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The impact of eTwinning on continuing professional development of teachers in Italy

Studies, highlights and prospects of the Italian community

Edited by Donatella Nucci, Alexandra Tosi and Maria Chiara Pettenati

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This volume is the translation into English of the publication *eTwinning e la formazione degli insegnanti. Studi, evidenze e prospettive della community italiana*, Carocci, Roma 2021. CHAP. 9 is totally new and is not included in the original version. All URLs have been checked at the time of going into print, but in July 2022 the eTwinning platform etwinning.net has been dismissed and all data transferred to a new European platform, the European School Education Platform https://school-education.ec.europa.eu/ accessible with an EU login. We apologize in advance if some links will not be active in the future.

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Preface

by *Santi Scimeca**

The first eTwinning conference took place during a cold and rainy weekend in Brussels in January 2005. The web portal had just been launched and we were about to meet the national representatives of the countries involved, and to test, with real teachers from all over Europe, how this crazy and beautiful idea of "electronic twinning" could make inroads among the educators present. eTwinning was born as a "platform for twinning", following the indications provided by the European Commission visionaries who were its promoters. At the same time, at the Central Support Unit in Brussels, where this initiative was designed, conceived, questioned, dismantled, and reassembled continuously, the potential of eTwinning was already very clear. Evidence of this was the choice of inviting, as keynote speaker for the conference, Derrick De Kerckhove, an academic known for having understood the social function of the Internet before others. His essay *Connected Intelligence: The Arrival of the Web Society* offered a reading of the web with infinite potential: a network of connected intelligences capable of generating billions of synapses, creating resources and connections, with the aim of enriching and improving our society. The keynote was greeted with enthusiasm and scepticism at the same time: after all it was 2005, and only after a few years would social media transform our society forever. eTwinning was just born, its motto read "School partnerships in Europe", but the profound difference between twinning and network, between partnerships and communities was already clear back then. eTwinning could only be based on a continuous, informal, bottom-up exchange of information, content, resources, excitement among all participants, in order to grow as educators and improve teaching in Europe. Certainly ambitious goals, but those were times of ideals and high hopes.

More than three decades have passed and eTwinning has earned a front row position in the new Erasmus+ programme of the European Commission, reaping the fruits of years of work and success, and with a potential yet to be fully expressed. While it is true that in 2021 we will reach one million registered users since 2005, it is also true that in most of the countries involved only a minority of teachers are part of the com-

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munity and participate in the proposed activities, collaborative projects, and training and upskilling opportunities. Some might argue that initiatives such as eTwinning are by their very nature intended for pioneers, for the most capable and ambitious teachers who are able to innovate and challenge their own working methods. Maybe so, but the Covid-19 pandemic has taught us that schools have had to face an epoch-making revolution overnight, and millions of teachers have been forced to reinvent themselves in what has been called "Emergency Schooling" and "Distance Learning", often based on improvisation and on reproposing online traditional classroom methods. Those who already had the tools and skills to manage a class remotely did so – and continued to do so – with profit. The others have generated that frustration that was visually embodied by the protests of students wanting to go back to school at all costs.

The pandemic has only highlighted, with dramatic timing, the difference in methodologies, attitudes and skills that exists among teachers across Europe. If on the one hand this difference is physiological (there are six million teachers in our continent), on the other hand it is strange that the school, the institution that more than any other is called upon to shape new generations, is so jagged and varied in terms of training and educational offer. While respecting the sanctity of school autonomy and freedom of teaching, it is now unthinkable to continue teaching with tools and methods that were already obsolete 40 years ago (to then complain that students "are distracted and do not enjoy lessons"). We must have the courage to affirm that schools, school heads, teachers, must question themselves and, if necessary, update and change to keep up with their students and with the reality that surrounds us. Within the limits of its prerogatives, the European Union is contributing generous budgets, timely initiatives, excellent resources, and eTwinning is an example of this. But the change of an institution such as the school cannot be made by decree; we need a cultural and professional change from the bottom, favoured by a regulatory framework, which unlocks the fetters that are still slowing our continent's schools down.

This volume demonstrates how such a change of course is not only possible, but has already occurred in the thousands of teachers who participate in eTwinning and, we are sure, in the many who share its spirit and open-mindedness, perhaps without actually being aware of it. This collection of essays is dedicated to those who have decided to change the way they face the school environment despite the opposition of a school director and the hostility of the most reluctant colleagues. To those who have revolutionised their own paradigm, perhaps after years of career, despite this being difficult, arduous, and lacking in recognition. The last two years have proved, if proof were still needed, that they were right. But they already knew this, having seen it every day in the proud and satisfied looks of their students.

It is now up to the school system to ensure that eTwinners all over Europe are valued and taken as an example. Professional development opportunities exist and can be taken up by anyone. What is really needed is to understand that professional development should not be seen merely as a duty or a regulatory requirement, but as a necessity and a personal pleasure, in the spirit of the so often cited and often forgotten

"lifelong learning". The eTwinning community is based on sharing and emulation, peer learning and peer mentoring. The most important step is not to signing up for the online platform, but being ready to challenge oneself. The readiness for change is more essential than ever at this time: This is what we tell the new generations, but we must be able to do it ourselves first.

The most capable teachers are often also the most generous, making themselves available to their school and their colleagues. It is thanks to them that the school can become a network of connected intelligences, in which to work and grow together in a system that recognises and values the skills acquired and distributed throughout the community. And it is thanks to them that schools can truly change and be more democratic and inclusive, ready to prepare new generations for the epoch-making challenges we face.

Presentation

by *Sara Pagliai**

This volume is the result of a close collaboration between the Italian eTwinning National Support Organisation (NSO) and some INDIRE research lines, with the valuable contribution of the University of Florence, a key partner in this impact study.

After more than 15 years of activity and great growth in both qualitative and quantitative terms, the eTwinning action, in fact, is experiencing recognition of the changes it has been able to trigger through European cooperation and electronic twinning in terms of educational and methodological innovation in our school.

We can truly say at last that eTwinning is the most significant distance learning collaboration and training initiative in Europe and beyond, a great educational community; this is also thanks to greater complementarity with the other Erasmus+ programme opportunities for schools.

In particular, in our country, the action took advantage of collaboration with regional school offices, signing agreements that established regional eTwinning training plans for teachers managed by local school authorities with the coordination of the Italian eTwinning NSO.

