name of the game, Main instructions, Goal, Additional tips for the teacher/facilitator (if present), Materials and tools needed for the activity, Students' output, Debriefing, Learning outcomes, Recommended Timing, Digital environment tips (for online version). At the end of each game, learners are invited to return to the digital tool to upload the outputs (i.e., photos or digital documents produced during the training), respecting the integrated blended approach of the training model.

3. Evaluation Survey Results

About 170 groups of students and about 50 teachers have registered in the online environment and explored the digital tool's sections and functions. It is a good number, better than the expected amount of at least 120 students, but we hope it will grow also after the pilot phase. Due to COVID-19 restrictions, the project's last training meeting will be online, in August 2021, with one to three students per partners' territories. The scope is to compare and exchange the knowledge and competencies achieved and elaborate a business canvas for a European Coopcamp cooperative.

At the end of the training path, a questionnaire was submitted to the students to evaluate their learning experience in the digital environment. From the analysis of the responses (219), some interesting aspects emerged on which to reflect to further improve the digital learning environment. By comparing Figure 1 and Figure 2, we can see that at the end of the course, almost all of the students increased their knowledge (94,5%) about the world of cooperation and its principles, including those who stated to know quite much or very much about cooperatives.

FIG. 1. *Evaluation Survey Results*

how much did you know about cooperatives and cooperative principles when you started the course?
219 risposte

- Very much
- quite much
- not much
- nothing at all

43,4% · 16% · 11% · 29,7%
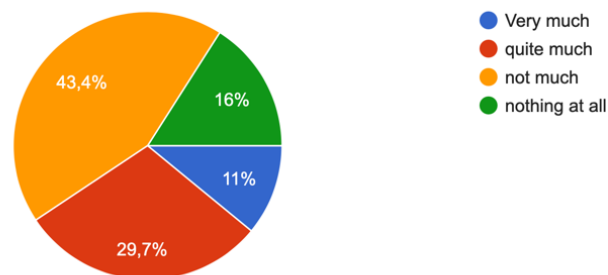
FIG. 2. *Evaluation Survey Results*

do you feel you increased your knowledge about cooperatives?
219 risposte

- very much
- much
- not much
- nothing at all

63% · 31,5%
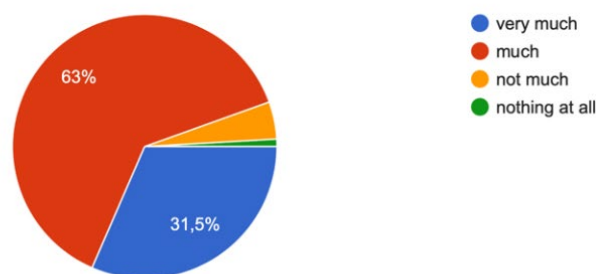
The improvements mainly regard the basic knowledge and some specific aspects about co-operatives, such as solidarity, democracy and sustainability (Figure 3).

FIG. 3. *Evaluation Survey Results*

what do you think you better know now?
219 risposte

basic cooperative concepts	105 (47,9%)
some specific aspects of cooperation (solidarity, democr…	149 (68%)
ethics applied in concrete actions	32 (14,6%)
modes of operation of cooperatives	1 (0,5%)
the beginning of cooperatives.	1 (0,5%)
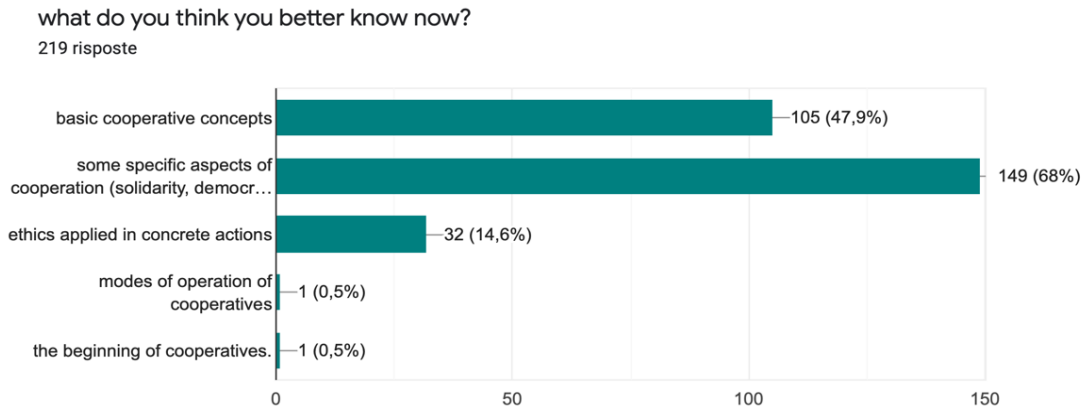
However, not only the cognitive aspects are perceived as improved by the respondents. Also, the metacognitive dimension is considered highly enhanced, with particular reference to the ability to link different matters (90% of positive responses, Figure 4), of transforming theory and ideas in practices (83% of positive responses, Figure 5 and 85% of positive responses, Figure 6), and to collaborate with other people (87% of positive responses, Figure 7).

FIG. 4. *Evaluation survey results*
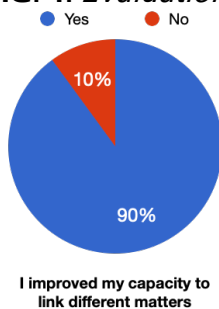
Yes   No

10%

90%

I improved my capacity to link different matters

FIG. 5. *Evaluation survey results*

Yes   No

17%

83%

I improved my capacity to apply what I learn in theory

FIG. 6. *Evaluation survey results*

Yes   No

15%

85%

I improved my capacity of transforming ideas in practices

FIG. 7. *Evaluation survey results*

Yes   No

13%

87%
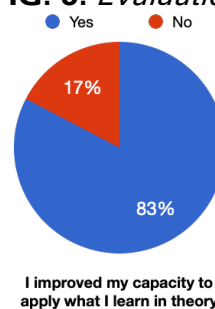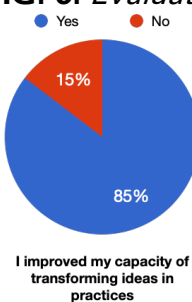
I improved my capacity to collaborate with others
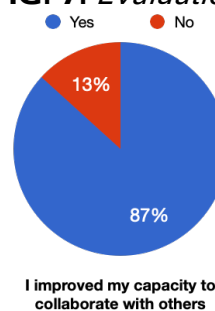
Other questions were aimed at investigating whether the gamified approach had a positive function in terms of learning and motivation. The responses show a general high appreciation, both about the approach (76% of positive responses, Figure 8) and to the capacity of stimulating learning (74% of positive responses, Figure 9). Overall, the course was perceived as adequate in terms of difficulty, enabling effective learning: only 26% find the course more difficult than expected (Figure 10).

FIG. 8. *Evaluation survey results*

the gamified approach was very useful

FIG. 9. *Evaluation survey results*

the challenges we met during the coursewere stimulating

FIG. 10. *Evaluation survey results*

the course was more difficult than expected
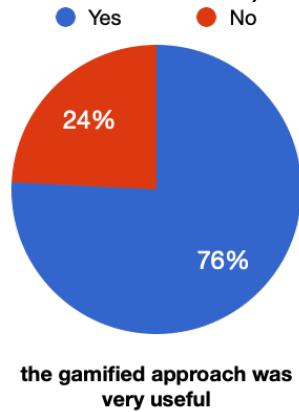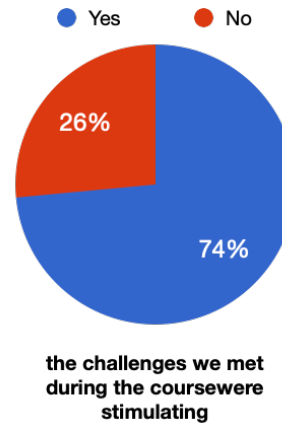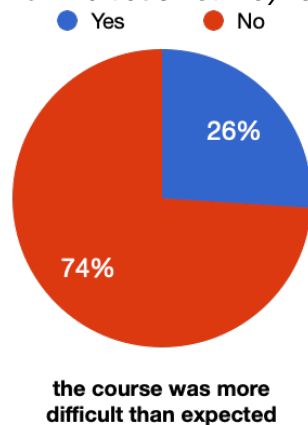
In their qualitative responses, students highlighted some aspects that may be useful in fine-tuning the digital learning environment, such as the need to make the objectives of certain challenges clearer and the possibility of more extensive explanations.

Apart from that, the students' comments are enthusiastic for several reasons. First of all, they express the fun they had in 'playing to learn', and in being involved in a way that had hardly ever happened before; then they show that they appreciated the possibility of working in groups in a different way than usual and with greater intensity and systematicity; finally, they underlined the opportunity to improve their use and knowledge of the English language. Many students also expressed their appreciation of the cooperative world, whose logic and dynamics they had so far barely known. Some criticisms also emerged, precisely

concerning what was generally considered a strong point (gamification and the English language). This confirms, if it were needed, that there is no one method that is good for all, and that in any case every educational path should be calibrated on different cognitive styles. This is a suggestion that could be taken into consideration for the development of the tool and the training activities, to be proposed also in an individual and 'traditional' way. But, in any case, the cooperative and experiential logic of the project leads to a different approach: the one that has been used and that on the whole turns out to be very effective.

Conclusion

It is possible to identify some aspects for reflection on possible new applications. The first concerns the importance of involving, in the construction of the training model, people whose imagery is 'close' to the future recipients of the training. This makes it possible to speak more coherent languages and use more coherent symbols. The second refers to the profound interweaving between storytelling, gamification and the values on which the training is built: being able to connect the values, without penalising the narrative form or trivialising gamification, is a great challenge that requires attention, but which in the end gives a lot of satisfaction, both on the side of the designer and of the user.

The last aspect to be stressed concerns the blended model. Building a continuum between the real and the digital world is not easy, because sometimes it can seem like a downward compromise. However, the challenge we have faced with the Coopcamp training model is to systematically and effectively bring the real and digital worlds together in a mutually supportive way.

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Learning to Learn in Preschools: An Exploratory Qualitative Study in Italy and Mexico

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ABSTRACT: *Learning to learn (L2L), one of Europe's key competencies, is increasingly central in the post-modern world. International experts define it as a survival tool in the mutable employment landscape, or as a means of self-fulfillment and development in work and domestic life (Stringher, 2014). Citizens should be equipped with this hyper-competence, yet international comparative studies are scarce. It seems that primary and secondary education around the world is particularly good at thwarting key components of this notion, such as creativity and curiosity, and these components are much more developed in the early years (Chernyshenko et al., 2018, 80). However, the literature has devoted much less attention to the acquisition of L2L from early childhood. In our international qualitative study, within a socio-cultural tradition, we intend to start filling in this gap. Our aim is to offer examples of practices conducive to the acquisition of L2L in early childhood. We take a theoretical stance grounded in the international literature and in order to understand how L2L is conceived of in these two preschool systems, we examine normative documents. We analyze nine qualitative interviews with Italian and Mexican preschool teachers within the wider international study. The interview guide tapped L2L in everyday school-life, so to collect preschool teachers' authentic responses. The methodology is a descriptive, phenomenological content analysis with a focus on teachers' L2L conceptions, which we classified as wide/narrow according to Hounsell (1979). From our corpus, we searched for theoretical L2L categories, and reported excerpts exemplifying teachers' L2L conceptions, functions and practices to support L2L acquisition in children aged 3-5. Results show that teachers' conceptions of L2L vary from wide representations to narrow/vague ones. Even if the sample is qualitative, evidence suggests that teachers with a complex L2L conception show greater quantity and quality of activities favorable to L2L development, although teachers with a narrow conception also implement some L2L-conducive strategies. We interpret this as evidence that L2L is culturally bound. Teachers' activities foster L2L in different ways: stimulating children's curiosity, active participation and questioning or promoting their self-confidence and meaning making. We also found high compatibility between the Mexican preschool curriculum and our theoretical L2L framework. Conversely, the Italian preschool curriculum only defines L2L in*

a footnote. However, the Italian interviewees do show some activities conducive to L2L, although only one in five definitions is wide. We attribute this apparent contradiction to the fact that the Italian preschool curriculum is organized around key experience fields and this didactic organization seems adequate for supporting children's active exploration and meaning making. However, preschool teachers seem unaware that their didactic practice is also supportive of L2L in early childhood.

KEYWORDS: *Learning to learn, Preschool, Italy, Mexico, Qualitative comparative study.*

Introduction

Learning to learn (L2L) is considered one of the eight key competences for lifelong learning according to the European Commission (2018). It is part of the global educational discourse on the need to develop learning autonomy and its corresponding skills in students of all educational levels. International experts define L2L as a survivor tool in the mutable employment landscape, or as a means of self-fulfillment in work and domestic life (Stringher, 2014). Even though it is thought that citizens should be equipped with this hyper-competence, international comparative studies are scarce (Kupiainen *et al.,* 2008).

It seems that primary and secondary education around the world is particularly good at thwarting key components of this notion, such as creativity and curiosity, and these components are much more developed in the early years (Chernyshenko *et al.,* 2018). However, the literature has devoted much less attention to the acquisition of L2L from early childhood.

In this work we present results obtained from the analysis of a semi-structured interview conducted with preschool teachers in Italy and Mexico, as part of a wider international project on L2L. The qualitative phase was carried out by means of an interview with teachers of students of 5, 10, 13 and 15 years in Brazil Ecuador, Italy, Mexico, Spain and Uruguay (N = 127). The general aim was to identify representations, similarities, differences and analogies that, according to the culture of origin, L2L competence entails in teachers and in their respective contexts. We present the results of an exploratory analysis of nine interviews conducted with 5 Italian and 4 Mexican preschool teachers within this wider international study.

1. Theoretical approach to L2L in Mexico and Italy

L2L has been defined as a «complex hyper-competence orchestrating cognitive, metacognitive and socio-affective-motivational assets of the individual in a voluntary effort to produce knowledge upon and improvement of one's own learning» (Caena, Stringher, 2020, 213). In a

rapidly changing world, this competence is essential for personal fulfillment as well as a requirement for active civic participation. It entails individuals building on prior learning so they can apply knowledge in new and challenging situations. L2L involves autonomy and metacognition of the learner as key aspects to plan and organize one's own learning, not only to apply knowledge to new situations and keep learning (and un-learning) lifelong, but also to raise awareness in one's own learning strategies and preferences, face obstacles in learning, be resilient and seek help from others.

Each macro-component of this competence is the result of complex interactions between its diverse constitutive elements with opportunities created by the environment. In particular, social interaction is of utmost importance because it fosters cognitive development, motivation, learner autonomy within a social milieu and metacognitive skills. That is why the role of teachers and schools is so important: they might create settings in which children can be active builders of their own knowledge.

Early childhood education sets the basis for L2L through specific activities and strategies that nurture children's innate curiosity and desire to learn and foster the development of metacognition, motivation, willingness to learn and the cognitive basis for learning construction. However, considering that L2L is an integrative competence (the whole is greater and different from the sum of its parts), much innovative research is needed to determine the best practices to support the development of this competence in early childhood. The compatibility between the theoretical model of L2L and the activities that have potential for its development have been studied by Caena and Stringher (2020), Huerta, Cárdenas and de León (2020), Paour, Cèbe and Haywood (2000) among others. This is a necessary step in order to understand how and why educational practices may be effective in promoting L2L acquisition.

School practices are the result of teachers' transformation of pedagogical knowledge, curricular guidelines, and their knowledge as members of cultures and subcultures into educational actions, strategies, behavioral patterns, or institutional management processes. In this sense, it is very important to comprehend teachers' beliefs about learning, development and L2L. Although individual elements of L2L may be implicit in certain educational practices, it is essential to understand the meaning and intentionality that these practices have for teachers. Within this framework, the link between activities implemented and the development of the competency can be better substantiated.

Within the Italian and Mexican scientific community, it is rather uncommon to find authors defining the specific characteristics of L2L in early childhood (Stringher *et al.,* 2019). Nonetheless, preschool seems paramount to support children's curiosity and developmental L2L, defined as learning potential, a holistic capacity to learn which sets the basis for lifelong learning and mediates future learning attainment and achievement (Stringher, 2016). Caena and Stringher tried to delineate a developmental model of L2L, highlighting key basic elements that can

and should be acquired in early childhood to set a solid basis for further developing this competence in life. Among such aspects, key are executive functions such as: attention span and control; understanding of rules; inhibitory control and initial self-awareness, theory of mind; open-mindedness; persistence on tasks and task planning. Crucial is social reflection and interpersonal relations in learning, as is learning from mistakes.

2. Learning to learn in Italian and Mexican Preschool curricula

There is general agreement on the importance of L2L as one of the key competencies for lifelong learning and as a valuable goal for education systems (Council of the European Union, 2018; UNESCO, 2017). This has led to curricular reforms in many countries to incorporate, in different ways and with different nuances, strategies or activities for its development, in line with the curricular priorities established by national educational policies. We first contextualize the Italian and Mexican education systems and then examine how L2L is thematized within preschool curricular guidelines of these countries.