Throughout the duration of Erasmus+ 2014-20, the participation of Italian teachers and schools in eTwinning has been exponential, consolidating Italy in the first places in Europe in terms of participation, results and recognition in the community. eTwinning has developed becoming increasingly a point of reference and a pillar of the cooperation activities of Key Action 2 Erasmus+, as a privileged electronic platform not only to activate collaborative educational projects, but also as a search engine partner and environment for ongoing professional training and exchange of approaches and experiences.

In particular, the platform has been able to evolve over time, increasingly enhancing its structural strengths, in parallel to the educational purpose: a light approach, that is, an ease of activation of projects by users, who are not required to have special technical skills; absence of bureaucratic procedures or particularly stringent requirements and timelines; and its green side, given the nature of collaboration that is virtual, remote, and therefore with low environmental impact.

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Among the Erasmus+ Actions, eTwinning was also one of those that demonstrated greater vitality and effective use during the Covid-19 pandemic. The health emergency has undoubtedly created difficulties for physical movements, but despite everything the exchanges have continued in an orderly manner using distance learning and in general mobility in blended mode, to the full satisfaction of teachers.

Within the Erasmus+ Programme, eTwinning has supported in practice the cooperation policies of European education systems, a commitment that is renewed in the new 2021-27 programming.

Now, the new Erasmus+ 2021-27 programme – of which eTwinning is an increasingly fundamental measure – will increasingly invest in people, in particular in future generations, in their skills and knowledge, trying to respond to global challenges, such as social inclusion, environmental sustainability, innovation.

Erasmus+ 2021-27 is an instrument for action aimed at achieving a European Education Area, a Europe of knowledge, «a Europe in which learning, studying and doing research would not be hampered by borders. A continent, where spending time in another Member State – to study, to learn, or to work – has become the standard and where, in addition to one's mother tongue, speaking two other languages has become the norm. A continent in which people have a strong sense of their identity as Europeans, of Europe's cultural heritage and its diversity»[1].

My congratulations, therefore, to all those who contributed at various levels to this publication, and my wish that this may represent a first valuable testimony of how the synergies among national policies and the results of European activities in the field of education can be best exploited to achieve a general improvement in the activities of our schools, especially on the side of innovation, internationalisation, and educational design.

1. European Commission, *Strengthening European Identity through Education and Culture*, COM(2017) 673 final, Strasbourg, 14 November 2017.

Introduction

by *Donatella Nucci*, *Alexandra Tosi* and *Maria Chiara Pettenati**

> European teachers and trainers are the cornerstones of the European Education Area and play a central role in promoting the European dimension of education by helping learners understand and experience the feeling of European identity and belonging to Europe.
>
> *Council Conclusions on European Teachers and Trainers of the Future*
> (Official Journal of the European Union C 193/11, 9/6/2020)

eTwinning is the largest European community of teachers aimed at fostering collaboration between teachers and schools. At the same time, it is configured as an Action which is co-designed and represents an expanded educational environment, and as a professional community of teachers based on exchange and improvement in digital and international environments.

Founded in 2005 on the initiative of the European Commission, it is currently among the Actions of the Erasmus+ 2021-27 Programme and involves over 900,000 teachers throughout Europe, of which about 90,000 Italians; eTwinning is also the largest community in Italy, with a peak of registrations and a constant growth of new projects with at least one Italian partner since 2015, in conjunction with the *La buona scuola* reform (Law 13 July 2015, No. 107) and in particular with the National Digital School Plan.

The Action is characterised by multi-level governance in which the Central Support Service (CSS), under the guidance of the European Commission, and the National Support Oraganisations, work together to provide quality guidance, support, and training to users. In Italy, this governance is further developed at local level, through collaboration with Regional School Offices and the network of eTwinning ambassadors. This element is a strength that makes it possible to reach a large number of teachers and offer training content in line with the educational policy guidelines dictated by the European Commission and the Italian Ministry of Education.

Contributing to the training of teachers, increasing their skills and competences not only in the use of new technologies but also in terms of educational innovation, multilingualism and global citizenship, has been one of the main objectives of eTwinning since the very beginning. Over the years this aspect has been strengthened at all levels, increasing and diversifying the training offer. In Italy too the eTwinning

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National Support Organisation (NSO) has updated and multiplied training opportunities, while seeking a rationalisation and systematisation that facilitates teachers in constructing their own customised training path, with the prospect of being able to trace it back to the recognisable Training Unit envisaged in national legislation.

Of key importance in the strategic vision of the Action is the contextualisation in the normal school activity: learning by doing and benefiting from sharing the knowledge and skills of the whole community of participating schools. eTwinning is a perfect example of situated and informal learning: teachers learn new skills and acquire new competences in the context of their normal work practice. Unlike the traditional offer of in-service training, which is often sporadic and decontextualized from normal teaching practice, eTwinning integrates directly into the daily work context of teachers, allowing them to choose the path to follow based on their actual needs and starting exactly from their level of skills. In fact, participation in eTwinning often begins with a peripheral approach to the community; at this stage, many teachers not fully familiar with the new technologies engage in very simple projects, perhaps involving only the use of e-mail, in an exchange of correspondence with the partner school. As time and participation in the community increase, there is then a progression towards more complex projects with challenging training objectives on issues of global relevance, which involve the use of more sophisticated technological tools and innovative teaching methodologies.

With such a rich and diverse professional development and training offer, and one that is growing rapidly, eTwinning's impact studies on teachers and its formal recognition at the national level have become two key aspects of the European Central Unit's monitoring and collaborative work within the transnational eTwinning taskforces. This is also the context for the research question posed by the Italian eTwinning NSO and INDIRE Research: *How does eTwinning interact with teachers' professional development in our country, and with what impact?*

This book, intended for teachers, trainers, school heads, researchers and political decision-makers, brings together the fruits of about five years of studies conducted on this topic by the Italian eTwinning NSO and INDIRE Research in collaboration with the University of Florence.

The overall contribution presented in this volume contributes to support the thesis that eTwinning is teacher training as well as a lever for school innovation. It is so because of the richness of the activities that make up eTwinning as an experience, activities that come to affect the educational, organisational and professional spheres of the teachers who are part of the community. The various chapters of this volume contribute to delving into and providing evidence of this thesis from multiple perspectives.

CHAP. 1, written by Giacomo Bianchi and Giulia Felice, sketches the context with a longitudinal look at more than fifteen years since the official launch of the Action: what has eTwinning been in Europe and Italy, and what is it now? What does it represent today in the European landscape of school education and in-service teacher training? What futures are envisioned and wished for this community?

In CHAP. 2, Elena Bettini and Lorenzo Mentuccia discuss in depth one of the central and distinctive elements of the eTwinning experience: documentation. It is intended as a practice aimed at three strategic objectives: supporting effective remote collaboration between teachers and students, highlighting the quality dimensions of the eTwinning experience to reward and share the best ones for the benefit of all, disseminating the results and therefore helping to involve new members into the community.

CHAP. 3, written by Donatella Nucci, Alexandra Tosi and Maria Chiara Pettenati, introduces the theme of enhancing eTwinning experience in terms of professional development referring to the various phases of the teaching profession: initial, incoming and in-service training. To do this, it highlights how the eTwinning approach to teacher training uses processes, models and tools that guarantee governance, quality and impact of experience in terms of training, which allow to effectively address and overcome numerous critical issues found by educational research in the field of teacher training in Italy. The chapter lays the groundwork for the detailed discussion of the theoretical framework and results of the eTwinning impact analysis on the professional development of Italian in-service teachers, addressed in CHAP. 4 by Francesco Fabbro, Maria Ranieri and Enrico Imbimbo. This research was conducted in 2020 by the Department of Training, Languages, Interculture, Literature and Psychology (FORLILPSI) of the University of Florence in collaboration with INDIRE and the Italian eTwinning NSO.

In CHAP. 5, Margherita Di Stasio and Laura Messini analyse the idea of evaluation, in all its facets – expert evaluation, self-assessment and peer evaluation –, configuring it as a support for reflection on practice, in a dimension of recognition and visibility in the community within the context of professional development.

CHAP. 6 looks at one of the many specific contexts where the effects of the eTwinning experience for Italian teachers are immediately evident: the teaching of civic education, which was reintroduced into our curricula in the 2020-21 school year. The chapter, written by Maria Chiara Pettenati, Anna Tancredi and Sara Martinelli, is based on the following research questions: what elements do the eTwinning didactic experience and the teaching of civic education have in common? What digital and methodological skills are useful and transferable from the eTwinning context to the context of civic education? Does the eTwinning experience foster in any way the transversality process that Law 20 August 2019, No. 92 attributes to civic education?

CHAP. 7, written by Laura Parigi, Rudi Bartolini, Francesca De Santis and Alessandra Anichini, illustrates a research path based on the study of narrative as a form of research on experience, leading to the proposal and experimentation of a format and process for the realisation of a documentation model based on digital storytelling, one capable of accounting for the richness of real and lived experience through voice, words and images.

In CHAP. 8, Maria Ranieri and Elena Gabbi illustrate the first part of an ongoing research project to use Learning Analytics techniques and methods to explore

the eTwinning community, in order to better understand and thus optimise learning and the environments in which it takes place. CHAP. 9 describes the evaluation of a participatory approach to applying Learning Analytics to the eTwinning professional community in order to investigate its potential for improving teachers' professional activities.

In CHAP. 10, Samuele Calzone, Nicola Malloggi, Elettra Morini, Enikö Tolvay, Maria Teresa Sagri and Mario Venturella draw a profile in terms of eTwinning Schools innovation, using an information system produced and managed by INDIRE to provide an overall geolocated representation of the schools that the institution has been supporting for years to aid the transformation processes of the "way people engage in schooling". The aim of this chapter is to reinterpret the significance that the planning of schools can have within the curriculum plans to promote improvement and innovation processes that are sustainable over time.

In the light of the *Council Conclusions on European Teachers and Trainers of the Future* of 26 May 2020 and the Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021-30) (2021/C 66/01), we can state that eTwinning will continue to play an important role in the landscape of European cooperation in school education, with its constantly increasing integration into the Erasmus+ Programme. In particular, the European Council Conclusions reaffirm the fundamental value of the role of teachers in modern society and call on the Member States to adopt a number of strategies, including eTwinning[1] as regards their in-service training:

> Motivate education and training institutions to integrate the physical, virtual or mixed mobility of teachers and trainers into their learning, development and internationalisation strategies, including by using the potential of European tools such as e-Twinning and Epale as integral parts of the learning offer. Whenever possible and in line with national regulations, as well as depending on the circumstances in the individual countries, validate the skills and competences acquired through European tools and mobility in the context of the continuous professional training of teachers and trainers.

The relevance of eTwinning is also evident in relation to the Italian National Recovery and Resilience Plan (PNRR). In fact, in Mission 4, dedicated to Education and Research, investment is also made on the quality training of teachers in service, on the development of their digital skills, in order to accelerate the digital transformation of the school organisation and learning/teaching processes, and on multilingualism and the internationalisation of the school system.

With the firm intention of continuing to support the role of eTwinning in the institutional positions that we are privileged to hold, we finally leave the recipients of this volume to take up the calls to action addressed to them: to join the community,

1. eTwinning is implicitly referred to in various points of the European Council Conclusions, for example in points 26, 30 and 31, but also explicitly in point 35.

for those teachers who have not yet done so, and to become increasingly heard and valued witnesses of the proven impact that eTwinning has on their professionalism, for the more experienced teachers; to support and encourage eTwinning membership in their schools, for school heads; to use this body of knowledge as a starting point for giving value to and further investigating this important school innovation phenomenon, for trainers and researchers; to further leverage synergies with other national policies, including those of the PNRR, and to officially recognise the value of the eTwinning experience, for policy-makers.

1

eTwinning: history, present, future prospects

by *Giacomo Bianchi* and *Giulia Felice**

1.1 Introduction

In 2003, the European Parliament and the Council decided to adopt a multiannual programme for the integration of information and communication technologies (ICT) into education and training systems in Europe[1]. The eLearning Programme (2004-06), as it was called, had, among other things, the task of promoting the use of ICTs for educational purposes and the development of new basic skills, in line with the Lisbon Strategy's macro-objective of making Europe «the most competitive and dynamic knowledge-based economy in the world»[2]. Among the actions carried out within eLearning was eTwinning. The name given to this initiative was not accidental: born from the fusion of the words *electronic* and *twinning*, it perfectly encapsulated its main mission, namely «the development of electronic twinning among primary and secondary schools», without forgetting to point out that eTwinning would also deal with «the promotion of teacher training»[3], all in a European dimension.

In a memo of 2005, the year of the Action's official launch, the European Commission presented eTwinning as the way towards «the school of tomorrow»[4], to be reached thanks to two fundamental ingredients: Europe and ICT. According to the Commission, thanks to eTwinning, schools would become a place open to the outside world, teachers would start to exchange views and practice more innovative teaching methods, pupils would experience flexible learning processes and develop

* G. Bianchi is a member of the Italian eTwinning NSO (g.bianchi@indire.it), G. Felice is a member of the Italian eTwinning NSO (g.felice@indire.it). Although the chapter is the result of a common reflection, PARR. 1.1, 1.2 and 1.4 and boxes 1.1-1.3 and 1.5 are to be attributed to G. Felice; PARR 1.3, 1.5, box 1.7 and the figures are to be attributed to G. Bianchi; box 1.6 is by both. Parts of the online environment described in this chapter do not exist anymore or have changed in form and functionality.