2.1. The Mexican education system

According to The General Education Law, the Mexican Education System is divided into three levels: basic, upper secondary and, higher education. The basic level is divided into pre-school, primary and secondary education. Initial education has been part of the basic level since 2019, it serves infants from 45 days to two years 11 months of age, and currently has a coverage of only 1.1% of the in-age population. Preschool serves children from 3 to 5 years. Primary school serves children from 6 to 11 years and Secondary school serves children from 12 to 14 years. The upper-secondary education caters to the 15-17 age group. The coverage rate for preschool in the 2019-2020 school year was 72.1% (SEP, 2019). In this sector, 84.3% of schools have public support, while the remainder are private non subsidized preschools (SEP, 2020).

The pedagogical orientation of the preschool curriculum assumes a competency-based approach. The preschool curriculum, in force until the 2020-2021 school year, defines L2L as a fundamental goal and establishes various strategies and activities for its development. In all curricular areas, teachers should promote learning situations that contribute to the development of children's ability to learn, to be, and to live together. In the Mexican preschool curriculum one of the functions of schooling is to develop children's ability to learn:

> which means learning to think; to question various phenomena, their causes, and consequences; to control personal learning processes; to value what you learn together with others; and to foster interest and motivation to lifelong learning (SEP, 2017, 29).

To achieve this, the curriculum is organized into three areas or components: the field of academic training, which is made up of language and communication, mathematical thinking, education, exploration, and understanding of the natural and social world. The personal and social development component includes social-emotional education, physical education, and the arts. There is a third component, called curricular autonomy, in which each school can choose a curricular proposal.

2.2. The Italian education system

The Italian education system includes an initial segment of education and care for children aged 0-5, recently merged under the responsibility of the Ministry of Education (MOE). Approximately 94% of the in-age population attend the 3-5 segment, while the 0-2 has a very uneven distribution on the national territory and caters for the needs of only 30% of children, less than the European objective of 33% (ISTAT, 2020). The pedagogical orientation of Italian preschool has historical roots in the work of renowned Maria Montessori and Loris Malaguzzi, founders of the Montessori pedagogy and of the Reggio Approach respectively. The majority of preschools is public (either State or Municipal) and approximately 23% are private but publicly subsidized (*paritarie*) (Freddano, Stringher, 2021). The preschool curriculum is vertically integrated with the first cycle of education, including primary school and lower secondary school, for children aged 6-10 and 11-13 respectively.

L2L is only marginally addressed in the national curricular guidelines of 2012 (MOE, 2012) within the discourse of the European key competences for lifelong learning. The L2L definition is the Italian translation of the European framework definition (EU Parliament, 2006, 16), stating that L2L is «the ability to pursue and persist in learning, to organise one's own learning, including through effective management of time and information, both individually and in groups». In spite of the definitional difficulty and lack of specific L2L resources for teachers, the preschool curriculum, organized in experience fields, not by subject, is considered a quite useful tool to support learner curiosity and interest (Huerta *et al.,* 2020).

3. Method

The research instrument is a semistructured interview administered to 5 Italian and 4 Mexican preschool teachers. An exploratory qualitative content analysis was carried out on the transcripts and on the national curricular guidelines in order to: (1) find examples of preschool teachers' conceptions and practices conducive to the acquisition of L2L in early childhood; (2) understand how L2L is conceived of in these two preschool systems, according to our L2L theoretical approach (Stringher *et al.,* 2020).

3.1. Analytical procedure
The following steps were taken during the analysis:
  a) reading of the preschool National Curriculum (Italy and Mexico) and thematic codification according to a top-down approach guided by theoretical L2L components (Caena, Stringher, 2020);
  b) holistic analysis of the 9 interviews for the identification of practices conducive to L2L applying thematic coding of responses (top-down approach), according to theoretical components of L2L (Caena, Stringher, 2020).
  c) categorization of teachers' L2L definitions as wide/narrow conceptions.

> A *narrow* definition primarily focuses on study strategies and methods, while a *broad* definition involves deeper engagement with the material to be learnt including through non cognitive/socio-emotional components concurring to drive learning and sustain it, in the face of adversity' [...] A NARROW definition contains ≤ 3 different theoretical components (net of repetitions); OR terms contrasting with L2L theory; OR with vague/don't know responses; OR just defining plain learning and not higher-order second level learning (Bateson, 1977); OR activities to foster L2L and stimulating students. The length of a definition was not an attribute for classification' (Stringher *et al.,* 2020: 304).

  d) selection of excerpts exemplifying teachers' L2L conceptions and practices to support L2L acquisition.
  e) organization of results in tables and extracts

4. Results

4.1. Key aspects of the Mexican Preschool Educational Model
In Mexico, the curricular changes undertaken within the framework of the 1990 Comprehensive Basic Education Reform (RIEB) and the Education Reform (RE) initiated in 2012 crystallized the transformation processes in the curricula of preschool, primary and secondary education (SEP, 2011).

The current national curricular guidelines *Aprendizajes Claves para la Educación Integral* (2017) defines L2L as one of the main purposes of the educational system. In the official curriculum, metacognition and learning dispositions are among the most important objectives: «achieving knowledge is as relevant as learning about how we learned it. This knowledge (which is called metacognition) allows students to learn more and more, because they have more control over their ways of learning» (SEP, 2017, 106).

At the preschool level, the (socioemotional) area focuses on the process of identity building and the development of emotional and social

skills. It seeks for children to acquire self-confidence by feeling capable of learning, face and solve situations with increasing autonomy (SEP, 2017).

4.2. Key aspects of the Italian Preschool Educational Model

In Italy, the preschool curriculum aims at the development of children's identity, autonomy, competence, and citizenship. Key in these curricular guidelines is the focus on 5 'experience fields', i.e., organizing concepts, grouping didactic activities, and supporting children's learning: self and others; body and movement; images, sounds, and colors; discourses and words; knowledge of the world. This transversal organization of the curricular activities is theoretically very relevant for L2L acquisition. In countries where there are experience fields (i.e., Italy and Spain) preschool teachers seem to use a wide array of activities to promote children's learning potential (Huerta *et al.,* 2020).

The Italian preschool curriculum sets a competence profile at the end of preschool which includes the following aspects, relevant for L2L (without mentioning it): socio-emotional learning; theory of mind; self-confidence; curiosity; motivation and interest; asking for help; awareness of own processes, resources and limitations; fluid and crystallized abilities; questioning attitude; thinking and reflective skills; constructive use of the error; problem-solving; attention for tasks.

In addition, the initial part of the curricular guidelines establishes key goals for the entire first cycle and recalls European key competences, including L2L: to equip children in order to navigate uncertainty; thinking skills and autonomy; information selection; capacity to develop methods to reach desired goals (MIUR, 2012). Thus, «schools combine the task of 'teaching to learn' with the task of 'teaching to be» (ivi, 7).

4.3. Teachers' conceptions on L2L compared with theory and curricular guidelines

In Table 1 we synthesize a cultural map of L2L components extrapolated from the Italian and Mexican interview transcripts and we compared them with the constituents of the L2L notion as derived by our theoretical analyses (Stringher *et al.,* 2020; Caena, Stringher, 2020) and with the components found in the Italian and Mexican preschool curricular guidelines.

Although there is no perfect correspondence between theory, curricular guidelines, and teachers' practice, it is important to highlight that many specific theoretical components of L2L were found in curricular guidelines of the two countries and in teacher´s responses. However, the following key categories lack in teachers' conceptions of both countries: autonomy, creativity, innate desire to learn, learning identity, resilience and transfer of learning skills and attitudes. Italian and Mexican teachers differ in their mention of 10 out of 25 theoretical categories: capacity, competence, developmental dimension, knowledge and its elaboration, meaning making, metaphors, motivation and interest, problem solving in

learning, self-confidence and skills. Overall, this yields to narrow conceptions of participants, as shown in Table 2.

TAB. 1. *Cultural map of L2L Components: Theory, Preschool Curriculum and Conceptual Analysis of teacher´s responses in Italy and Mexico*

Categories	Theory	Preschool curriculum		Conceptual Analysis	
		Mexico	Italy	Mexico (4)	Italy (5)
Autonomy	(L2L Function)	blue	orange		
Capacity			orange		orange
Competence		blue	orange		orange
Coping with uncertainty and new challenges	L2L Function		orange	blue	orange
Creativity		blue	orange		
Critical thinking			orange	blue	orange
Curiosity		blue	orange	blue	orange
Developmental dimension		blue	orange	blue	
Growth orientation and self-improvement		blue		blue	
Innate desire to learn					
Knowledge, elaboration of knowledge			orange	blue	
Learning for life/lifelong learning		blue	blue	blue	orange
Learning identity			orange		
Learning mechanisms and strategies			orange	blue	orange
Learning styles			orange	blue	orange
Meaning making		blue	orange	blue	
Metaphors					orange
Motivation and interest		blue	orange	blue	
Problem-solving in learning			orange		orange
Relationships (iv)		blue	orange	blue	orange
Resilience					
Self-confidence		blue	orange	blue	
Self-regulation and metacognition		blue	orange	blue	orange
Skills		blue	orange	blue	
Transfer (of learning, skills and attitudes)					

Note: Numbers in parentheses indicate the numbers of interviews. White cells indicate absence of category.

A narrow conception is common in both countries. This contrasts, in the Mexican case, with the broad reference to L2L and to the activities that promote it, which highlights the significant appropriation that teachers make of the curriculum.

TAB. 2. *Teacher´s Conceptions of L2L according to Hounsel, 1979*

	Narrow	Wide	Total
Italy	4	1	5
Mexico	4	0	4
Total	8	1	9

In Table 3, we provide sample excerpts exemplifying these narrow views on L2L by participants, while in Table 4 the only wide conception is provided for comparison.

TAB. 3. *Representative excerpts of narrow conceptions of L2L according to Hounsell (1979)*

	Narrow Conception	L2L components
Italy	Curiosity, curiosity, curiosity, stimulate curiosity a great deal. Create those solid bases so that nothing is really defined for good, that is, I know this thing, but it's not enough, I need to know, see, comprehend other things. Learning is a bit schematized, i.e., you learn multiplication tables and that's it […] the child must touch and experience things	Curiosity, learning styles of the child. Learning (level 1*, not considered a L2L component)
Mexico	(L2L) is to learn from others and to learn from yourself because you never stop learning. There will always be something new, a new word you know, a gesture, I don't know, always, there will always be something new. Everyone has a lot to give you to learn, so if we learn to learn, to observe, to like the things that are around us, to live in a different way, then we are learning to learn.	Level 1 learning * (not considered a L2L component)

* According to Bateson, 1976

TAB. 4. Excerpt of a wide conception of L2L found in the Italian sample

Excerpt synthesis.	Theoretical components of L2L
Continuous movement, in which the brain learns, intakes, synthesizes, re-starts. I restructure my knowledge and re-start to re-apply. L2L is to know how to use knowledge I already have to face new situations. I understand which are the ingredients, what I already know, and use this knowledge to know new things, this is mental flexibility. L2L is like permanent learning, in any situation, also in everyday life, not only in school, a disposition to learn, a dynamic view of learning, while learning is more fixed, still. (Valentina, teacher in a preschool located within a Comprehensive Institute with positive value added to student learning)	Learning for life Knowledge Coping with uncertainty Self-regulation and self-awareness Curiosity Competence Metaphors

The quotation above (Tab. 4) represents elements that constitute a broad conception according to Stringher, Scrocca and Davis (2020). In the Mexican case, no such conception was found.

A holistic analysis was made of all the interview responses, identifying specific activities: exercises or tasks and general strategies supporting L2L. They were classified according to the corresponding conceptual

dimension of L2L and to the activities that various researchers have identified as conducive to its development. Some strategies can be classified in more than one conceptual dimension because they are carried out through different activities. The classification within one or another dimension required an interpretative effort. We selected excerpts from the responses that allow us to identify the sense in which the teacher uses the activity or strategy mentioned.

TAB. 5. *Representative excerpt of activities implemented to foster L2L (holistic analysis). Mexican example*

Excerpt	Theoretical components of L2L
In philosophy for children, we have noticed that, when you propose different activities, either introductory or when you start to introduce the novel, how the children begin to generate, number one, the understanding of the rules of what is philosophy for children, the basic ones, the community of dialogue. They manage to understand them, but not only understand them, they even begin to take an active part in deciding to whom they give the floor. (MARSALIC R. 3.1)	Social Dimension: Participation Understanding of social rules Interpersonal relationships

TAB. 6. *Representative excerpt of activities implemented to foster L2L (holistic analysis). Italian example*

Excerpt	Theoretical components of L2L
The teacher proposes an intentionally wrong answer to specific questions in order to promote reflection in children and a questioning attitude. The activity is directed to develop critical thinking, the capacity of children to analyze and observe everyday life. The teacher supports children's self-confidence and wit in manifesting the correct answer without fear. (Valentina, teacher in a preschool located within a Comprehensive Institute with positive value added to student learning).	Cognitive, metacognitive and socio-affective L2L components; capacity to face uncertainty

The richness and variety of activities mentioned in both countries contrasts with the narrow conceptions expressed by teachers. This is indicative of the fact that there is great potential for the promotion of L2L within everyday teaching practice in preschool.

5. Discussion and conclusions

We found high compatibility between the Mexican preschool curriculum and our theoretical L2L framework. The Italian curriculum is also compatible with L2L, being organized around children's experience fields, and it would be even more efficacious, provided a definition of L2L in early childhood is included.

Results show that teachers' conceptions of L2L vary from a wide representation to narrow or vague ones. However, also preschool teachers with a narrow conception implement L2L-conducive strategies.

We interpret this as evidence that L2L is culturally bound. In this respect, the curriculum is considered as an 'artefact' that synthesizes educational contents, criteria, objectives and perspectives that are promoted and accepted within a specific culture. In this case, both countries count on a curriculum linked to L2L, which represents a 'cultural' aspect.

Teachers' activities foster L2L in different ways: stimulating children's curiosity, active participation, and a questioning attitude or by promoting their self-confidence and meaning-making. Interestingly, the L2L elements mentioned in teachers' definitions and activities seem to appear theoretically unintegrated, without a pedagogical project that gives them unity and only one in nine definitions is wide (Hounsell,1979).

There seems to be a need to undertake a broad pedagogical discussion that allows teachers to express, in an explicit way, the functions and meaning of their daily practice. Italian and Mexican preschool teachers seem unaware that their didactic practice is also supportive of L2L in early childhood, perhaps because they didn't receive specific training on what L2L is. In addition, the Italian curriculum only marginally defines this concept and misconceptions could arise, such as that children are too small to help them acquire learning abilities.

We conclude that, provided adequate teacher training, preschool teachers could do even more to help the children thrive, keeping them curious about their surrounding world and supporting them as autonomous yet collaborative explorers, with the necessary self-confidence to face uncertainty and with the perseverance to look for the beauty of discovery and knowledge construction.

5.1. Limitations and next steps

In this work, we present initial results obtained from an exploratory analysis only. For this reason, it is necessary to expand the analysis by taking into account interviews conducted with preschool teachers in other participating countries within the international project. We would like to consider the different aims and meanings that teachers take into consideration when organizing an activity for children in their classroom.

One promising avenue for further interrogating our knowledge base is a holistic analysis of the entire interview transcripts in search for links (if any) between teachers' views of nowadays students, teachers´ learning conception, L2L definitions, L2L orientations and activities with assessment practices in all the participating contexts through qualitative comparative analysis (QCA) (Bingham *et al.,* 2019). It seems, from our preliminary analyses, that preschool teachers have prejudices concerning the practicability of L2L for preschool years, considered too early a period for developing this competence. Setting solid basis for L2L and lifelong learning in preschool is indeed possible and desirable, with the adequate support for teachers (Paour, et al, 2000).

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Reinventing the Curriculum and its Practices

Game Media Literacy as an Approach to Complexity in Education

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ABSTRACT: *In this paper, we focus on Eric Zimmerman's Manifesto for a Ludic Century, an essay on the importance of games as a paradigm for understanding the complexity of the 21st century, in which systems thinking, play and design are presented as crucial skills to be considered as indispensable as others when reinventing an education system, which aims to approach the complexity of the world we inhabit and promote. We also present some useful points of view of well–known game designers and academic scholars involved with Game Science who introduce Game Media Literacy as an approach to complexity in education. Finally, we present the setting up of the first–year Game Design Lab activity, involving Students coming from the Senior High Schools of Sassari area in Sardinia as well as students from the Course of Studies in Public Communication and Information Professions of the University of Sassari.*

KEYWORDS: *Game media literacy, Trialogical learning, Complexity, Critical thinking, Hybrid environment, Teaching practice.*

Introduction

Let us start with the generally accepted modern definition of *game* in the Game Community (Salen, Zimmerman, 2003).

> A game is a closed and regulated system in which we freely choose to participate, subjecting ourselves to rules for solving artificial challenges, which result in a quantifiable outcome. The engaging in the game activity, the act of playing a game, does not entail losses or benefits.