1. Decision No. 2318/2003/EC of the European Parliament and of the Council of 5 December 2003.

2. Presidency Conclusions, Lisbon European Council 23-24 March 2000 (https://www.europarl.europa.eu/summits/lis1_it.htm).

3. Cfr. *supra*, note 1.

4. European Commission, memo 05/8 of 13 January 2005 (https://ec.europa.eu/commission/presscorner/detail/en/MEMO_05_8).

new skills[5]. Thus, eTwinning promised to achieve results on a large scale, as no other Action had ever been able to do, practically at the sole cost of Internet connection. In truth, the European Commission realised that more than a cost issue, the initiative raised an issue related to teachers' time and skills, but at the same time it appeared confident in stating that «motivated teachers can do excellent things with everyday resources»[6]. And perhaps in order to motivate them, it emphasised that teachers were at the heart of the initiative, nor did it forget to outline the many benefits for their professional and personal development from participating in eTwinning. Contributing to the training of teachers, increasing their skills and competences not only in the use of new technologies but also in terms of teaching approaches and methodologies, multilingualism, interculture, was – and continues to be – one of eTwinning main objectives.

More than fifteen years after the official launch of the Action, many of the declarations and hopes of that time are reflected in what eTwinning has become and represents today in the European school education and in-service teacher training environments. In the following paragraphs, we present eTwinning by taking a snapshot of the Action as it stands today (PAR. 1.2) and by briefly reconstructing its development over time (PAR. 1.3); we then focus on the specific context of eTwinning in Italy (PAR. 1.4) before closing the chapter, with some considerations on the future of the community (PAR 1.5).

1.2
eTwinning: action, platform, community

eTwinning today is an Action funded by the European Commission under Erasmus+ (2021-27), the European Programme for Education, Training, Youth and Sport[7]. With more than 936,000 teachers enrolled, about 218,000 schools registered and more than 122,000 projects activated since 2005 to date[8], eTwinning is the largest community of schools in Europe. Currently 43 countries[9] participate in the Action, and in each of them there is a National Support Organisation (NSO), which, acting

5. *Ibid.*
6. *Ibid.*
7. The new Programme was established by Regulation (EU) 2021/817 of the European Parliament and of the Council of 20 May 2021.
8. Data updated as of May 2021.
9. Today, the 27 member states of the European Union are part of the community, along with Albania, Bosnia and Herzegovina, North Macedonia, Liechtenstein, Iceland, Norway, Serbia and Turkey, as well as Armenia, Azerbaijan, Georgia, Moldova, Ukraine, Tunisia, Jordan and Lebanon. These last countries bordering on the European Union initially joined the so-called eTwinning Plus initiative, launched for the first time in 2013, and today they are fully part of the Action. Switzerland was part of eTwinning from 2014 to 2020, while the United Kingdom joined it until 31 December 2020 until its exit from the European Union (Brexit).

at the national level, promotes and monitors the Action, provides a helpdesk service to users and organises information and training activities. The network of NSOs (SSC, Support Service Community) is coordinated by the Central Support Service (CSS) which is based in Brussels at European Schoolnet (EUN)[10] and acts on behalf of the European Commission. eTwinning offers teachers, from kindergarten to secondary school[11], the platform www.etwinning.net, which is available in 30 languages and has three levels:

1. the European portal, accessible to everyone on the Internet;
2. eTwinning Live (cfr. box 1.1), reserved for registered eTwinners;
3. a third level comprising the TwinSpace (cfr. box 1.2), accessible to project developers, the group environment (cfr. box 1.3), for those participating in discussions on specific topics, and the Learning Lab, a space that hosts professional development courses (cfr. *infra*, box 3.1).

Users can find different tools to collaborate, communicate, share within each platform environment/level. The interface and tools offered by eTwinning are characterised by the "social" dimension typical of social networks: the community grows thanks to the individuals' personal contribution that, once shared, interacts with the contributions of other members and becomes, thus, assets for the entire community of users.

To register in eTwinning, teachers must be working, even on a temporary assignment, at an eligible school[12], and they are not required to have a minimum level of knowledge of one or more foreign languages, nor any particular ICT skills. Moreover, there is no limit on registrations of members of the same school; on the contrary, eTwinning encourages the creation of teams of teachers, particularly of different subjects, involved in community activities.

In order to make the platform a positive environment, the NSOs check new registrations on a daily basis and, along with the CSS, constantly oversee user activities.

10. EUN-European Schoolnet is a consortium of 32 European Ministries of Education, a non-profit organisation specialised in educational innovation and education technologies (http://www.eun.org/about).

11. Teachers of any subject, including technical-practical teachers who work in laboratories independently or in conjunction with curriculum teachers, national boarding school educators, school heads, librarians and foreign language assistants, may enroll in eTwinning. An exception is the teaching staff in service at the municipal kindergartens, who can register on the platform. On the other hand, administrative staff, technical assistants may not register, nor can staff who qualify as "professional educators", even if they work at a school, being professionals with external contracts.

12. eTwinning accepts registrations of schools of all levels, from the kindergarten to the upper secondary level, public or private but recognised by the State, and vocational training centres, which provide courses of at least three years' duration open to learners in compulsory school age. Schools not recognised by the State, evening classes, adult education centres, universities and private companies are not eligible to register in eTwinning. As far as universities are concerned, an exception is represented by those participating in the European initiative eTwinning for Future Teachers dealing with initial teacher training (cfr. *infra*, box 3.2): introduced as a pilot Action in 2013, it currently involves 21 faculties of Education Sciences from as many Italian universities; more information is available on the national eTwinning Italia website (https://etwinning.indire.it/etwinning-for-future-teachers-ite/).

Users, in addition to being made accountable by accepting the eTwinning code of conduct, have the possibility to report undesirable phenomena such as spam or copyright infringement[13].

Enrolling in eTwinning one gains access to a variety of tools and services[14], becoming part of an active community of practice in which peer learning and exchange of good practices happen on a daily basis. Thanks to eTwinning teachers can interact with colleagues from other countries, innovate their teaching through the creation of electronic twinning and the use of ICT (cfr. box 1.4); they can break down school boundaries thanks to internationalisation, multiculturalism and multilingualism; they can take advantage of many training and updating opportunities, and rely on the continuous support and assistance of NSOs. In addition, at the local level, users can benefit from the support of a network of eTwinning experts called "ambassadors" (cfr. *infra*, box 1.6). There are currently more than 1,500 eTwinning ambassadors across Europe: they promote the Action and its benefits, offer technical and pedagogical support to eTwinners and collaborate with European and National Organisations on online and in-person training.