Christian Swertz (2019) describes Game Media Literacy (GML) as the set of educational processes specific to games, which become tools to discuss learning in games, learning about games, learning by game design, and learning from games. GML, born as a theory in 2004,

embodies in a very direct sense the characteristics introduced by Eric Zimmerman in his *Manifesto for a Ludic Century* (Zimmerman, 2014) to describe media and culture as systems which are increasingly modular, customizable, and participatory. The way we work and communicate, research and learn, socialize and romance are all intimately intertwined with complex digital information networks which, owing to their flexibility and organicity, promote a playful dynamic twist to the pursuit of an education model suitable for young students to approach complexity in a spatiotemporal perspective. GML is about creating and understanding meanings, forcing us to gain the ability to see how the parts of any system of human relations fit together to create a complex whole, making use of active playful participation and innovative transdisciplinary ways of thinking geared to analyse, redesign, and transform existing systems into more organized ones. Games are a natural habitat for approaching complexity. Being playful is the engine of innovation and creativity, as we play, we think about thinking and we learn to act in new ways, overcoming the passive relationship to the systems we inhabit.

1. Game Media Literacy and Complexity in Education

The book *What Video Games Have to Teach Us about Learning and Literacy* published by James Paul Gee (2004) is considered the starting point of Game Media Literacy. Studying GML at school is often justified in terms of making the curriculum relevant to students' lives. This is not a popular way to pique their interests but to equip them with the skills and understanding to make sense of and contribute to contemporary forms of communication and representation (Buckingham, 2003). GML is also inherently polemic, arguing that the cultural materials young people engage with outside of school, such as games, deserve investigation. Underpinning these pedagogic and political aims is a theory of communication which understands meaning to be constructed through different ways, such as visual image and sound, and not just written text.

Therefore, studying games has in recent years been described in terms of acquiring a form of literacy, designed to enable students to be fluent in a different media language. This completes recent developments in literacy research, which identify in the spread of modern technologies the reason for which verbal language is no longer the primary symbolic system (Kress, Leeuwen, 2001). Contemporary texts, from newspapers to internet web pages, increasingly combine verbal language with visual images, sound, and graphics. Being literate today means understanding and applying the grammars of different styles and media, not only of written texts. The concept of 'multiliteracies' (Cope, Kalantzis, 2000) has engendered a range of subcategories, such as TV literacy, cinema–literacy, visual literacy, computer literacy and of course game media literacy (Tyner, 1998). Literacy is about creating and understanding

meaning, which allows people to write (create) and read (understand) texts. The understanding of GML is therefore connected to a certain understanding of what we refer to as text. The classical definitions are in a certain way narrow because they refer only to printed texts and to texts that are regarded as high culture. Media Literacy offers a less restricted meaning of text, which includes multimedia and multimodality, addressing objectives for teaching and learning about media and developing consequences for pedagogies. Game Media Literacy offers a broader meaning of text. Crucial to GML is not just the meaning of games, but rather, the ideologies and ethos of gamers' cultures. By means of Gee's *Theory of Discourse*, which provides a tool for investigating discourse and social practice that highlights the interrelationships between language, language learning, social identity, and social context (Knobel, 1999), GML first goal is to become familiar with dialogues about games and gamers' cultures. Let us not forget that on the one hand we have a generation of teachers with very little game literacy if none, and on the other a generation of students raised with internet and a multitude of gaming literacies, many of which are not affiliated with school academic world (Beck, Wade, 2004; Gee, 2003). If we are willing to acknowledge that today's students have literacies that their teachers lack, we should be considering letting the kids develop the curriculum! Can anyone imagine 14–year–old 'L33T speaking'[1] kids teaching media literacy courses, where teachers, students, parents, and elected officials are required to finish a game like DOOM? This hypothetical and imaginary scenario hopefully makes obvious that the question is not whether one group can simply make sense of texts, but according to whose systems of interpretation. One of the core issues for GML is whose literacies privilege, what questions consider legitimate and which ones not.

What is the value of studying games in school? The cognitive skills which games develop are much more complex than those usually required for school–based learning, with players acquiring a 'metalanguage' for games in a way which rarely happens for school subjects (Gee, 2007). It cannot be assumed that young people are inherently competent users of game media. Although games teach the competencies required to use and interpret them, this does not mean there are no gaps in young people's knowledge and no room for making this more systematic and sophisticated (Meek, 1988; Buckingham, 1993). Gee (2007) makes a strong argument for the critical literacies that informal player communities sustain. But the extent to which players develop these forms of literacies relates largely to their social circumstances; many young people have little access to the social

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[1] L33T is an Internet Language which substitutes for English alphabet. L33T, the word itself, means *élite*, which is used for good gamer, and it is also known as 1337, l33t, 31337. https://sites.google.com/site/inhainternetlanguage/different-internet-languages/l33t

contexts that enable and, most importantly, motivate critical consideration of games. Buckingham and Sefton–Green (1994) argue that the creative and critical use which young people are assumed to make of digital technologies, and games, is often overestimated. For many players, informal learning only goes so far. First, there are issues of access and power; certain social groups, for example, may play a less prominent role in fan communities and have more restricted access to games. Consequently, they will have less opportunities and social purpose in considering games and game practices reflectively. Second, although game players may learn to read games and consequently write or produce their own approach to play, there remains an impasse between contributing to game culture through play and contributing by making games. Few players have the social motivation, institutional connections, and practical tool to understand games by producing their own.

This makes a strong argument for developing forms of education and social situations that enable people's interactions with games to be more productive than they might otherwise be. While acknowledging students' existing abilities, it is also possible to say that they can be provided with the material, cognitive and social resources to move beyond them. More subtly, following the tendency of researchers to define complexity in terms of their objects of inquiry, with GML we invert the assertion that learning is complex and work from the conception that complex systems are learning systems (Davis *et al.,* 2008). This definition enables us to embrace both the hard and the soft approaches to complexity research. From the demandingly empirical branch of inquiry that follows mathematics and that is most associated with physics, GML allows to draw principles that are useful for challenging prevailing perceptions about what learning is and how it is related to teaching (Davis, Sumara, 2010). From the more holistic soft branch that is more the domain of health professionals, biologists, philosophers, psychologists, and educators, GML offers the perfect ground to examine some possibilities for action when dealing with phenomena that seem to learn and change on their own. The project of education is among the most complex of human enterprises, arising in the nexus of individual interest, social need, disciplinary diversity, cultural self–perpetuation, and humanity's efforts to situate itself in the more–than–human world. Oriented by this realization, the insights offered by hard complexity research do more than inform education, they transform education.

It should be clear by now, that our main interest is in teaching about games, not through games. To date, much of the game and education literature has concerned itself with using games to teach curriculum content, such as history or ICT. The notion of game literacy is then applied to the functional competences required to manipulate game hardware and software and is often said to be a competence that teachers require, rather than students, who are assumed to already have it. Many teachers are indeed likely to have limited experience of board or digital games,

and there is an issue about what kind of professional development might enable them to use them in class. Yet it cannot be assumed that all students play games or have experience of a wide range of titles. Furthermore, playing games and developing a metalanguage about them involves different kinds of competences. Although playing games might be crucial to considering them in design terms, developing critical understanding of games is different from using them functionally as a delivery mechanism. In other words, GML is not about gamification, applying games to teach and learn content, like in serious games or edutainment products, these aspects are not included in its definition. GML is not about imposition, playing a game is a free, optional activity that completely loses its nature if it is imposed. A workshop built on a game, if forced, does not work. Psychology, Management and Pedagogy have recognized motivation as a determining factor for years now. GML is not the overall solution. A game can work, and it can work particularly well to convey valuable content and solid skills, but it is a language, a medium to master, not the solution to all shortcomings. GML is specific to gamers and their culture, it includes multimedia and multimodal communication, also popular culture, and the suggestion to learn from games how to handle complex systems and systems thinking.

2. Complex Systems and Systems Thinking

Complex systems are described as large systems of heterogeneous parts, interconnected hierarchically without centralized control. Every individual part interacts with other local parts (neighbors), which in turn generates a global behavior. In other words, it is from local interactions with simple rules that complex patterns can emerge. Some examples are the brain, an ant colony, human society, the global weather, the Internet (Lansing, 2003). Essentially, all these examples have nodes of some form – the brain has neurons, an ant colony has individual ants, human society has individual humans (whose bodies in turn are complex systems) – and these nodes interact mostly locally, adhering to some simple rules, which is a sign of a complex system. Complex systems are a subset of nonlinear dynamical systems, it is a very interdisciplinary topic, covering topics from biology to anthropology, from computer science to chemistry. For biologists, it is the idea that natural selection is not the sole source of order in the biological world (Lansing, 2003). What makes a complex system interesting is how mysterious its behavior can appear, and how incredibly hard is to predict how it will behave. It is the seeming simplicity of these systems that baffles scientists when instead they generate different intricate patterns.

The big revelation is that games are complex systems too, being forms of learning environments where learners are collaboratively developing, transforming, and creating shared objects of activity in a systematic manner. Therefore, playing them help foster Systems Thinking which,

according to Peter Senge (Senge, 2006) of the Center for Organizational Learning at MIT, is a discipline for seeing wholes. A framework for seeing interrelationships rather than things, for seeing patterns of change, rather than static snapshots. Systems thinking probes the underlying nature of how things work. To survive in a time of increasing complexity, becoming a systems thinker would be key. Today world problems require the kind of thinking that GML provokes. e.g.: How does the price of gas in California affect the politics of the Middle East, and how these two variables affect the Amazon ecosystem? These types of problems force us to understand how the parts of a system fit together to create a complex whole with emergent effects. They require playful, innovative, transdisciplinary thinking in which systems can be analyzed, redesigned, and transformed into something new. For these reasons, games make a natural fit.

3. Board and video games as a training ground for life skills.

Board and video games are examples of complex systems which are protected environments, where players feel comfortable and free from fear to make mistakes when engaging in new situations, since the consequences of their actions are limited to the game field only. When information is put at play, game–like experiences provide the increasingly systemic, modular, customizable, and participatory environment required. Games embody all these characteristics in a very direct sense, becoming machines of inputs and outputs, hybrid environments that are inhabited, manipulated, and explored.

Different games help to develop different skills. Cooperative games favor teambuilding and consolidate the habit of giving and receiving feedback. The well–known game of chess develops pure logic attitude and analytical thinking. Management games involving economic simulation forge priority management and performance analysis. Strategic games, involving complex analysis and decisions making, promote problem solving and critical sense. Over time, game practice develops both assessment and productive skills, faster and more successfully than theoretical manuals. It trains to picture both the parts of a system and its global frame of actions.

4. There is a need to be playful

To be able to deal with complexity, it is not enough to be a systems–literate person, who understands systems in an analytic sense. We also must learn to be playful in them. A playful system is a human system, a social system rife with contradictions and with possibilities. Being playful is the engine of innovation and creativity: as we play, we think about thinking and we learn to act in new ways. As a cultural form, games have

a particularly direct connection with play. John Seeley Brown (1989), former chief scientist at Xerox Palo Alto Research Center, considers crucial to understand that play is not only a juvenile activity. Play is how mammals learn. Babies and children play as a way of developing their understanding of the world – therefore, it is essential that adults can play as well. We transitioned into a time of transitions, and the only way we can adjust to the present–day speed of change is to become as adept at play as babies dropped into a world about which they know nothing. Play constitutes a pushback against the boundaries of a system established by rules. Man–made systems – the tax system, the school system, society as a whole – can be oppressive sometimes. In a world increasingly dominated by such systems, play could become a crucial, even subversive skill.

5. We should think like game designers

In the Ludic Century, we cannot have a passive relationship to the systems we inhabit. We must learn to be game designers, to recognize how and why systems are constructed, and to try to make them better. It took several decades for automobiles to shift from being a hobbyist technology, requiring expert knowledge, to being a locked–in consumer product. The constant change of digital technology means that our hardware and software systems may never stabilize in this way. To fully engage with our world of systems, we must all think like game designers. Game design involves systems logic, social psychology, and culture hacking. To play a game deeply is to think more and more like a game designer – to tinker, retro–engineer, and modify a game to find new ways to play it. But… what exactly thinking like a game designer is about? It is beginning to recognize how the elements of a system interact, to frame possibilities for our participation within a system, to fit those possibilities into real contexts and communities and finally, to achieve these possibilities in a shared exchange with others. Thinking like a game designer promotes effective learning through constructive groups interactions, minimize conflict and controversy; it encourages giving and receiving feedback as well as asking for elaboration or help, to exhibit a general equity of participation and minimal social loafing and have an equitable division of labor (Webb, Palincsar, 1996). If you imagine this level of exchange around our national or global discussions about education, healthcare, environmental impact, privacy, security, civic participation and more, then the notion that we must all learn this way of thinking rises to an imperative.

The 20th Century was the age of linear information, the 21st Century is the age of games. Because we live in a world of complex systems, we need systemic tools to describe it. Linear media (books, movies, lectures), no matter how attractive, allow users only to learn passively (learning–to–know), without exposing them to direct practice (learning–to–do)

(Aldrich, 2009). Games instead, offer users possibility to learn actively, as they act as metaphors reflecting specific systems (Mendler de Suarez *et al.,* 2012). Consequently, carefully designed games provide players with a first–hand experience of the systems they represent.

6. Game Design Lab Activity (Sassari, Sardinia)

Based on Discourse theory, the idea of respect for different discourses, and the rejection of putting bans on certain discourses, suggest picking up gamers Discourse in non–gamers Discourses and vice versa. An example is a dialogue in class about games students play, with teachers as presumable representatives of a non–gamers Discourse. A dialogue like that can increase respect for the respectively other discourse. It also allows to reflect cultural practices like social class or cultural values and to develop critical thinking (Squire, 2005).

Good chances to learn something useful in games, where useful is not restricted to relevant in a competitive capitalistic economy to earn money but might also mean relevant for personal development and development of societies, justifies games as relevant for informal learning. All scholars who research Game Media Literacy argue that there are good chances to learn something useful in games and from games. The arguments range from theory of play through game analysis to empirical research. The Game Media Literacy discourse convincingly argues the relevance of games for approaching complexity and systems thinking, which are becoming relevant skills for understanding today's society.

Therefore, we are setting up a one–year Game Design Lab project involving Highschool Students and University Students. Investigating questions are:
- – How do we approach understanding of complex system and systems thinking?
- – How can we fully engage with systems of relations?
- – How can we promote in our students, in a natural way, the ability to recognize how and why systems are constructed, and to try to make them better?

A pilot of Highschool students attending the last three–year Senior High Schools in Sassari area, Sardinia, mixed with university students coming from the Course of Studies in Public Communication and Information Professions of the University of Sassari, are going to be engaged in thinking as game designers, exposed to systems of reasoning which show how the systems thinking perspective can be applied to provide fresh insight into complex phenomena as interpersonal behavior, social relations, attitudes, social cognition, and personal beliefs. Our goal is to measure their grasp of complexity underlying our way of communicating, learning, and behaving in the real and digital world. Outcomes from this study include monitoring learning about games, the

awareness that takes place while playing games, education that takes place while designing games, and for teachers involved in the project, monitoring learning from games of new educational approaches. To simplify this challenge, we decided to use board games instead of video games for several reasons. First, we wanted to be as independent as possible from technical elements, avoiding the excessive programing specialization typical of videogames. Board games make complexity evident, being systems entirely readable by players. Also, we wanted the mechanics and interactions between players independent of specific hardware and software, providing anyway an environment where players can enjoy their agency, which is one of the core elements of a game. Preserving options and structure to make meaningful decisions and shaping one's own experience, with the satisfaction of implementing a personal will inside the 'magic circle'[2] of the game. Through this will, players wield, influence, and implement what can be accomplished inside the game itself.

In conclusion… Enjoy play to live and live to play!

The ideas emerging from Game Science are particularly useful paradigms for thinking about the future (Hunicke, 2004). There was a time, during the third industrial revolution, when the dominant cultural metaphor was the machine. That was the prism through which people understood their world and themselves. The ideas about games, play, design, and systems are becoming a dominant prism, through which future generations are looking at their world. The Ludic Century, its tools and technologies afford us a unique opportunity to design it together (Zimmerman, 2014). To do so, we must learn to communicate effectively with each other about future realities. We must embrace the struggle of collaborating on their designs. When we play, we challenge each other while allowing for mistakes, and doing so we create together, we explore the systems around us, experience victory and defeat, learning how to succeed through our failures.

Game Media Literacy is a very useful ground to teaching critical thinking, consideration of cultural contexts, and creative actions. While teaching grammar as a metalanguage in lessons that focus on printed text is common knowledge for teachers, this is not yet the case for the grammar of games, we need to work on this aspect. To analyze games it is important to have a common metalanguage, because players do not develop critical thinking by just playing games. Teaching about games is necessary to reach these objectives.

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[2] In the context of games, the magic circle is the area within which the rules of the game apply, a special space, ideally but not necessarily delineated by the rules within which play occurs. It need not be a physical space but can instead be virtual or a frame of mind.

This is our way how we build bridges, increase empathy, and shape our future. Together!