To foster good practices within the community, there is an award system with quality labels and prizes that are given annually to the best eTwinning projects at both national and European level (cfr. *infra*, box 2.1), as well as the European award, eTwinning School Label (cfr. box 1.5), which is awarded to those schools that, under certain minimum requirements, demonstrate excellence in digital practice, eSafety, pedagogical innovation, collaborative learning and professional development of teaching staff.

BOX 1.1
eTwinning Live

It is the second level of the platform, which is accessed with personal credentials only by users who have registered on the www.etwinning.net portal and have been validated[15] by the NSO. Within this environment – available as public portal in 30 different languages –, eTwinners have various tools to communicate, collaborate and actively participate in community initiatives. Among the sections that can be customised by the user is the Profile, to be updated whenever data such as e-mail address or school affiliation need to be changed, but also information such as the subjects taught or the project idea to be developed. Updating the profile is critical as this is the "business card" visible to other community members

13. The eTwinning code of conduct, accepted by users at the time of registration, is available on the European portal (https://school-education.ec.europa.eu/en/etwinning_code_of_conduct).

14. Please note that unlike many other Actions of the Erasmus+ Programme, in the case of eTwinning there is no direct funding for beneficiaries, as eTwinning projects do not receive any funding.

15. Among its contractual tasks and obligations, the NSO has the daily control of registrations at the national level to verify the eligibility of members. If they are eligible, users are validated, so they can access eTwinning Live and take advantage of all the tools and services offered; in the event of non-eligibility, however, the user account is deleted.

(People section). For the protection of privacy and personal data, if the user is inactive for at least 12 consecutive months, or if the eTwinner chooses to deactivate his/her account for a period, his/her profile is no longer visible to other members of the community, until anonymisation, which is provided for prolonged inactivity of at least 36 consecutive months.

eTwinning Live is the place where users come into contact and communicate with the other enrolled teachers, also in a private form thanks to an internal mail tool on the platform that therefore enables not to disclose personal contact details. If the user's objective is to search for eTwinners to collaborate with, there is an ad hoc section (Partner Forum) that enables users to search for teachers and schools for both eTwinning and Erasmus+/KA2[16] projects, either by proposing their own project idea or by checking the proposals of others. The Projects section, on the other hand, is where users activate new eTwinning projects, manage those they are part of, and store details of all the projects they have participated in.

The other sections of eTwinning Live allow users to communicate and exchange ideas and resources in real time within the community (Events section), to participate in theme-based discussion groups managed by users or sponsored by the CSS (Groups section), and to take advantage of online professional training opportunities (Professional Development section).

In addition, on the eTwinning Live main page, the European and NSOs regularly publish the latest news from the community in terms of initiatives, deadline notices, training opportunities, etc.

BOX 1.2
The TwinSpace

It is the virtual classroom, the online space available to the partners of an eTwinning project. Each project corresponds to a unique TwinSpace, thus enabling collaboration in a confidential environment. Within this space, in fact, partners have at their disposal, and can choose to use, tools to:

- communicate in synchronous (chat, videoconference, instant messaging);
- communicate asynchronously (forum, internal mail-TwinMail);
- share materials (files, images and videos);
- collaborate (web pages to be created and customised in a collaborative way).

As soon as a project is activated, the TwinSpace appears as an empty space; it is the partners who determine its structure by creating pages and subpages.

Project partner teachers can decide to invite additional members such as students and visitors to the TwinSpace, creating *ad hoc* accounts with custom credentials. The TwinSpace is therefore the only environment on the platform accessible to students, who in this shared workspace can communicate through forums and chats, share materials and contribute to content creation, autonomously and under constant teacher supervision. Apart from the "Project Diary" on the main page of the TwinSpace, which is public by default, it is up to the teacher-administrators to decide whether and which pages should also be visible to non-project members. If well organised and rich in documentation of the collaborative activities carried out, at the end of the project the TwinSpace will be its natural showcase, which can also be used for dissemination purposes.

BOX 1.3
The eTwinning groups

These are private environments that can be accessed by registered eTwinners to discuss and work together on specific topics related to eTwinning and/or teaching more generally. It is a tool created to encourage the sharing and exchange of practices but also the discussion of teaching methods, effectively implementing non-formal learning that enhances the professional profile of the teacher.

Some of these groups, known as "sponsored" or "featured" groups, are managed centrally by the CSS and led by one or more moderators chosen by the CSS. They cover topics from the world of teaching, such as the teaching of coding or foreign languages, education on current issues (e.g. gender equality, environment and sustainability) or the use of certain teaching methods (e.g. gamification, inclusive teaching), or are activated on particular initiatives such as in the case of the group dedicated to eTwinning Schools.

The groups can also be created by users on topics of personal interest – provided they are related to eTwinning and teaching in general – subject to approval by the CSS. The founding eTwinner can decide to manage the space independently or make other members of the group administrators. Depending on the goal for which it was created, a group can be open to all members of the community or reserved.

As in the case of the TwinSpace, different tools are available within the group in order to:
- communicate in synchronous (chat, videoconference, instant messaging);
- communicate asynchronously (forum, internal mail);
- share materials (files, images and videos);
- collaborate (web pages to be created and customised in a collaborative way).

In addition, visitor accounts can be created, while pupils cannot access.

As in the winSpace, it is the teacher-administrators who decide whether and what content to make public in addition to the updates/posts shared on the main page, which are always visible to non-members of the group.

BOX 1.4
eTwinning projects
by *Elena Bettini*

eTwinning projects are remote collaborative projects carried out with the use of digital tools.

Within the platform there are tools, such as the Partner Search Forum, that enable eTwinning registered teachers to meet virtually and decide, after an initial moment of getting to know each other and exchanging project ideas, to undertake a project together. Initially, there are only two "founding" teachers and they apply for approval of the project by completing a project form providing information on the educational objectives, expected results, activities, etc. Subsequently, the two founders can freely expand the partnership by inviting other eTwinners to participate in the project. Having passed the formal validation phase of the project by the NSOs of the two founding teachers, the project has its own TwinSpace, i.e. a virtual classroom with integrated digital tools.

An eTwinning project is completely flexible, there are no rules that impose a predetermined duration, a predetermined number of partner teachers of the project, a topic instead

of another, a certain type of activity. Teachers who activate an eTwinning project are completely free to decide their work plan, to remodel it at any time if necessary, to extend the collaboration to others and to extend the project activities.

BOX 1.5
eTwinning Schools

The eTwinning School Label has been activated from the 2017-18 school year to promote and enhance eTwinning's impact on schools. The initiative was launched the day after the publication of the report on the Action ten years from its birth (Kearney, Gras-Velázquez, 2015), when the time seemed ripe to shift attention from eTwinning's impact on individual teachers to that on the school system as a whole.

Through an automatic check of the eTwinning platform (Phase 1), schools that meet the following minimum requirements are identified annually:
– the school has been registered in eTwinning for at least 2 years;
– at least 2 teachers of the school are enrolled in eTwinning and have an active profile, which means they carry out activities on the platform (e.g. projects, training events, groups);
– at least one eTwinner from the school has obtained, in the last 2 school years and serving in the same school, a National Quality Label for a European project.

Schools that meet these requirements are invited to apply (Phase 2). In filling out the application form, the school must present its policy on responsible Internet use and online safety (eSafety), prove that several teachers and classes are involved in the eTwinning teaching practice, and demonstrate that several teachers are involved in eTwinning professional training and other training.

Applications are assessed by the NSO. If the assessment is positive, the schools receiving the recognition retain the certificate for a period of two years.

The eTwinning School Label is not only an acknowledgement of the achievements that have been obtained when it is awarded, but also a new starting point for the school. Inspired by the eTwinning Schools Manifesto, head teachers and teachers further undertake to innovate teaching through safe digital practice and to increasingly orient themselves towards a shared leadership and teamwork approach, aspiring to become a reference model for other schools in the area. For this reason, the eTwinners of certified schools are invited to join a dedicated eTwinning group and participate in special training opportunities, as well as being involved as good practices testimonials.

1.3
eTwinning over time

At the time of its official launch in 2005, the European Commission was already clear about the great potential of the new platform and the objectives it should pursue. A virtual space was opened to give European Schools the opportunity to progress and innovate by learning from each other and promoting the European multilingual and multicultural society model. In particular, it was to enable teachers to learn and put into practice more interactive teaching methods, to compare their educational

approaches with European colleagues, to share ideas and teaching resources, to compare their respective school systems[16]. With these objectives in mind, eTwinning was defined by the Commission as «a long term partnership where at least two primary or secondary schools from at least two different European countries use ICT to carry out some form of pedagogically relevant activity together»[17].

So, eTwinning was basically born as a platform for the creation of collaborative distance projects between European schools. The first version of the platform was in fact totally focused on the creation of electronic twinnings: registered users accessed a reserved area, called "desktop", where they had a tool to search for potential project partners among other registered users, a chat and a mailbox for the exchange of messages. If the search was successful, a project could be activated, for which a TwinSpace was made available to partners along with tools for communication, such as chats and forums, and for the documentation of partnership activities.

Just one year after the launch of the Action, when the European Commission published the Recommendation 2006/962 on the 8 key competences for lifelong learning[18], eTwinning projects already clearly represented a formidable operational tool for the development of these competences[19] available to European schools.

Although projects always remain the fundamental focus of the Action, eTwinning is no longer simply a space for the creation of collaborative educational projects between schools in different countries. Over the years, the platform has been continuously enriched, becoming a real community of practice for teachers and school heads, one that, in addition to partnerships, offers many opportunities for professional development, peer training and self-training, constituting a large network for the exchange of teaching practices for schools of all levels.

The impetus that contributed to this evolution was twofold, coming both from outside and from within the community: on the one hand, the technological, social and political context in which eTwinning was (and is) embedded inevitably changed over time; on the other hand, it was the teachers themselves who, by using them, showed the potential and limitations of the tools made available to them and communicated their own needs and proposals for improvement, thus giving useful indications for the continuous technical development of the platform.

What has happened over these 16 years? First of all, eTwinning has changed because the eTwinners' community has grown. At the end of 2005, after one year of activity, there were about 10,500 registered users throughout Europe, which became

16. European Commission, memo 05/8 of 13 January 2005 (https://ec.europa.eu/commission/presscorner/detail/en/MEMO_05_8).

17. *Ibid*.

18. Recommendation 2006/962/EC of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning.

19. The key competences that can be recognised in learning/teaching for eTwinning projects are not limited only to communication in foreign languages and digital competence. Cfr. in this regard Unità nazionale eTwinning Italia (2007).

over 79,000 in 2010, 282,000 in 2015 and over 764,000 at the end of 2020, with more than 132,000 new users registered in a single year. This growth has never slowed down to date and has also affected the number of schools on the platform, which has risen from 7,653 in 2005 to over 20,700 in 2020, and the number of projects created, which has risen from around 1,900 in 2005 to over 15,400 in 2020 alone[20].

Together with the dissemination work carried out by the NSOs in their respective countries with the help of local representatives and ambassadors, the progressive expansion of the nations involved in the Action also contributed in part to those rising figures: at the time of launch in 2005 there were 28 members – the then 25 countries of the European Union plus Norway, Iceland and Bulgaria – and over time this has expanded to a total of 43 countries[21].

The growth of the community in terms of numbers has been accompanied by a constant technical and conceptual evolution of the platform, which has embraced the rapid changes that have occurred in the world of ICT in just a few years.

eTwinning was born at a time when social networks had not yet exploded; even Facebook, at that time, was in its embryonic phase. However, it was precisely at that time that the Internet was entering, what is generally recognised as, its second phase of development: from an environment characterised by the sharing of content in a predominantly unidirectional manner, used by users mainly for consulting information and finding resources, the web was beginning to reveal itself as a place where users themselves could be active players capable of interacting with other users and creating content.

eTwinning 1.0 was born in 2005, but it took four years to realise that it was already 2.0 by nature: eTwinning was an early social network for teachers. As soon as we understood the extent to which teachers communicated, shared ideas and met well beyond the development of school projects, it was natural to provide more tools to unleash the potential of a community comprising over 60,000 teachers in Europe (Scimeca, 2010).

Between 2008 and 2009, therefore, eTwinning made its first big leap forward, taking a social media approach and incorporating new tools for communication and collaboration among teachers that went beyond just eTwinning projects. To emphasise this significant development, the official motto changed from "School Partnerships in Europe" to "The Community for Schools in Europe". The public portal was redesigned, the user desktop enriched with new features, giving teachers the possibility to create a real personal profile visible to all members, and making communication between users easier and more immediate. The new desktop has provided teachers with a noticeboard where they can share with other members of the community their difficulties, successes, interesting news, and resources created or found on the web.