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Reinventing the Curriculum and its Practices

Active Learning and Curriculum Across Disciplines: A Field Research Study in Secondary School

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ABSTRACT: *Active learning practices are rarely carried out in secondary schools in a systematic way, even though the 'Riordino' (PRD 87, 88, 89 of 2010) exhorted teachers to implement active approaches. On the other hand, the reflection on the curriculum (Ajello, Pontecorvo, 2002; Frabboni, 2004; Baldacci, 2006) and the gradual liberation from the idea of a national 'programma' (Stenhouse, 1977) made it clear that teachers should be the ones to select contents and teaching strategies, on the basis of the particular contexts and the epistemological structures of the disciplines and their connections. This research study was carried out in collaboration with a secondary school, where some teachers were already promoting active learning strategies in core subjects, each one following their own teaching model. After an initial exploratory phase, the study moved on to a phase of collaborative research and research-training (Asquini, 2018). There followed a process involving most subject departments and covering the entire teaching process (design, implementation, peer observation, documentation, reflection). Researchers and teachers defined a documentation model of the practice together, from design to action, which encouraged reflection (during and after) and dissemination within and outside the school. This process was both research and professional development. By comparing different teaching practices (in Maths, Physics, Science, Italian and Latin), the study highlighted some cross elements which were then consolidated in the expanded version of the study, involving more classes and teachers. These aspects concern the curriculum (from the selection criteria of the core ideas of the subjects to a discovery/problematic approach to the contents), the teaching design (course and lesson planning) and the methods (frequent use of various forms of verbal interaction: conversational lesson, discussion, brainstorming, group work, students' writing tasks). This interdisciplinary approach to practices, ultimately, seems to show a sort of mutual influence between subject areas: language teaching was inspired by a 'scientific' approach to the study of languages where linguistic 'data' (words, sentences, texts) were observed, analysed, classified and re-elaborated (Bertocchi, 2015); at the same time, Science teaching developed particular attention to language – both 'natural' and more strictly 'scientific' (Fiorentini, 2018).*

KEYWORDS: *Active learning, Curriculum, Disciplines, Teaching practice.*

Introduction

The Italian reform of the upper secondary school of 2010[1] explicitly invited teachers to implement active teaching paths in all subjects, not only in technical ones, and stimulated a reflection on the curricula functional to the development of the outgoing profile of the student, in which the «plurality of subject knowledge» should become «unitary knowledge, endowed with meaning, rich in motivations»[2]. The indication is to hold together and «enhance all aspects of school work»: the study of subjects in a systematic, historical and critical way, the use of methods of investigation, argumentation and comparison, the study and analysis of texts (in a broad sense), the constant use of the laboratory in the scientific field, etc.[3].

The qualitative monitoring carried out by INDIRE on secondary school teachers and principals (Faggioli, 2019), however, a few years after the issue of the new ministry indications, revealed how their real impact «on the curricular structure and on the school's didactic system was very limited, if not even non-existent». If, at least in technical and professional subjects, practices of active teaching are found, in the core subjects and in Licei, in particular, traditional teaching methods such as the lecture prevail. The same applies to interdisciplinary experiences that remain isolated and linked to sporadic projects.

1. Curriculum and active learning

The still too widespread use of traditional methods (e.g. *lecture*) at this school level is a complex question to analyse on which there are few specific research studies. The reflections on active teaching methods that do not deepen the question of subject learning appear insufficient to understand the question, since it is precisely at this school level that the epistemological and psychological problems of knowledge fields have a strong weight. According to Margiotta (2013) the way of conceiving subject knowledge (in a notional, systematic-deductive and encyclopaedic way) is the reason why they can only be taught in a transmissive way, resulting boring, sometimes incomprehensible, because they are far from students' cognitive structures and, therefore, selective and suitable only for already trained minds. This view appears confirmed by the fact that, even where active strategies are used, this often results not incisive with respect to subject learning.

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[1] Reorganisation regulations of *Licei, Istituti Tecnici and Professionali* (PRD March 15, 2010, no. 87, no. 88, no. 89), completed by Indications, Programmes and National Guidelines.

[2] Reorganisation regulations of *Istituti Tecnici* (PRD March 15, 2010, no. 88), Annex A – The students' cultural, educational and professional profile of Technical Institutes.

[3] Reorganisation regulations of *Licei* (PRD March 15, 2010, no. 89), Annex A – The students' cultural, educational and professional profile of *Licei*.

If active teaching/learning is to be a 'global school innovation device' (organisational, pedagogical and didactic) (Baldacci, 2006), it must nevertheless be declined in the various specific contexts. The broad and inclusive definition according to which it is a set of ways of teaching based on the direct and active experience of the learner (learning by doing) – transversal to subject fields (Zecca, 2016) – must be integrated with the idea that active and laboratory practice is always centred on a certain cultural object which determines its specific learning logic (Baldacci, 2006; Frabboni, 2004). It is therefore necessary to speak of laboratories of knowledge areas: science laboratory, mathematics laboratory, Italian laboratory, etc. Each of them must bring about a rethinking of the various cultural objects and their internal logic (Bertocchi, 2015; Camizzi, 2020; Fiorentini, 2018).

The 'laboratory' approach (active teaching) can be understood as a research environment (Margiotta, 2013) that holds together the experiential work on subject contents, the development of specific ways of thinking (mental habits and kinds of intelligence) and that of a more general and transversal to research and reflective thinking (Dewey, 1961; Baldacci, 2006; Nigris *et al.,* 2018). In this context, the term interdisciplinarity does not only concern the contents of teaching but also languages, strategies, formal logics and methodological approaches (Frabboni, 2000).

This idea of active teaching approach is combined in a coherent way with a complex vision of the curriculum that goes beyond the idea of a programme (Stenhouse, 1977), a curricular perspective that makes it possible to relate the short-term development of subjects' learning (explicit curriculum) to the long-term development of the student's overall knowledge (implicit curriculum) given by the curriculum as a 'system of knowledge and didactic strategies' (Baldacci, 2006; Frabboni, 2002).

In this framework, teachers and schools must take charge of selecting the contents and choosing the way to mediate them, based on the contexts of action and the epistemological structures of the subjects and the dialogue between them.

2. The research study

In 2018 the principal of the *Istituto Superiore 'Enriques Agnoletti'* of Sesto Fiorentino (Florence) asked INDIRE for support to develop and promote within the school (in particular in the new *Liceo Scientifico Matematico*[4]) active teaching and a revision of the curriculum in all subjects. In the school (*Liceo Matematico*), there were already some teachers who implemented active practices both in the STEM area and for Italian

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[4] The *Liceo Scientifico Matematico* has more hours of Mathematics and Physics than in standard scientific secondary schools.

language (a problematic-inductive approach for STEM[5] and an active approach to grammar[6] and language learning for Italian and Latin) and focused on the revisions of the subject curriculum but they were few, isolated and did not work in a systematic or structured way.

The need that prompted the research was therefore twofold: on the one hand, the need of the school and, on the other, the need of INDIRE to know the reality of the high school starting from inside the core subjects. The meeting of these two needs/problems was translated into two research questions:

- how is it possible to implement active methods in different subjects in secondary school? Are there any common elements, despite the specificities?
- How to build a school curriculum based on active learning?

3. The methodological approach

The starting conditions and the aims of the research led us to refer to methodological approaches that focus on the teaching practice considering the complexity and specificity of the context in which it is inserted.

Especially, we were inspired by the main aspects of Collaborative action-research (Losito, Pozzo, 2005; Mortari, 2009) that we found consistent with the characteristics of our research: it developed from a problem detected by the teachers themselves and by the principal in the specific context of the school; therefore the teachers were involved together with the researchers on a path of critical reflection and mutual comparison that followed the whole process; it was aimed at deep understanding and improvement of practices (Losito, Pozzo, 2005).

Another methodological reference for our research is research–training (Asquini, 2018), since it has an explicit and not only indirect objective, in addition to the transformation of practices, also teachers' professional development through the reflection and analysis of their own practices (Nigris, 2018). Our role was to mobilise the resources and skills of teachers, to help them to become aware of their practice features, to refine and disseminate them as examples to other teachers in the school.

To do this, we adopted the method of Analysis of practices (Laneve, 2005; Altet, 2012), which was useful for us to bring out the explicit and implicit professional knowledge of the individual teacher, to reflect on some specific subject aspects together with colleagues of the same

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[5] The high school is leader of the school network *Laboratori del Sapere Scientifico* (LSS) of the Tuscany Region that proposes an inductive and problematic teaching model of STEM subjects (http://www311.regione.toscana.it/lr04/web/lss).

[6] Valency grammar is a scientific model for grammar thought up by Francesco Sabatini, an alternative to the traditional, that offers a more active and reflective approach to language learning (Camizzi, 2020).

subject and to discuss common elements of different practices in the extended interdisciplinary group. The analysis considered the multiple components of teaching practice: the actors involved (teacher and students) and how they interact with each other; the different moments of teacher action (design, action in the classroom and reflection in and on action) and all the dimensions involved: epistemological, methodological and relational (Altet, 2012).

The tools that allowed us to reflect and reread the experiences were: a systematic documentation of the learning paths by the teachers, «oriented towards the constant assumption of awareness of the thought and action of teaching» (Cerri, 2012, 146) but also aimed at «find different ways of dealing with similar cases» (Mortari, 2009, 55). The narrative flow accompanied the entire process: started at the time of learning path design, it was enriched during classroom implementation with the teacher's reflections and with the students' feedback and output; in the same way, observation in the classroom allowed us to compare multiple points of view on teaching practice; the use of video to record and analyse the practices helped us to isolate and deepen specific points of the lesson and of the learning process, individually and in groups (Goldman *et al.,* 2009).

4. The research process

The research consisted of three parts: an exploratory phase, a second step of collaborative action-research and a third of dissemination (Cf. paragraph 6.5), in a progressive process of expansion to include more teachers and classes.

TAB. 1. *The phases of research*

Exploratory phase (2017-2018)	Collaborative action-research (2018-2019)	Dissemination (2019-2020-2021)
2 teachers (Italian lang., Physics)	8 teachers (Italian lang., Physics, Science, Maths)	30 teachers (Italian lang., Physics, Science, Maths, English lang., Philosophy)
1 class group	2 class groups	10+ class groups

4.1. Exploratory phase
Between March and June 2018, the research team carried out a preliminary and exploratory phase focused on the newly created experimental course of *Liceo Matematico*. This phase was relevant to analyse the aims of the school and the characteristics of its practices and

to create a climate of mutual trust essential to build together the next action-research process.

The research team, using qualitative and quantitative tools (Tab. 2), investigated the different views of the stakeholders of *Liceo Matematico*: interviews with the school principal and the teachers involved, focus groups with both class council teachers and students and a survey was also given to parents. In the meanwhile, researchers observed some classroom lessons of Physics and Italian Language and started a dialogue aimed at bringing out the teachers' ideas about the subject taught and the methods of teaching transposition as well as to know the context and perceived criticalities regarding the teaching-learning process. Some lessons were video-recorded by researchers and then shared with teachers to stimulate further analysis and reflection processes.

TAB. 2. *Tools of analysis*

WHO	TOOL	WHAT
School principal, Teachers involved	In-depth interviews	The new experimental course, motivation, teaching strategies, curricular contents, documentation
Class council teachers	Focus group	The new experimental course, motivation, teaching strategies, curricular contents, documentation, relations
Students	Focus group	Motivation for choosing "*Liceo Matematico*" and expectations, teaching strategies, curricular contents, relations
Parents	Survey	Motivation for choosing "*Liceo Matematico*" and expectations, teaching strategies, curricular contents, relations
Italian language and Physics teachers	Interviews/lesson observations/video-analysis	Teaching strategies, curricular contents, relations

Data analysis brought out, in spite of the subject differences, some common elements in view of their subject and curricular design as well as in the teaching methods and strategies used: the careful selection of subject topics, an inductive approach to contents, active student participation, the construction of shared knowledge and the frequent use of verbal interaction and group work.

4.2. Collaborative action-research

On the basis of what emerged in the exploratory phase, the research group formulated a hypothesis: Bringing out and systematising common elements to the various subject practices we could define a common reference framework to share with other teachers of the school.

Consequently, some proposals were made:
- to analyse the existing practice of different subjects bringing out transversal elements
- to systematise and consolidate common elements in order to define a shared framework
- to spread the practices to the school's other teachers

In the school year 2018/19 the classes involved became two (I A and I B), the subjects four (Mathematics and Science were added to Physics and Italian language) and the teachers eight: two teachers for each subject, supported by two researchers, collaborated to design, implement and document a subject learning path that adopted an active approach in a core curriculum topic.

TAB. 3. *Steps of collaborative action-research*

	WHAT	WHO	TOOLS
1	**First DESIGN**	subject small-group	semi-structured form
2	peer-reviewing	interdisciplinary whole group	guided group conversation
3	**Detailed PROJECT WORK (plan)**	subject small-group	semi-structured form
4	peer-review	subject small-group + researchers	guided group conversation
5	**IMPLEMENTATION with students:**		
	ongoing documentation, peer-observation, ongoing project-plan review	subject small-group	semi-structured form and teacher diary peer-observation form (semi structured)
	video-observation in-depth interview after the lesson (2 lessons for each teacher)	subject small-group + researchers	video recording
	video analysis of parts of the lessons	interdisciplinary whole group	guided group conversation
6	**Reflection and process evaluation**	interview interdisciplinary whole group focus Group with students	semi-structured guided group conversation
7	**Revision of documentation and re-plan**	subject small-group + researchers	guided group conversation

The whole process was grouped in three macro-phases (Tab. 3):

A. Design of learning path (steps 1-4)

The pairs of subject teachers worked together on identifying the topic, defining learning goals and plan a subject learning path structured in phases and activities by using a specific documentation model. In this phase, meetings with the whole interdisciplinary group allowed teachers to dialogue on concrete aspects of learning design seeking a sharing of language, approach and point of view.

B. Implementation in the classroom (step 5)

After each lesson, teachers were asked to note relevant facts, impressions and thoughts in a shared document. Moreover, they were observed during the practice by the same subject colleague (peer-observation, at least one lesson) and by researchers. Some short discussions between teachers and/or researchers, after the classroom observation, facilitated the identification of strengths and criticalities and supported possible redesign *ongoing* for the next lessons. Video recording of some lessons was also useful for the process of reflection and regulation because teachers were able to observe themselves in the classroom. To favour the analysis of the practice, during two meetings of video analysis with the whole group, teachers showed some clips of their video recorded practice and researchers stimulated an interdisciplinary discussion in order to identify possible points of methodological convergence in teaching (active approach, group work, students' writing tasks, verbal interaction).

C. Revision of the process and the documentation (steps 6-7)

In the final phase, the entire process was reviewed on several occasions for an overall evaluation and re-design for the following year. Researchers studied the whole documentation and selected significant moments to deepen in the perspective of a reconstruction of the meaning of the practice that had been shared with teachers with additional in-depth interviews. Finally, focus groups with the students and collective meetings with the teachers were organised to consolidate the results of the research.

5. Data collection and analysis

In this research study, methods and tools for data analysis were designed to reflect on teaching practice and teachers' 'practical knowledge'. For this purpose, a plurality of tools (mostly unstructured and narrative) were used (Tab. 4) to help teachers share the experience designed and achieved in the classroom. The tools chosen not only allowed detailed description of the various steps of the learning path but also an

explanation of the problems, the decisions taken, the unexpected events encountered and the students' responses.

TAB. 4. *Main data collection tools*

Source	Who	Type of tool	Target
First design	Teachers	Semi-structured	Share with the group a first idea of the learning path that each pair of subject teachers chose to design, experiment and document.
Planning/diary form	Teachers	Semi-structured/ Narrative	Support all the process steps, from planning to implementation to reflection. Purpose of this tool is recursive design and comparison with peers and researchers.
Classroom observation reports	Teachers/ Researchers	Semi-structured/ Narrative	Collect observer's, teacher's or researcher's notes on the lesson implemented.
Classroom video-recordings	Researchers	Not structured	Stimulate teachers' reflection on their own or others' teaching practice and allow individual and collective video-analysis sessions.
Post-lesson interviews	Researchers	Semi-structured	Stimulate teachers' reflection on their didactic practice and bring out their impressions on the activity.

For these reasons, we believe narrative is the most suitable way to give back the complexity of the didactic practice. Asking teachers to «share their experiences is a good heuristic strategy to facilitate the description

of tacit and explicit 'theories-in-use'» (Mortari, 2009, 53). Narrating one's own experience, listening to that of others, discussing with others (researchers, peers) is a good way to have a deeper vision of teaching practice and, at the same time, lay the foundations for a transformative action of the practice itself.

Data collection and analysis support the entire research process: in this way it is possible to share analysis and ideas with the teachers involved in implementation of learning paths and to help them in rereading and rewriting their teaching practice. Useful data and information were also collected through interdisciplinary meetings and through subject workgroups. During these meetings different work strategies were used such as group work, video analysis and focus groups.

The continuous collaboration between researchers and practitioners and the combined use of different types of documentation and observation tools enabled a plural approach to teaching practice. This collaboration brought out the different points of view on the practice enacted, from the teacher who led the activity to the researchers and peers.

An example of this plural approach was the rereading and rewriting by several hands (researchers and teachers), achieved by each subject workgroup on two lessons conceived as particularly significant for the conceptual nodes and for the methodologies adopted. On these lessons, each disciplinary workgroup carried out an in-depth analysis starting from the teacher's writing (design) and 'integrating' it with what was detected from the various data sources (diary form, observation reports, video of the lesson, interviews, transcription of some discussions in class, etc.). Tags and notes were added to the description to highlight the recurrence of common aspects or dimensions. On the other hand, these notes help to formulate questions to ask the teacher or issues to be explored in a following interview. In this way the research group tried to explore the fundamental ideas of the activity analysed from the point of view of both the subject content and the mediation strategies adopted.

The different subject cases examined in this way were then compared with respect to three important aspects: the path structure, the lesson structure and, in the lesson, the way of using some strategies in particular: verbal interaction, group work and students' writing tasks.

6. Results

6.1. The subject learning paths

As a result of the research, one learning path was developed for each subject involved. All the paths were designed and carefully documented by each pair of teachers with the researchers' support. The documentation was analysed for the purposes of the research and it was subsequently shared with other teachers of the subject departments of

the school, becoming the first nucleus of an active learning curriculum of the institute.

6.1.1. Physics: introduction to the concept of pressure[7]
(Teachers: Falsini and C. Giannotti)
The learning path offers a phenomenological-inductive approach to the study of the behaviour of gases: it starts with a macroscopic description of the physical system to gradually build with the students the conceptual elements of the idea of pressure. It also presents a historical aspect since, in the interpretation of the phenomena observable in everyday life, the ancient idea of *horror vacui* is initially used, then that of the pressure of a gaseous fluid, to arrive, only at the end, at the modern definition of pressure.

6.1.2. Science. The solutions: knowledge of terms or conceptual knowledge
(Teachers: M. C. Colao and M. R. Santo)
This path was implemented for secondary school starting from a path of the LSS (Laboratories of scientific knowledge) network. The approach used is phenomenological-inductive and is organised in the recursive sequence: observation (in groups), description with individual verbalisation and shared conclusion.

The path begins with the recognition of substances and continues to build the operational knowledge of soluble substance. Moreover, after analysing the solute properties, students formulate the definition of physical and chemical transformation ideas. The path ends with the learning of the solubility concept and its connection to substance and temperature.

6.1.3. Italian language – Mathematics interdisciplinary learning path[8]
(Teachers: V. Firenzuoli, D. De Luca, S. Donati and L. S. Spiezia)
This learning path was designed and carried out by two teachers of Italian language and two of Mathematics and is based on the reading and analysis of the short story *I sette messaggeri* by Dino Buzzati. This short story, a narrative text with specific morphosyntactic features and characterised by the presence of physical-mathematical themes, was used both for a linguistic study, aimed at analyzing the linguistic features and identifying the communicative purposes of the text, and for a particular 'scientific' reading oriented at finding and analysing mathematical information and modelling them with various kinds of representations. In this learning path, the phenomenological and problematic approach to the contents, typical of the scientific method, was also applied to the study of language and texts.

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[7] This learning path had already been carried out within the LSS network.
[8] For further information, please refer to the complete documentation: https://biblioteca.indire.it/esperienze-innovazione/view/422.

6.2. Learning path structure

The observation and comparison between the different subject paths brought out, beyond their specificities, a common macrostructure that underlies the same way of conceiving learning and the subjects themselves, but also learning design.

FIG 1: *The learning Paths structure*

	Italian language	Maths	Science	Physics
PRELIMINARY PHASE Identification of curricular content and definition of learning goals	Knowing how to read and understand literary texts, grasping their linguistic features, in relation to their textual typology	Modelling a maths problem resulting from a literary text through specific representation and by the definition of a general law and the familiarisation with mathematical progression	Deep understanding of phenomena and related knowledge. Learning and using specific vocabulary and scientific definitions	Study of the behaviour of gases, in particular of the concept of air pressure, using a phenomenological-inductive and historical approach
OBSERVATION and first approach to the PHENOMENON/ PROBLEM/TEXT	First holistic approach to the literary text - collective reading - Brainstorming	Selective reading of the literary text: - Search for mathematical/scientific elements - Identification and focus on the mathematical questions hidden in the text	Recognition of substances - Group observation - Individual description - Collective discussion	Observation and first interpretations (HV): - observations and description at home (individually) - consolidation of observations in the laboratory collectively or in groups - interpretation (discussion) with the horror vacui theory
EXPLORATION, EXPERIMENTATION AND ANALYSIS	Analytical approach to the text - narratological analysis - morphological analysis - lexical analysis	- Graphic representation of data (tables and graphs) - Comparison of the data and identification of regularities	Analytical approach to the phenomenon and building operational knowledge through individual verbalisation and collective discussion. Analysis of the solute properties	- Experiences that confute the idea of Horror Vacui; - Observation of other phenomena and interpretation through Torricelli's theory
CONCEPTUALISATION FORMALISATION	- Identification of different linguistic features by comparing literary and scientific texts - Identification of communication purposes (author/reader relation) - Classification of the texts (mirroring)	- Determination of the mathematical law: an equation describing the relationship between the sizes taken into consideration - Familiarisation with mathematical progression and its written form	- Defining the physical and chemical transformation idea - Learning the concept of solubility related to substance and temperature - Knowing and using the science-specific vocabulary	A new idea of air pressure - By re-analysing many experienced experimental situations, students are led to a new concept of air pressure. - The idea of the weight of air is discussed and refined
FINAL PHASE Verifying the acquisition of competencies/skills	CLASS TEST/ASSESSMENT - Writing a literary text on mathematical content - Analysis of a literary text with linguistic features identified in the preceding lessons	TEST/ASSESSMENT Individual questions on topics dealt with collectively during the course	Learning assessment of the relevant knowledge through open questions	Learning assessment of the relevant knowledge through open questions

Figure 1 shows how there are already similarities in the formulation of learning objectives (*Preliminary phase*) which are described from the point of view of the learners and not only of the subject content (Margiotta, 2013). They are all focused on understanding phenomena or problems (physical, chemical, mathematical or linguistic such as a literary text) and discovering the laws that govern them. All the paths develop through a phenomenological-inductive process in which three phases can be identified:

- In the first phase, students approach the object of study – the phenomenon or problem to be solved – directly, through observation not mediated by the teacher, and attempt a first understanding by exploiting their own personal resources. This moment had several purposes: to stimulate a first holistic and emotional comprehension of the text (Italian language), to bring out the first interpretations on the phenomena of science and physics and the formulation of hypotheses in mathematics.
- The second phase is that of exploration and more rigorous investigation conducted with the tools of the subject, personally by the student supported by peers (group work) or discussing with the teacher. The first impressions recorded during observation are validated or refuted in this phase in which students analyse the various aspects and layers of a text, carry out experiences and new observations or try to represent the collected data.

- in the conceptualization phase, through the comparison of the data collected and the reflection on the process carried out, the students arrive at identifying the regularities of the observed phenomena: to define operational knowledge of atmospheric pressure (physics) and chemistry and physical transformation (science), to recognise the characteristics that classify a text as literary and identify a mathematical law. The experience had in the previous phases acquires meaning through a reflection conducted in moments of collective discussion and with individual verbalisation (Dewey, 2012; Fiorentini, 2018).

Formative assessment accompanies the entire process through teacher feedback and peer review, while the final assessment consists of a complex output aimed at verifying the skills acquired.

6.3. Lesson structure

During the research study we saw an alternative lesson structure to the traditional one (explanation – individual study – questioning/exercise) emerge through reflection and discussion with teachers on the strengths and weaknesses and in the continuous redesigning of learning paths. Beyond the specific subject, as in the case of the learning path, some common elements emerge. The teachers created activities aimed at supporting the learning process through initial cognitive and emotional engagement, direct experience and reflection on it (Fig. 2), in a cycle of three moments (start, development and conclusion), known also in the literature as the steps of an effective lesson (Calvani, 2014).

FIG. 2. *The lesson structure*

Start	Experience	Conclusion
Preparation: setting, resources, tools ------- **Stimulus and cognitive engagement** **Connections with other previously known knowledge:** prior knowledge, contents of previous lesson/doubt/students' responses Discussing homework/students' verbalisation (notebooks, diary, etc.) **Preview of lesson objectives and main contents**	**Assignment activity** **Activities:** observation/analysis/text manipulation/production/experiments **Strategies:** individual and group work/dialogue lesson/discussion **Sharing and socialisation**	**Conceptualisation /Systematisation** Summary/metacognition/synthesis/ mirroring Transfer of knowledge to a different context Deepening of knowledge: homework Anticipation of the next lesson

As for the structure of the path, the central moment of the lesson is that of the experience in which the students are involved in observation, analysis, problematisation or in scientific experiences.

This phase is preceded and followed by two important and necessary moments:

- a starting moment in which the teacher prepares the tools and the learning environment and proposes a cognitive engagement to prepare the students for learning. This is also the time of the lesson

where students recover previous knowledge and, in this way, meaningful learning is built (Ausubel, 2004), connected with the personal experience and consistent with the entire path.

– the conclusion is essential to reflect on the results of the exploration and to arrive at conceptualising and systematising the discoveries made. This moment is often neglected for lack of time. Together with the teachers, we worked to give adequate space to reflection on the experience at the end of each lesson, to establish a fixed point from which to restart in the next lesson. Each lesson is an important stage in the learning path and in knowledge building.

6.4. Teaching strategies

If the 'what is taught' pertains to the epistemology of each subject – albeit in the similarities of structure – the 'how to teach', that is to say the ways in which the teacher supports the students in the experience and in the subsequent reflection process and conceptual re-construction (Nigris *et al.,* 2018), presented common elements in the four observed practices. In particular, focus was on those strategies that allow students to express and put into words (orally or in writing) their thoughts and that facilitate the interaction between the subjects for the social construction of learning (Vygotskij, 2008; Pontecorvo *et al.,* 2004).

The in-depth analysis of some lessons allowed us to compare and contextualise the teaching strategies used, highlighting not only the formal aspects but also the specific goals and different ways of managing them based on the moments, the subject and the teaching styles. From this analysis and comparison, we drew some suggestions that were presented to the group of teachers the following year.

6.4.1. Verbal interaction

The moments of verbal interaction occur frequently in all the practices and at different moments of the learning path or of the same lesson. The research focused on the analysis of moments of meaningful dialogue for the conceptual development of the path using some common criteria:
– the context in which it takes place;
– the purpose;
– student participation;
– the teacher's intervention type.
It is interesting to highlight that:
– group discussion often follows a moment of *individual* reflection (in response to a teacher's question, reading a text, observing a phenomenon), sometimes written in a personal notebook or on a post-it note. In these moments one opens up to confront one's own idea with that of others, one seeks mediation in mutual respect, one finds a common formulation;

– in these moments the language of the subject is constructed, the relationships between common language and specific language are clarified;
– the different configuration of the discussion is functional to the teacher's purposes: freer at the beginning of the path (to explain the first ideas of the students), more structured in the most advanced moments of the conceptual development of the path.

6.4.2. Group work

In observing the practices, attention was paid to the moments in which the teachers asked the students to organise themselves in working groups to answer a question, solve a problem, carry out a task (in class, in the laboratory or at home) or write the on board diary (e.g., Physics). This strategy, initially used mostly by teachers of Italian, was then extended to teachers of other subjects who used it in a different way, especially in relation to the organisation of work (assignment of roles and structuring of the task).

The research allowed us to highlight some objectives for which group work was used:
– to carry out reinforcement activities through the use of knowledge and learning acquired in new tasks or to solve different problems;
– to favour cognitive processing, which derives from the reciprocal process of organisation, presentation and critical analysis of one's point of view for the resolution of complex tasks;
– to build knowledge starting from ideas, hypotheses of solutions, proposals negotiated in the group (introducing a new concept/topic starting from an initial elaboration of the pupils carried out with a process of discovery)

Furthermore, this way of working contributes significantly to the development of transversal skills.

6.4.3. Students' verbalisation and writing

The 'written' production of the students allows to make visible their thinking and learning on the contents addressed in the learning path. It cannot be defined as a real didactic 'strategy' as in the case of discussion and group work. Rather, it is a way of working required of students that recurs throughout the entire course. It is a process and path documentation that the students carry out both individually and in groups.

This work emerged in a particular way in physics and science: starting from having the students keep a personal notebook in which to write down their hypotheses or those of the group, as well as the final syntheses, in some cases it became a real laboratory logbook drawn up individually or in groups (corrected *in itinere* by the teacher) which became the text to study in view of the evaluation test.

6.5. Dissemination

The path carried out during the collaborative action-research was modelled in order to satisfy the initial goal of spreading active learning practices through schools and subject departments.

During the 2019/2020 school year, a path of research-training was recommended to a wider group of teachers, engaging also some teachers of subjects previously not involved (such as English teachers and Philosophy teachers). A group of about 30 teachers was involved (with more than 10 classes) and among them some newly hired teachers were also involved, supported by the 8 teachers engaged in the previous phase of the research, now with a tutor/coach role.

The new participants, grouped by subject, re-designed and experienced the learning paths developed the year before or, in some cases, collectively designed new paths based on the same approach. To design and document the activity, the same tools as the previous trial were used reconsidered following the feedback received.

During the COVID-19 emergency lockdown, both in 2020 and in 2021, teachers did not stop the research-training even though difficulties were observed related to subjects in group collaboration. In this period, teachers worked mainly on the learning path redesign, adapting it to the new remote teaching context.

Conclusion

The research revealed how the implementation of active practices in the various subjects could be consolidated in a small group, spread to larger groups, until it became a way of working for the various subject departments (process still in the consolidation phase) thanks to the concomitance of some factors:
- attention to curricular design:
  - choice of meaningful content;
  - careful planning of the learning path/process;
  - inductive/problematic approach to contents;
  - choice of experiences/activities close to students and within their reach;
- attention to teaching mediation:
  - verbal interaction functional to the learning goals and context;
  - group work used in particularly difficult passages or, in some cases, used to carry out all the activities of the path;
  - students verbalisation to make their thoughts visible;
  - close attention to language and critical thinking in all subjects;
- attention to moments of collegiality and research within the departments (professional development):
  - sharing of goals and projects (co-design);

- o peer observation and co-presence;
- o peer documentation.

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Graphic Tools for a Visual Representation of the Curriculum

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ABSTRACT: *By looking at the variables involved in the definition of the integrated curriculum as proposed by Martini (Martini, 2019), a visual representation can support the use and development of this model. A visual representation allows the readers not only to observe the relationships between elements, but also to highlight their criticalities and inconsistencies, in particular when relationships and variables articulate over several dimensions. Through visual representation the designer can arrange each variable both in a three-dimensional graphic space and to make use of other variables or visual attributes – such as color, shape, texture, etc. (Kepes, 1944; Bertin, 2011; Engelhardt, 2002) – to show further variables in a coherent manner, as long as there is an agreement between the variable represented and the visual attribute. The integrated curriculum itself is defined by Martini (2019) through graphic analogies. For example: « Conceiving knowledge as systems means thinking of them as aggregates of elements in a dynamic relationship between them, structured within them according to different levels of organization, in such a way that each of these levels corresponds to a supra- or a sub-system organized in the same way» (Martini, 2019, 6). Analogies bring together two abstract systems (Duhem, 1954), and visual analogies allow us to design a synoptically observable artifact with a heuristic value. A little further on, Martini proposes to use the network as a representational model of the structure of knowledge. Graphs are topological structures and they already show an isomorphic graphical representation of the properties they represent. The representation proposed by the author concerns the topology of the structure of knowledge, but it is possible to extend the representation to the other elements of the curriculum (identification of objectives, organization of time and space, the adoption of teaching methodologies, evaluation practices, the school-territory link and more), exploiting other graphic properties and integrating them with the graph of the knowledge structure. The first investigative work that needs to be conducted is to verify the regularity of the analogical relationship between the elements of the curriculum and their corresponding graphic form or if it is even possible to have an isomorphism between the graphic form and the object of the representation. Having verified the regularity of the analogy, it is necessary to develop a set of visual attributes that allow the variables of the integrated curriculum to be displayed consistently and systematically. The next step is to apply the visualization to a series of cases to optimize the set of graphic tools for the representation of the various levels and verify their functionality in terms of designing the curriculum itself.*

KEYWORDS: *Visual schematization, Synsemia, Integrated curriculum, Graphs, Diagrams*

Introduction

This paper is based on a paper by Martini (2019) in which, among other things, the author proposes the use of graphical tools (graphical/mathematical) to design and study the issue of the integrated curriculum. Martini bases her position on a strong analogy between graphs and knowledge representation. She refers in particular to graph theory and to the topological properties of the graph. Since she put the curriculum in analogy with the representation of knowledge, she proposes to adopt the graph as a model of the curriculum. She uses the visualization in the form of a graph both as a tool for observation and analysis, and as a design tool for the curriculum itself. By looking at the variables involved in the definition of the integrated curriculum as proposed by Martini (2019), a visual representation can support the use and development of this model.

1. The representation knowledge as an instrument of knowledge

A visual representation allows the readers not only to observe the relationships between elements, but also to highlight their criticalities and inconsistencies, in particular when relationships and variables articulate over several dimensions. Several findings support the fact that the integration between image and 'written word' and the integration between linear text and schematization is effective in comprehension and memorization.