20. Data from eTwinning CSS.
21. Cfr. *supra*, note 9.

Users were able to start interacting with each other even outside partnership projects, leaving messages on each other's digital profiles, expressing their approval of project ideas, and so on.

Among the most significant innovations, it is worth noting the introduction of two new environments that still represent the centre of professional development activities that teachers can find within the platform: the groups (cfr. *supra*, box 1.3), spaces for discussion, exchange and peer training on specific topics of interest to teaching[22], and the Learning Lab, a space intended to host online training events held by experts and organized by the eTwinning CSS.

2009 also marked the renewal of the TwinSpace virtual class (cfr. *supra*, box 1.2) thanks to additional features, such as the TwinBlog that was integrated becoming Project Journal, and a simpler and more intuitive design. Noting the teachers' need to work with multimedia materials, the space available as archive of project materials was increased. In addition, for the first time teachers were given the opportunity to invite their students to the TwinSpace with the role of administrators, a decision that certifies how eTwinning also allows to act on the dynamics normally existing between teachers and students.

TwinSpace was then the subject of a new and fuller restyling in 2014 with the introduction of pages for collaborative writing, the renewal of the tools for sharing multimedia materials and for communication, such as chats, forums and emails (TwinMail).

A further step in this direction was taken at the end of 2015, when the eTwinning desktop was completely renovated in its interface, functions and also in its name, becoming eTwinning Live (cfr. *supra*, box 1.1). Again, this was a transformation driven by teacher feedback and made possible by the evolution of communication technologies. In fact, the main innovation consisted in the integration within the platform (both in eTwinning Live and, later, in the groups and on project TwinSpace environments) of a videoconferencing tool that can be used by all eTwinners for training meetings, sharing of practices, dissemination/presentation of a project, search for partners or, in the case of projects, also for coordination meetings or videoconferences between classes[23]. The Events section of eTwinning Live was then launched, where all registered teachers were given the opportunity to create or participate in "spontaneous" online

22. Parallel to the groups, which initially started as environments created, moderated and led by the eTwinning CSS, users had another useful collaboration tool on the desktop: the teachers' rooms. These rooms could be created by anyone to share opinions or experiences on topics of general or specific interest to teachers, by means of a forum and a private chat room. Each teaching room could theoretically remain open for a maximum of three months, but the most successful ones remained open for much longer and in some cases were transformed into moderated and structured groups. With the launch of eTwinning Live, the teaching rooms were replaced by the new version of the groups, which today include both those managed by the eTwinning CSS and those managed by individual users.

23. A new transformation took place in 2018, relating to TwinSpace alone, but this was more a renewal of the design and improvement of tools already present in the workspace than a drastic change.

events, or to advertise in-presence events of interest to their colleagues; in parallel, the new Professional Development section collected the calendar of all "official" online training events organised by the eTwinning CSS or NSO.

Since 2005, there have also been significant changes in the context of European cooperation instruments in education: from an Action part of the eLearning Programme (2004-06), eTwinning was officially included in the Lifelong Learning Programme (LLP, 2007-13)[24], finding its natural place as a Comenius Special Action, given the many points of contact in terms of both objectives – increasing the quality and European dimension of teacher training, developing innovative ICT-based content and practices, improving pedagogical methodologies – and target audience, i.e. the school sector. In this transition, although it became the official tool for finding schools for Comenius partnerships, eTwinning maintained its identity as a community, and peculiarities such as «building relationships based on the exchange and sharing of digital resources»[25]: thus, it was still possible to activate eTwinning both as an innovative activity to be included in daily teaching and as a first experience of internationalisation of the school in preparation to a Comenius partnership or even to continue the collaboration with former partners of an already implemented Comenius project[26] (FIG. 1.1).

As we have seen, during the 2007-13 period, the eTwinning Action continued to grow in both quantitative and qualitative terms and to evolve in terms of both technology and content, so much so that it was re-proposed in its pivotal role within the subsequent Erasmus+ Programme (2014-20)[27]and again in the new 2021-27 Programme[28] among the IT platforms under Key Action 2 (Cooperation for Innovation and Good Practice). Under the new programme, the synergy between eTwinning and the other opportunities offered to schools by Erasmus+ was intensified: as it had been within Comenius, the eTwinning platform was confirmed as the official place to look for partners for Erasmus+ projects, while at the same time the use of eTwinning tools in Erasmus+ projects was increasingly promoted for both mobility (KA1 projects) and cooperation between schools (KA2 partnerships) to kick-start an initial remote partnership or prepare departing staff, to support in-presence activities, to disseminate project results, or to maintain contact with the former host or partner school.

During the first sixteen years of eTwinning, all these changes and innovations

24. Decision No. 1720/2006/EC of the European Parliament and of the Council of 15 November 2006 establishing an action programme on lifelong learning.