There is empirical evidence that organizing knowledge in graphic form and integrating linear text with diagrams can help comprehension and memorization (Butcher, 2006; Carney, Levin, 2002) and that this can have an impact on learning through an intelligent tutoring system (Butcher, Aleven, 2013). Visualization has shown its potential in supporting scientific research, multimodal writing has been used not only for explaining, but also to elaborate knowledge. Vertesi's observation (2014, 25) regarding the images of the soil of Mars: the planetary scientists manipulated the characteristic images so that otherwise invisible things emerged «that the point of their image manipulation was» to see new things, «to make a hidden feature» pop out, «to discriminate between different units that otherwise appeared the same in one filtered image». This can also be applied to anatomical representations, which work better as illustrations rather than photos, precisely because the illustration can more easily bring out a detail.

We can see the use of multimodal writing by Oresme (Fig. 1, among the first use of a coordinate bidimensional reference frame, that is a cartesian graph), but also in Galileo or Darwin sketchbooks, but also in Richard Feynman diagrams or DNA model. In questo senso non si può non osservare l'importanza che assume la dimensione visiva nell'esperimento mentale (Brown, 2011).

FIG. 1. *N. Oresme, Tractatus de configurationibus qualitatum and motuum, XIV century*
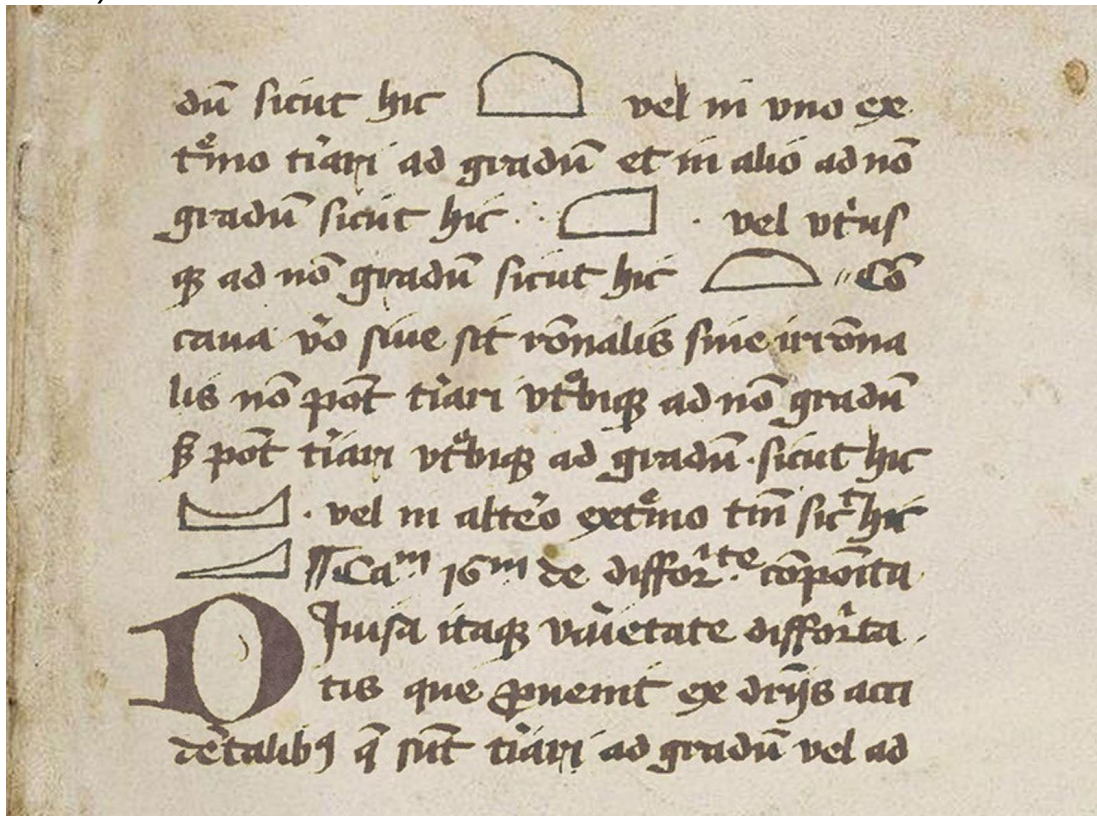
The image of Oresme's text is particularly significant as there is no solution of continuity between the alphabetical text and the diagram. The diagram is a substantial part of the argument. Each 'instrument' (i.e. linear writing and diagrams) is used for its own explanatory potential. The diagram allows us to observe the phenomena with a synoptic vision, without losing rigor and precision, but rather opening the way to what would have been the Cartesian diagrams and differential calculus.

2. Graphic tools for the design of a synsemic representation

It is necessary to consider the aspects related to the construction of a graphic system in order to design a coherent diagrammatic text, because the representation system needs to have a coherence with the depicted system. The goal is to seek the closest possible analogy, and if possible an isomorphism, between the object of the representation and the graphic form so that an operation carried out in the starting domain can be approximated in the closest way to that carried out in the domain of arrival (Perondi *et al.,* 2020). In mathematics, an isomorphism between the graphic form and the depicted object is possible in some specific cases, for example between geometry and arithmetic or even, for example, precisely due to graph theory.

FIG. 2. *Binomial expansion*
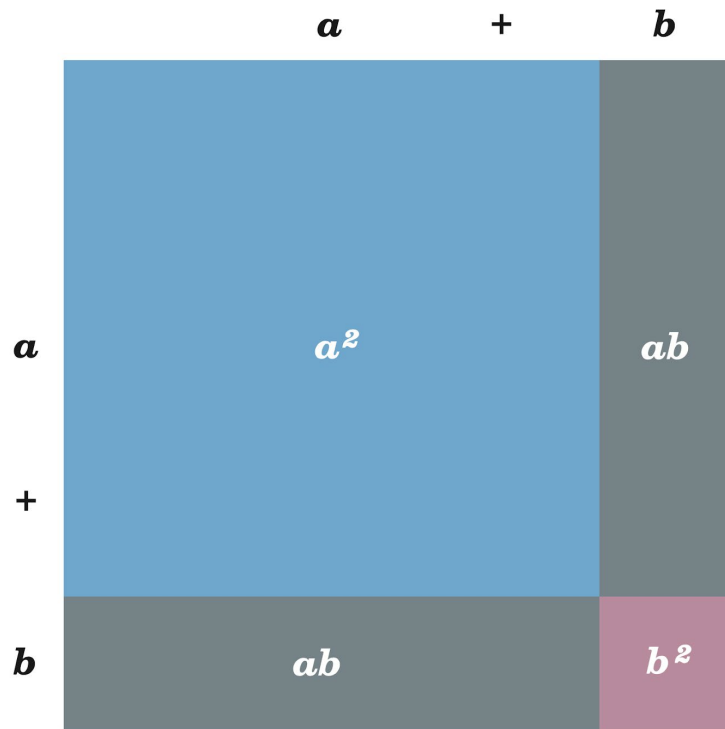
$$(a+b)^2 = a^2 + b^2 + 2ab$$

Source: drawing by the author

A very effective starting point to design a visualization with cognitive purposes is to adopt a taxonomy and 'tagging' the semantics of the content.

I have proposed, with other authors, to use a model that we have defined in previous essays as 'synsemic four-leaf clover' (Bonora *et al.,* 2019, 2020). The taxonomy we elaborated is intended to facilitate the design of a graphic artifact so that it is as consistent as possible with the object represented. This model is largely inspired by Bertin's taxonomy. Although there are other models and even if Bertin specifically dealt with statistical graphics, we argued that this model is effective in showing the logical relationships not only between visual variables, but also between elements and their hierarchical aggregations (horizontal and vertical) and the context of spatial relationships in which they are set. Through visual representation the designer can arrange each variable both in a three-dimensional graphic space, graphic space and to make use of other variables or visual attributes (Bertin, 2011; Kepes, 1944; von Engelhardt, 2002) – Bertin listed size, tone, texture, colour, orientation, shape and position – to show further variables in a coherent manner, as long as there is an agreement between the variable represented and the visual attribute.

Visual variables (or features) are the first leaf of synsemic quatrefoil. They correspond to the semantic variables. The visual variables can be associative (Fig. 3), and in this case we have sets of similar objects. These sets correspond to the semantic aggregations defined by the designer and are the second petal of the four-leaf clover.

FIG. 3. *Associative variables*
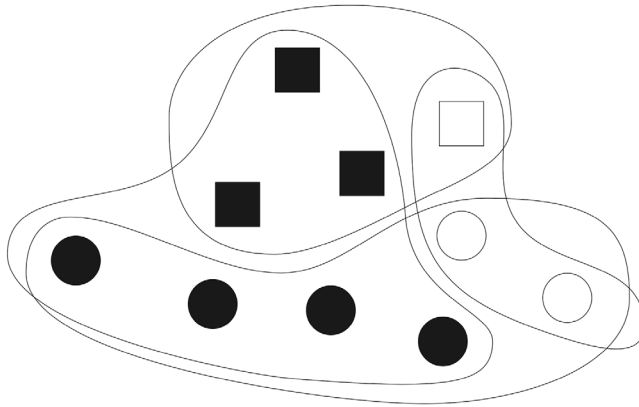
Source: drawing by the author

The visual variable can be dissociative (Fig. 4), whereby the elements are arranged in a hierarchical order. The hierarchy is the third petal.

FIG. 4. *Dissociative variables*
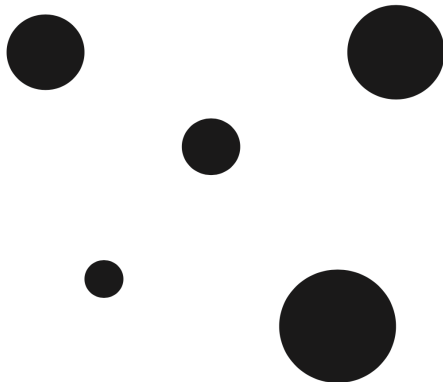
Source: drawing by the author

The visual properties of the variables, according to Bertin (2011, 48), 'impose' a precise relationship between the graphic elements that must reflect the semantic relationship of the objects represented, otherwise the risk is that a sort of 'stroop effect' occurs.

The fourth petal is what we have called the 'reference frame'. The reference frame is what gives meaning to the space: if we look at the

pictures in Fig. 5, we notice that the different arrangement of the basic information may generate a completely different reading of the same data.

FIG. 5. *Circle generation chart and family tree*
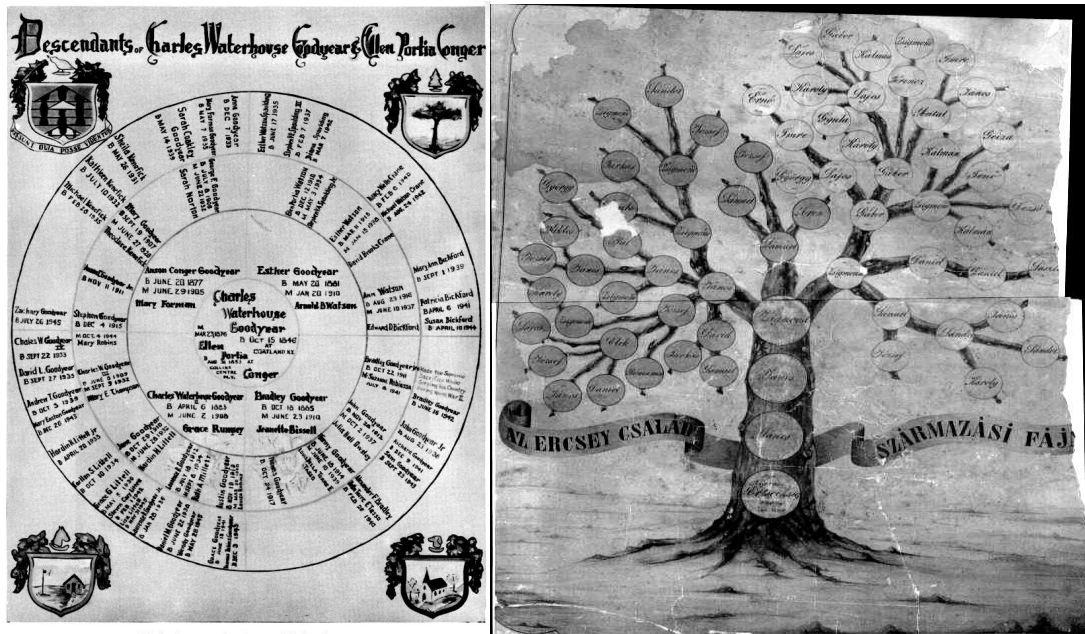
Source: unknown authors, available on:
http://freepages.genealogy.rootsweb.ancestry.com/~mcclendon/Bogalusa/Bogalusa%20Story/BogalusaStory-with-photos.html

On one side we see a family tree, on the left a circle generation chart. The tree allows us to better read the information in a sequence of 1 to 1 relation, the circle chart allows us to better read the structure of the family and the relationship between distant elements (such as parental link, generation, etc.).

Different spatial arrangements allow different points of observation, and help in a different way heuristic processes.

Reference frames are therefore the set of relations in a graphical artifact that give meaning to the space.

> Creating a reference frame implies abstracting the context. The designer reduces the number of explicit relations within the elements of the context, stripping the context of its accessory references which are part of its complexity. This way, the designer compresses the context, making it become 'portable' by reducing its informational 'weight'. […] the reference frame is the scheme which explicits the aspects that are considered more relevant by the author and the graphic compositor of the text. (Bonora *et al.,* 2020)

The strength of a visual representation allows the readers not only to observe the relationships between elements, but also to highlight their criticalities and inconsistencies, in particular when relationships and variables develop over several dimensions.

Different reference frames can be used to represent the same data, and each view, as long as it is consistent, will reveal a different way of accessing knowledge.

FIG. 6. *Dante's Paradise topography*
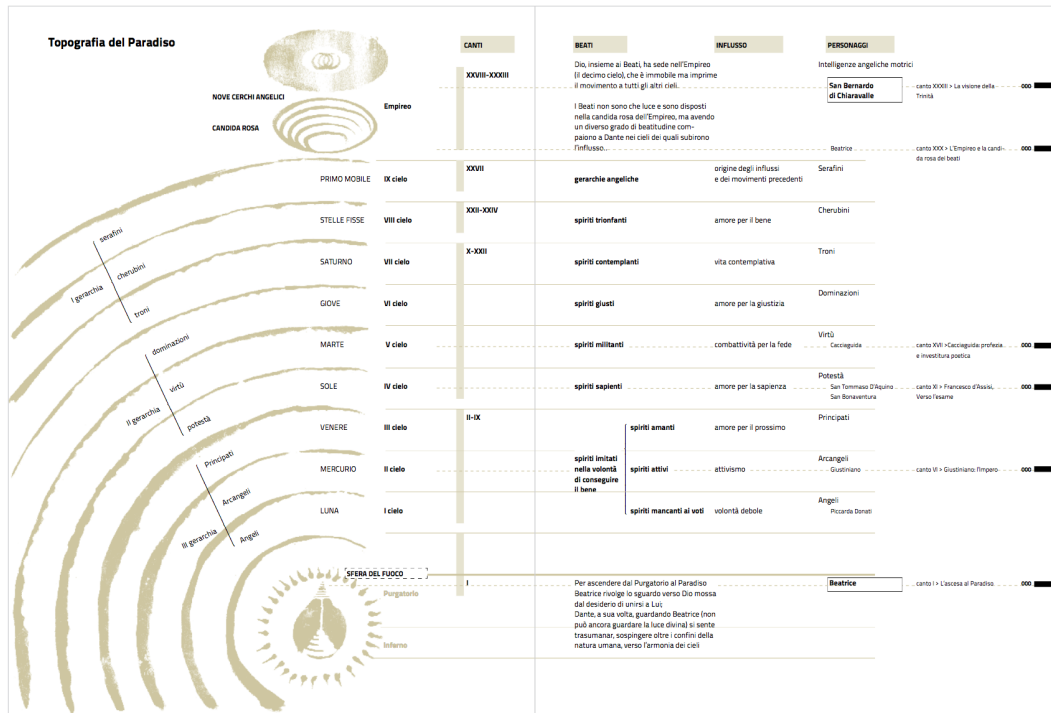
Source: Drawing by Angelo Monne, Luciano Perondi, Illustrations are part of the anthology Antologia della Divina Commedia. Incontro con l'opera. Beatrice Panebianco, Cecilia Pisoni, Loretta Reggiani, Marcello Malpensa. Bologna, Zanichelli.

If we observe Fig. 6, we note how the right and left side of the representation show the canticle of Paradise according to two completely different perspectives, each of them highlights different aspects through different graphic features. The connection between the two sides is the visual variable 'position'.

Analogy is the foundation of this process. Analogies bring together two abstract systems (Duhem, 1954), and visual analogies allow us to design a synoptically observable artifact with a heuristic value.

3. The diagrammatic representation of the integrated curriculum.

The integrated curriculum is defined by Martini (2019) through an analogy. She put the curriculum in analogy with the representation of knowledge on the basis of the acquisitions of network science (Barabási, Oulx, 2004; Buchanan, 2003). This operation is possible because (Martini, 2019) knowledge is conceived as complex systems which in turn can be represented by networks (Bertalanffy, 2004; Capra, 2012; Luhmann, De Giorgi, 1992).

The first investigative work that needs to be conducted is to verify the regularity of the analogical relationship between the elements of the curriculum and their corresponding graphic form or if it is even possible to have an isomorphism between the graphic form and the object of the representation.

In an isomorphism, the operations performed in one domain are also valid in the other, the connection is one-to-one. Unfortunately, the known isomorphisms are very few.

In an analogy the connection is less strong (Hesse, 1980), so the reader must be well aware of the limits of the analogy adopted. Otherwise, the reader will be able to apply the analogy as if it were an isomorphism and to use the relationships identified in a domain as a reliable inferential tool.

As I illustrated in another paper (Perondi *et al.,* 2020), the analysis of an analogy can have a heuristic function even if there is not a perfect biunivocal relation, but the reader must be well aware of the limits of the analogy itself. Having verified the regularity of the analogy, it is necessary to develop a set of visual attributes that allow the variables of the integrated curriculum to be displayed consistently and systematically.

> Conceiving knowledge as systems means thinking of them as aggregates of elements in a dynamic relationship between them, structured within them according to different levels of organization, in such a way that each of these levels corresponds to a supra- or a sub-system organized in the same way (Martini, 2019)[1]

Here Martini identifies associations between elements (associative variables) and a hierarchy between levels (dissociative variables), which are organized according to composition rules (reference system). A little further on, Martini proposes to use the network as a representational model of the structure of knowledge. Graphs are topological structures and they already show an isomorphic graphical representation of the properties they represent.

A graph would produce an orderable graph, as its property is to consider the relationship between nodes, but not the distance.

The representation proposed by the author concerns the topology of the structure of knowledge, but it is possible to extend the representation to the other elements of the curriculum (identification of objectives, organization of time and space, the adoption of teaching methodologies, evaluation practices, the school-territory link and more), exploiting other graphic properties and integrating them with the graph of the knowledge structure. For example, we can hypothesize that we can give a meaning to the length of edges that connect the nodes, or to the position of the nodes themselves, and the graph would turn into a quantitative

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[1] Original text (Italian): «*Concepire i saperi come sistemi significa pensarli come aggregati di elementi in relazione dinamica tra loro, strutturati al loro interno secondo diversi livelli di organizzazione, in modo tale che ciascuno di questi livelli corrisponda ad un sovra- o ad un sotto-sistema organizzato allo stesso modo*» (Martini, 2019).

visualization, which would reveal other aspects of the curriculum. Let's take the example of the London Underground Map (Fig. 7). The same information can be transformed based on the reference frame adopted and the variables that you choose to highlight.

FIG. **7**. *London Underground Map, designed by Harry Beck*
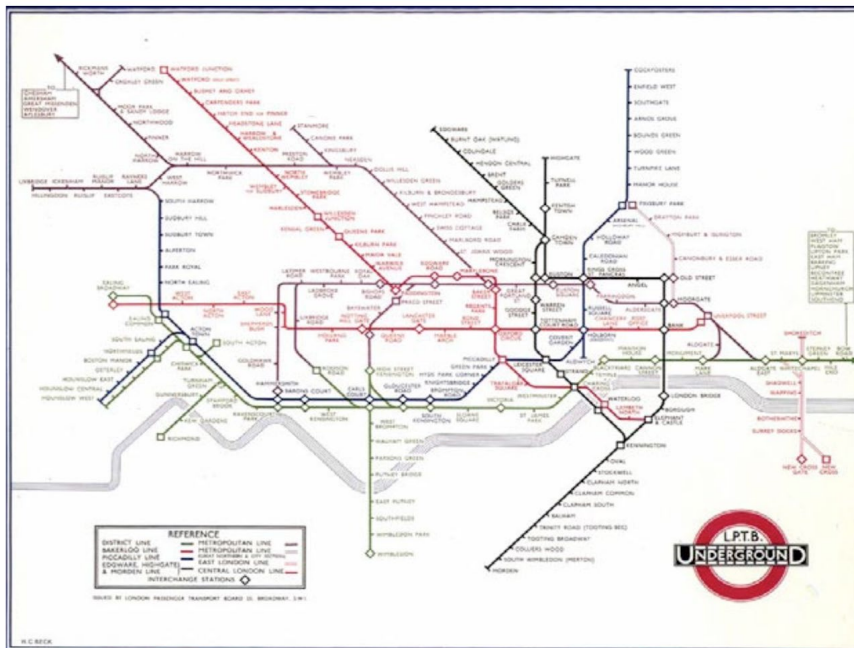
Source: Government of the United Kingdom. This map is in the public domain.

If we give a geographical value to the nodes, they will be arranged as in Fig. 8.

FIG. **8**. *London tube map based on a geographic projection*

Source: retrieved from https://commons.wikimedia.org/wiki/File:London_Underground_full_map.png

In Fig. 7 we have a sort of graph, like in graph theory, with nodes and edges, but with a 'rule of composition': the edges can have just three possible orientations (vertical, horizontal and 45°). The information is again different: it's possible to arrange in a small space a defined information, keeping just what you need in a trip on the underground: the sequence of stations. And this one is more or less the map which is still used now, as it is probably the most ergonomically efficient in the geographical environment of London.

FIG. 9. *London interactive time to travel map*
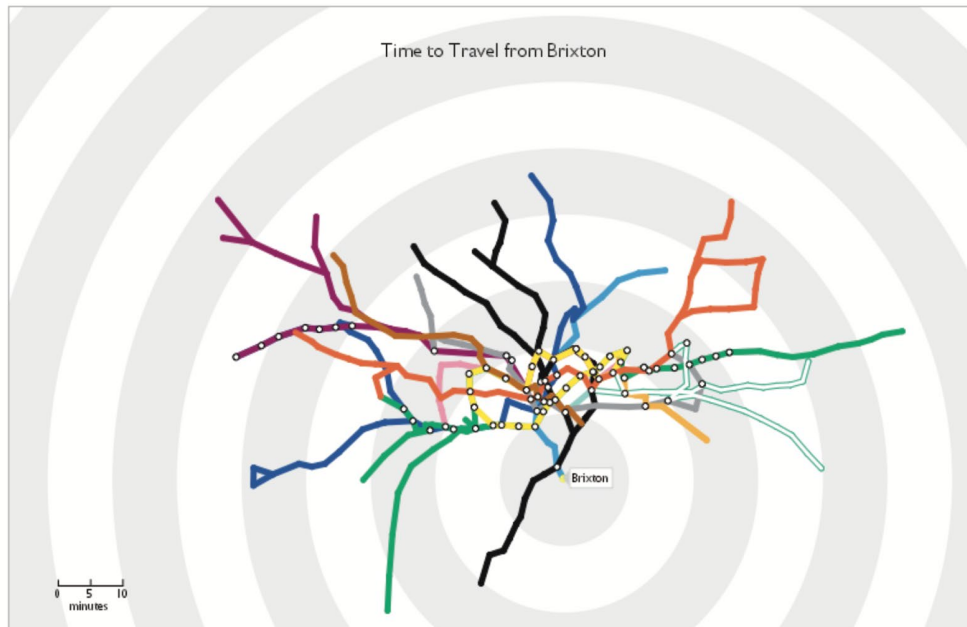
Source: retrieved from www.tom-carden.co.uk.

In Fig. 9 we can see a 'time to travel' map, where the reference frame is no more the geographic space but time and direction: different reference frames generate different graphic configurations, each one of them generates different information.

Each configuration suits well for a specific purpose. A representation can be understood as an intentional act (Giere, 2004, 2010; Tombolato, 2020) in which those who make the connection between object and representation select the features to be highlighted. If we try to do the same operation with the curriculum, we could increase the 'attractive power' of knots with more 'fitness', creating meaningful variation of density. This is a redundancy, but in this way the Clusters would be systematically highlighted.

The nodes with more fitness could also have a higher dimension or a darker tone based on the number of fits, creating a hierarchy based on the dissociativity of the variables.

Another possibility is to arrange the elements in bidimensional space, for example, as Martini herself indicates, according to the propaedeuticity or to the logical inclusion. The different disciplines could be arranged on

another axis, in order to highlight the disciplinary aspects and the weak links that connect aggregates of knowledge in different disciplines.

This operation obviously transforms the graph into a different object, since it would assume a quantitative or at least ordinal dimension. See for example the diagram on the right side in the schematization of paradise that I made with Angelo Monne in Fig. 6.

It is possible to work at the design of an integrated curriculum on the basis of relationships highlighted by the graphic visualization. By developing a system that dynamically responds to interventions, we could observe the effects that changes in the pathway have on the overall visualization itself. Dynamic visualization could be the feedback of curriculum design operations.

I have no evidence that the visualizations I have illustrated can favor knowledge processing, but I believe that empirical evidence on the subject relating to understanding graphs (Strobel *et al.,* 2018) and multimodal reading (Canham, Hegarty, 2010), show an advantage dependent on the integration between different diagrammatic and textual modes. Although a switch between different modalities can have negative effects (Cromley *et al.,* 2021).

The next step is to apply the visualization to a series of cases to optimize the set of graphic tools for the representation of the various levels and verify their functionality in terms of designing the curriculum itself. This will allow us to carry out empirical experimentation on the effectiveness in terms of comprehension and heuristic function of the use of diagrams in the processing of knowledge. For example, we could verify if the use of two Cartesian axes lowers the threshold of access to comprehension, or if the highlighting of the greater degree of fitness through the attribution of a greater 'gravitational attraction' to objects impacts on understanding and on the ease of use of the diagram. Or again if the redundancy between tone and gravitational attraction is functional to a greater perspicuity of the diagram.

Conclusion

The aim of this paper is to propose educators to use a wider set of graphic instruments which support the representation of the curriculum. I provide examples to show how the interaction between synoptic representation and knowledge organization can be functional to educators to elaborate on the problems concerning curriculum development from multiple and more interactive perspectives.

I see a huge potential in elaborating dynamic schematizations and in the possibility of synsemic configurations of the scientific text, such as visual abstracts (Ibrahim *et al.,* 2017; The art of abstracts, 2011), that we can apply to didactics.

The instruments for processing schematic and diagrammatic views are increasingly refined, as are the instruments for investigation and analysis

of usability and cognitive performance. It is therefore necessary to give an empirical foundation to the presumed heuristic effectiveness of the use of diagrams and synsemic and multimodal texts. I think that an area in which the subject of discussion involves the study of a flexible system with a variable topology allows us to test the effectiveness and perspicuity of a diagrammatic organization of contents. This operation can bring benefits both for the development of more effective graphic instruments for the development of knowledge, and for creating instruments to support the design of the integrated curriculum and therefore a functional instrument for addressing education problems.

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Pedagogy meets Architecture and Digitalisation

Rethinking Learning Spaces and Teaching Methodologies by Connecting Communities During the COVID-19-Period: Inclusive Vision and Research-Training in On-Line Workshop

Mariagrazia Francesca Marcarini

ABSTRACT: *This research-training had involved twelve Italian schools through out both on-line activities and at school design and involved a group of teachers of each school. that have joined together in a community to rethink how to organize and to review both the organization of school spaces and the teaching methods in an inclusive perspective in COVID-19 pandemic emergency. The schools involved are in the autonomous province of Trento, in the Italian Trentino-Alto Adige region: IC Cavalese (8 primary schools has a reduced number of students and the secondary school has a higher number of student) and IC Rovereto 3 (2 schools located in Rovereto which is a medium-sized city and are very numerous, with recently immigrated children who do not speak Italian and many with SEN. It focuses around three questions. Is it possible to: i) redesign classroom and learning environments for personalized and differentiated teaching in an innovative vision during COVID-19 period? Ii) Redesign classroom through both on-line training and at design activities at school? Iii) Overcome most of the obstacles to design learning spaces during the pandemic? The transformative research-training with the ideographic purpose has been used, and a critical approach induced teachers to find strategies to design new learning spaces through reflexive modalities and design project. The proposals presented by were very innovative in terms of organizing spaces following the problem of the distances to be maintained to protect each other from COVID-19, and they promoted many innovative ideas in terms of methodology, inclusion, and didactic differentiation.*

KEYWORDS: *Renewing schools, Collaborative on-line design, Inclusive vision; Universal design for learning, Learning spaces COVID-19 solution*

Introduction

COVID-19 emergency has led Italian schools to reflect on how to review both the organization of school spaces and the teaching methods in an inclusive perspective.

The research-training involved twelve Italian schools that have joined together in an educating community to rethink together how to return to school in September is presented.

The schools involved were IC Cavalese and IC Rovereto 3. The schools are in the autonomous province of Trento, in the Italian Trentino-Alto Adige region, 8 primary schools have a reduced number of students, while the secondary school has a higher number of students and are located in a mountainous area around the town of Cavalese. The other three schools are in Rovereto which is a medium-sized city, two of which are very numerous, with recently immigrated children who do not speak Italian and many with SEN.

FIG. 1. *The position of Cavalese and Rovereto cities in North Italy*

The headteachers need to reorganize the schools' spaces and the classrooms as a 'lab' to change vision of the school in innovative way implementing a differentiated teaching method and for the COVID-19 pandemic emergency

The schools involved are linked in the network IDeA (Innovazione Didattica and Ambienti di Apprendimento – Didactic Innovation and Learning Environments) and focused on new way for «doing school».

This network aims to support shared training paths relating to the innovation of learning spaces for creating flexible and personalized learning opportunities as well as sharing of vision, professionalism, exchange of experiences and technical solutions. The common purposes are mainly three: design new teaching methodologies in flexible spaces; subject laboratory classrooms; learning by skills 'beyond disciplines'.

A research-training design path was proposed involving some groups of teachers at each school; the design process was carried out both through on-line activities and design in site at school paying attention to the distance between people for the COVID-19 pandemic.

The schools involved of IC Cavalese in Cavalese city and in some different little cities (8 primary little schools and one middle school) are:

- Secondary first grade school 'G. Segantini' in Cavalese;
- Primary school in Casatta Valfloriana;
- Primary school in Capriana;
- Primary school in Molina di Fiemme;
- Primary school in Castello di Fiemme;
- Primary school in Carano;
- Primary school in Varena;
- Primary school in Cavalese;
- Primary school in Masi di Cavalese.

FIG. 2. *The schools of comprehensive Institute Cavalese*

The schools involved of IC Rovereto 3 in rovereto city (2 primary schools, one middle school with recently immigrated children with SEN) are:
- Secondary first grade school «I. Negrelli»;
- Primary school 'M. K. Gandhi';
- Primary school 'D. Chiesa' in Noriglio (hamlet of Rovereto city).

FIG. 3. *The schools of comprehensive Institute of Rovereto Nord*
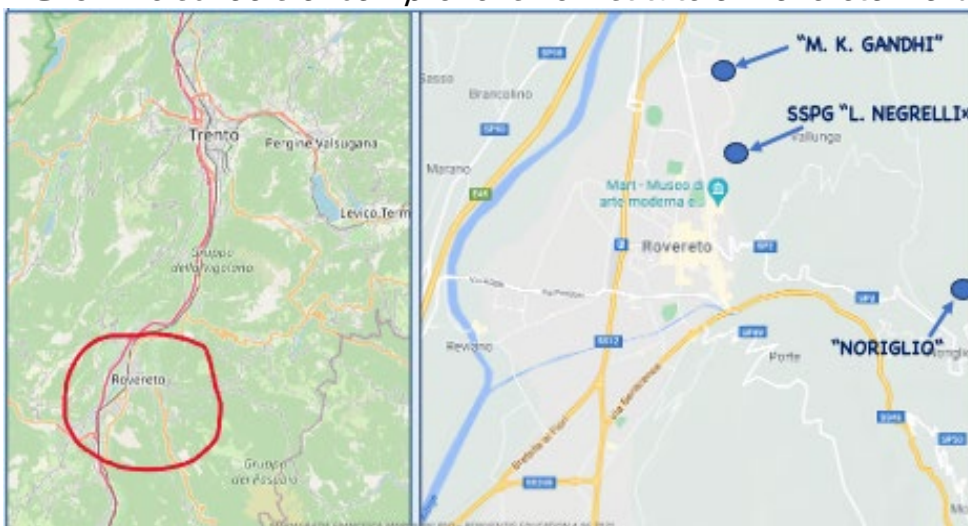
1. Research topics/aims

The research aims are to rethink how the redesign and/or reorganize both the school spaces and the teaching methods in an inclusive perspective in COVID-19 pandemic emergency through on-line workshop

2. Research questions

The focus is on three questions. Is it possible to:"
- redesign classroom and learning environments for personalized and differentiated teaching in an innovative vision during COVID-19 period?
- redesign classroom through both training and design activities on-line and at school with person distance?
- overcome most of the obstacles to re-design learning spaces during the pandemic?

3. Methodology

A critical approach induced teachers to find strategies to redesign learning spaces through reflexive modalities and design project. A research-training path was chosen for the reorganization of the spaces. «The term Research-Training (R-F) is used in the Italian pedagogical debate, even though it has not acquired a shared definition among the various research currents. At an interactional level, there is no possibility of its actual translation». It is not a concept precisely defined within the scientific debate in the educational field, it can be considered to derive both from participatory research (Nigris, 2008), and from Research-Action, where the participation of researchers and stakeholders to promote change is fundamental (Vannini, 2018, 21). Furthermore, the concept of R-F has been used in the current called 'Formative educational evaluation research' (Bondioli, Ferrari, 2004) and can also be considered as a process of professional growth for teachers. It is considered as a real empirical research that is carried out in order to promote development and innovation within educational institutions. The change must be sustainable both for teachers and for the environments, since both must mutually support each other (Asquini, Dodman, 2018).

Sustainability can be defined as a culture of education based on a transformative paradigm that enhances, supports, and realizes human potential in relation to the need to achieve and support social, economic and ecological well-being (Sterling, 2001, 22).This choice has two purposes: to promote participatory planning according to Giancarlo De Carlo (2013) so that the stakeholders can appropriate the spaces and also

change their role from 'users' to 'inhabitants' (Hertzberger, 2008; Faiferri, 2012).

4. Scientific significance

The research-training is significant to propose a learning spaces redesign and /or re-organization by teachers in order to personalize learning and teaching in COVID-19 emergency and also to try to experiment a research-training. A group of teachers of each school were involved Woolner, 2014, Weyland, Attia, 2015). The design process was carried out both on-line workshop activities and design in site at school paying attention to the distance among people for the COVID-19 pandemic.
'The teachers as designer' is an important challenge because

> at school, teachers make design decision every day how best to support their students and in term of curriculum also. Students too make decisions every day in term of how to approach and engage in activities. Principals and administrators make decisions every day that affect the culture and activity structures of their schools. These are all design decisions. The question, therefore, is not whether teachers, students, and administrators engage in design. The questions are whether or not they will engage in design effectively and consciously to better change existing situations into preferred ones for themselves and those around them (Clark, 2021).

The change is needed in schools because the current factory model of education that came to the fore with the industrial era does not entirely prepare our students for the future and also for the world in which they live today.

5. Organization

The research-training had three workshop phases:
  – First phase: Theoretical-Design
  – Second phase: Project work – Collaborative Design
  – Third phase: Final Plenary Meeting.

5.1. First Phase – Theoretical-Design
First workshop with researcher. It is organized in three parts. First part in plenary meeting and second part the teachers were divided in groups.
In the First Part as theoretical training some information and many images of innovative schools were presented to the teachers to support the subsequent empirical work that the teachers should have carried out and to suggest possible organizational solutions. The information is about:
  – Learning styles (DunnandDunn, 1978), sensory channels and learning profile;

- Importance of innovative learning environments (Rogers, 1947);
- Space (intended as the environment) is connected to social relations (Simmel, 1989);
- Educational relation in the social context (Bateson, 1993);
- Widespread well-being" (Alexander, 2008; Iavarono, 2008; Sen, 2017; OMS, 2017; Sandri, Marcarini, 2019)
- Emotion and learning (Goleman, 2006; Lucangeli, 2019);
- Emotion, space and neuroscience (Gallese, 2013; Gallese, Gattara, 2015);
- Linking pedagogical activities to spatial setting (Lippman, 2010)
- Comparison of educational models (Limone, 2012);
- Headteachers Leadership (Armenakis *et al.,* 1993; Kotter, 1996, Holt, Armenakis *et al.,* 2007);
- New organizational model (OECD, 2009; Imms, 2016, Castoldi, 2020; Marcarini, 2021);
- Learning environments and technology: the 'digital natives' and the transformation of teaching;
- Universal design for learning for inclusion (CAST, 2011);
- Differentiated teaching (Tomlinsom, 2014; d'Alonzo, 2016; Cottini, 2018, 2019);
- Some learning environments model (INDIRE model 1+4, Borri, 2016) Future classroom lab, Bannister; 2017; Senzazaino, Orsi, 2017);
- Importance of the research (Dewey, 1951). And reflection on one's work as a teacher and teacher as a researcher (Schön, 1993).

In the Second Part the teachers were divided into 5 groups and three practical activities were proposed two activities: Brainstorming, Diamond Ranking Case Study.

Brainstorming on four questions to stimulate reflection and to:
- Organizational culture is one of the key elements of school success. What elements do you think create a 'positive culture'?
- What is in your opinion the meaning of school culture today?
- What does it mean to build a school and an inclusive environment?
- What obstacles must be faced?

Brainstorming, although initially were used mainly in advertising since the 1930s, was then defined it as «a conference technique by which a group tries to find a solution for a specific problem, accumulating all the ideas spontaneously arising from its members» (Osborne, 1957), it is a very interesting technique also in education because it allows to develop the ability to find or invent new ways to face, to find common vision and ideas and also to solve problematic situations (Antonietti, 1994).

Some suggestions and the problems emerged in brainstorming by teachers regarding in particular:
- the importance of collaboration between colleagues and the need to share teaching practices in order to create a 'Bridge-Culture'

(Sandrone, 2007), a culture of connection, which, facing the problem of fragmentation and the lack of a unifying center;
- the knowledge of the territory is essential to propose educational activities that also involve other actors: artisans, museums, libraries, etc.;
- they agree that exclusively online teaching has alienated students and created inequalities;
- discussion and reflection with colleagues about the organization of the space and sharing an idea about the use of the classroom-space;
- difficulties about collaboration among colleagues because often the teachers are closed in the «single cell» tradition (Osborne, 2016, 37) and they they work like bees in hives: each with its own cell (Bertagna, 2011);
- there is a need for the development of teaching professionalism also through training to learn how to design the use of spaces according to the teaching methodologies to be used;
- there is a need to include all students from those with SEN to gifted.

FIG. 4. *Summary of the results of the brainstorming.*

Diamond Ranking: nine words were given to each group of teachers to put and reorder in the diamond ranking according to their priorities after reflection to stimulate the construction of a common vision; the words given are:
- Inclusion;
- Differentiated Teaching;
- Personalization;
- Quiet Area (it is a soft or relaxing space where regulated activities are carried out even in small or large groups; sometimes it is inside

the classroom itself, sometimes it is an expressed external space (Sandri, Marcarini, 2018).

– Digital Technology;
– Diffused Well-being;
– Teacher room/space;
– Student lockers;
– Art in the classroom/Poster.

The Diamond Ranking is an excellent strategy for encouraging collaboration in the classroom or in the laboratory and it is useful to engage people in the research process to develop common vision. When making decisions about choices or priorities, you often have to choose between multiple options. So by classifying the priorities it becomes easier to share the choices that must be made and this also leads to focus on the most and least preferred options, which, therefore, allows you to facilitate discussion, share information, welcome the perspectives of others, negotiate and share the choices (Clark, 2012).

The request was to put in the rectangle at the top of the diamond the word that represented the most important aspect for each group and in the rectangle at the bottom of the diamond the less important for them.

Each group of teachers has given great importance to well-being, inclusion and differentiated teaching and personalization. One group used diamonds creatively, as they felt that there were three important aspects to be taken into consideration on an equal footing: personalization, widespread well-being and inclusion, placed them in the central part, declaring that for them they were all three fundamentals.

FIG. 5. *Summary of the results of the Diamond Ranking*
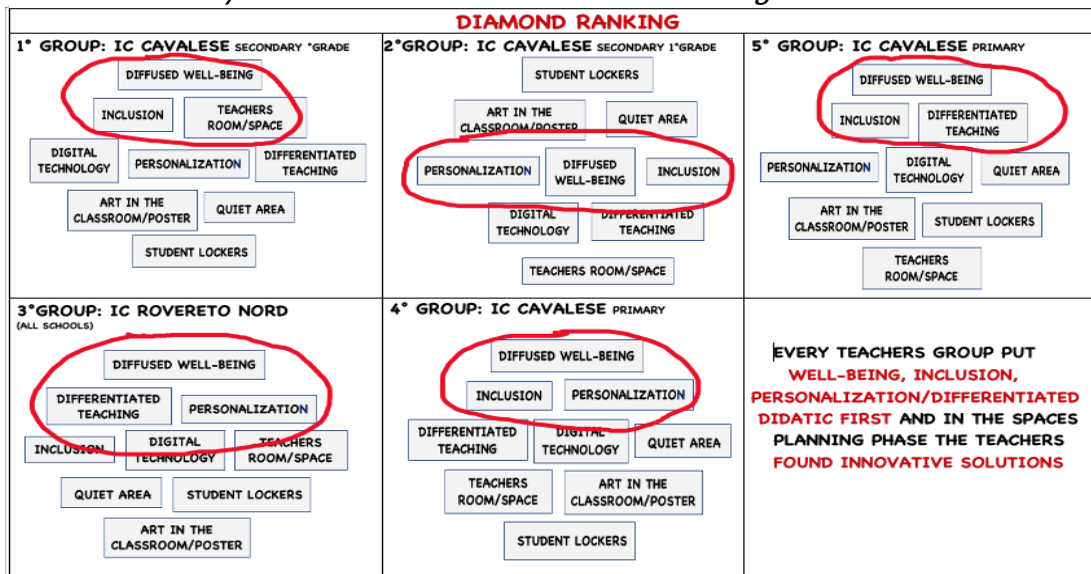
In the third part, in plenary meeting, each group reported to the others the reflections made on the three previous activities and the relevant tasks were suggested to the various teachers of the schools as appropriate.

Then dedicated meetings between the teachers of the various schools took place to carry out the design sending the material produced to the researcher for a review. A Case Study has been given to try to reflect about innovative learning environment and new didactic methodologies before designing their schools.

> Case study: the floor plan of a classroom of a 49 sqm (typical size of Italian classrooms) was given with the description of the group of 15 students, also with Special Educational Needs and the teachers reflected on how to organize the classroom space considering that the size of the rectangular benches is 50x60 cm or 50x70 cm.

Subsequently, there were individual workshops with each school and each related group reflecting with the researcher on any other adjustments and suggestions. As a conclusion, a final plenary meeting took place with all the groups and the two principals, where each group connected the others and presented their project proposals for further sharing.

5.2. Second Phase Project Work – Collaborative Design
Each group of teachers carried out the collaborative design in their school following the Guidelines by Ministry of Health and prepared the floor plan of their classrooms.

Individual meetings were organized with the researcher and each school and each related group that presented, discussed, and reflecting on the design and the material produced for a review and any other other adjustments and suggestions to be made.

The proposals presented by were very innovative in terms of organizing spaces also considering the problem of the distances to be maintained to protect each other from COVID-19, and they promoted many innovative ideas in terms of methodology, inclusion, and didactic differentiation.

After these meetings with the researcher each group reflected again and subsequently made some adjustments deemed appropriate and which could improve the classrooms and in general learning environments of the school.

5.3. Third Phase – Final Plenary Meeting
A final plenary meeting took place with all the groups and the two principals, where each group reported to the others the reflections made on the previous activities and presented their project proposals and the relevant tasks were suggested for further sharing.
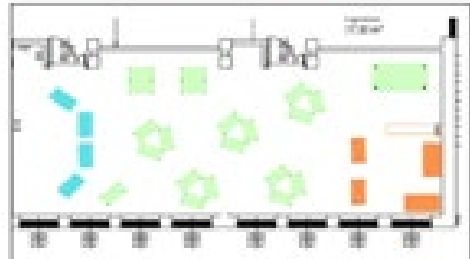
Some photographs and projects of the works carried out by the teachers of the schools involved are shown below.

FIG. 6. *Photographs and projects of the works carried out by the teachers of the schools*

2) THE SCHOOLS OF IC ROVERETO NORD

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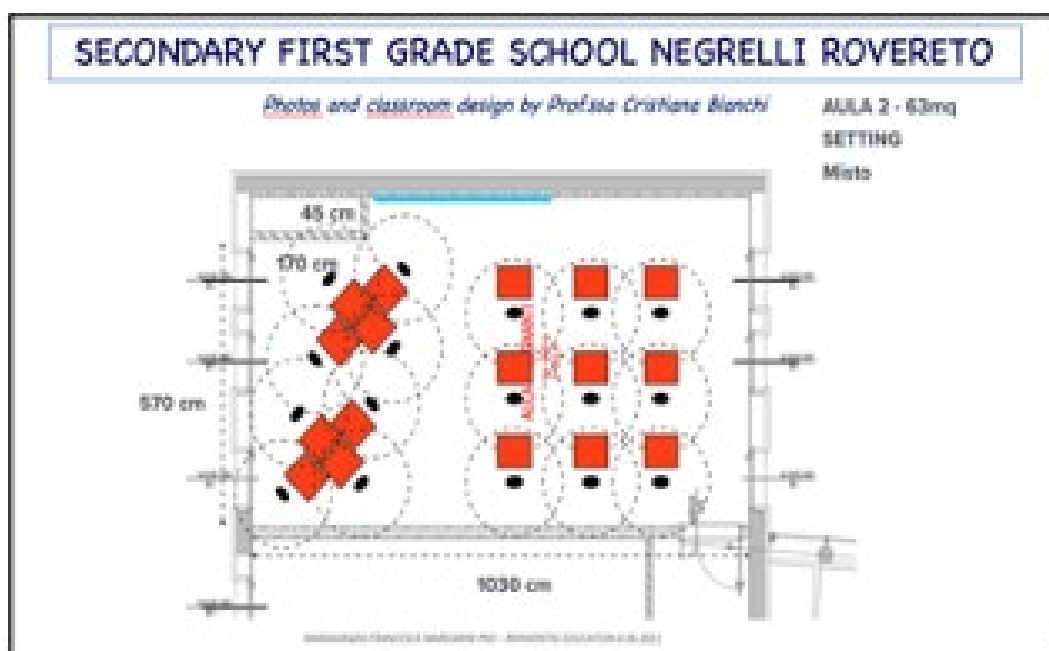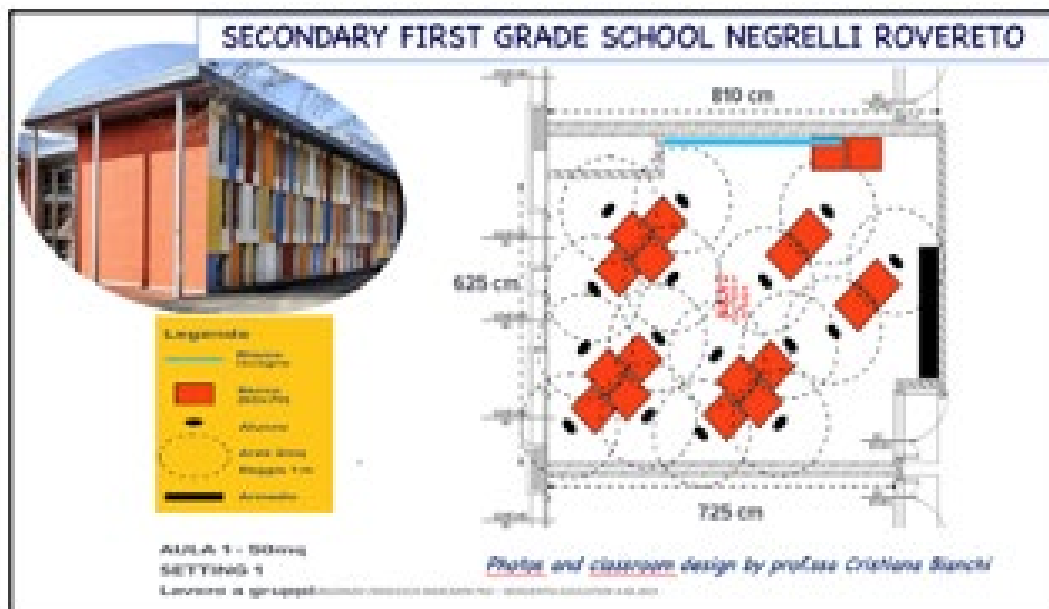
SECONDARY FIRST GRADE SCHOOL NEGRELLI ROVERETO

PRIMARY SCHOOL NORIGLIO (ROVERETO)

PRIMARY SCHOOL M. GANDHI ROVERETO

Photos and classroom design by the teachers

PRIMARY SCHOOL M. GANDHI ROVERETO

Photos and classroom design by the teachers

FIRST SOLUTION

SECOND SOLUTION

PRIMARY SCHOOL M. GANDHI ROVERETO

LARGE CLASSROOM 24 STUDENTS

PRIMARY SCHOOL M. GANDHI ROVERETO

SMALL CLASSROOM 12 STUDENTS

Conclusions

The proposals presented by teachers were innovative in terms of organizing spaces, distances to be maintained and methodology, inclusion and didactic differentiation.

From the teachers' reflections, it emerges the need to work in a team, to embrace great flexibility and to have a sharing spirit and to adopt the vision defined as 'Culture-Bridge' (Sandrone, 2007), a culture of connection, which, by addressing the problem of fragmentation, it performs general and specific functions that help the teacher to leave the solipsistic disciplinary model, to make possible greater interaction and support between teachers. It could also be defined as team-teaching, in which the essence of the concept lies «in the very spirit of collegial programming» (Bair, Woodward, 1973, 23), but this meaning is less broad than the idea of Culture-Bridge, because it excludes structural and organizational details.

There is a need to develop new itineraries and new teaching practices because the times when there were few methods and teachers had to choose one or the other are very far away (Calidoni, 2000). In recent decades, there has been an expansion of teaching, which has become an autonomous and articulated discipline, which has produced experiences, proposals, numerous models also in the international context, which however require teachers not only to continuously stay updated and get training, but also to develop the ability to orient themselves in the complexity and multiplicity of didactic proposals

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