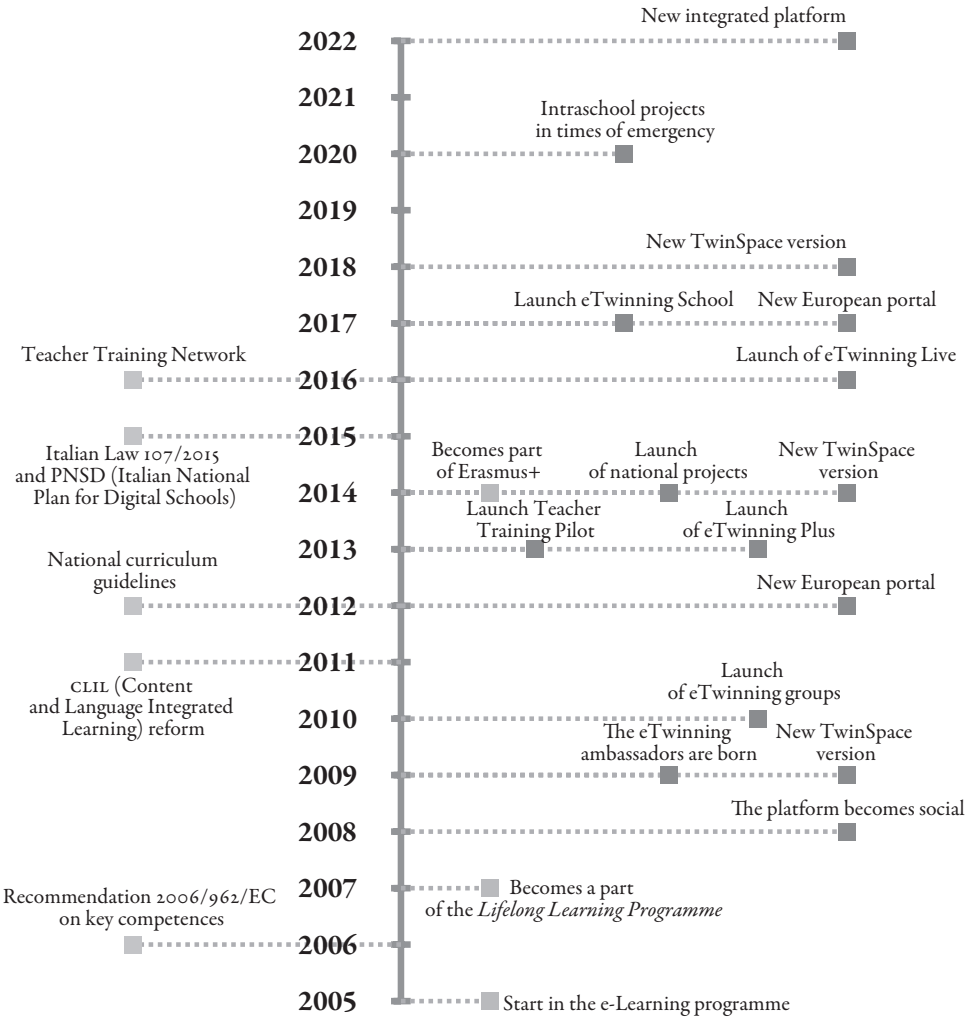
25. Archive of the Italian site of the 2007-13 LLP Programme (https://web.archive.org/web/20150519191739/http://www.programmallp.it/index.php?id_cnt=232). All translations of Italian texts in this volume are to be attributed to the authors.

26. Since there is no direct funding, eTwinning can boast the absence of bureaucratic procedures and a flexibility that allows even schools that have never participated in transnational cooperation projects to gain experience quickly and easily.

27. Erasmus+ (2014-20), the Union Programme for Education, Training, Youth and Sport, was established by Regulation (EU) No. 1288/2013 of the European Parliament and of the Council of 11 December 2013.

28. Cfr. *supra*, note 7.

FIGURE 1.1
eTwinning over time



have marked the transition from a platform for school twinning projects to a real community for schools and teachers throughout Europe and beyond, with tools to be used also in combination with the other opportunities sponsored by the European Commission.

eTwinning has always shown great flexibility and adaptability, and eTwinning projects themselves have undergone significant changes that go beyond the technological evolution of the tools made available to implement them: originally conceived exclusively as transnational partnerships, as of 2014, collaboration in nation-

al projects, i.e., between schools in the same country, was also made possible. This initiative made it possible to involve an increasing number of teachers, offering the possibility to activate electronic twinnings even to those who would have found the use of a foreign vehicular language an obstacle to their active participation in the community.

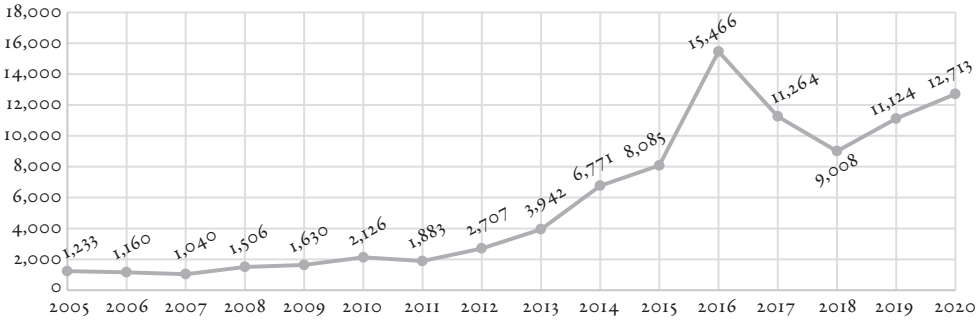
In more recent times, further proof of the adaptability of projects was provided on the occasion of the Covid-19 health emergency: starting in April 2020 and for the school years 2019-20 and 2020-21, the European Commission has in fact temporarily given eTwinners the possibility of also founding intraschool projects, i.e. projects whose members are teachers working at the same school.

One of the main reasons for the success of the platform, in terms of registered users and activities carried out, lies in the fact that eTwinning "works": the teachers who have registered have in fact found an interactive and stimulating environment, rich in tools for communication and collaboration. This has meant that the increase in subscribers is reflected in an increase in interactions among users, triggering the virtuous circle typical of social networks in which users contribute to bringing the online community alive, therefore making it more attractive for new members. Another factor that has contributed significantly to the success of eTwinning lies in its organisational structure: a multi-level support network, from the CSS to the NSOs to the network of local ambassadors, which has allowed on the one hand to provide constant assistance to subscribers and on the other to reformulate reports and needs coming from them in order to update and improve the opportunities and tools offered by the platform. It is precisely from these considerations based on experience that the need arises to delve into the effectiveness of eTwinning through a research path that analyses its impact and repercussions, as detailed in CHAPP. 2 and 3.

1.4
eTwinning in Italy

Since its launch in 2005, the management of the Action at the Italian level has been entrusted to the Italian eTwinning NSO, which, established at the National Institute for Documentation, Innovation and Educational Research based in Florence, is now part of the Erasmus+ National Agency/INDIRE. At the specific request of both the Ministry of Education and the European Commission/EACEA, the Unit has always collaborated with the Regional School Offices and the school Intendencies of the Valle d'Aosta Autonomous Region and the Autonomous Provinces of Trento and Bolzano, where official and pedagogical eTwinning contact persons are posted. In addition, since 2009 the Unit has been able to rely on the active collaboration of a network of eTwinning ambassadors, which now has 132 members (cfr. box 1.6). The ambassadors, coordinated at regional level by the official representatives and assisted by the pedagogical representatives, are responsible for the orientation, training

FIGURE 1.2
eTwinning in Italy: number of new teachers registered per year (2005-20)



Source: Italian eTwinning NSO.

and promotion of the eTwinning Action among the teachers of their region, participating as moderators and speakers in activities both in person and online, such as seminars, cycles of meetings, courses, practical workshops, support desks and consultancy[29] (FIG. 1.2).

The involvement of local school authorities has greatly facilitated the widespread dissemination of eTwinning among schools in the area, as well as the synergy with other actions at the local level; this commitment, supported by the competence and enthusiasm shown by eTwinning ambassadors in training and supporting less experienced colleagues, has been a decisive factor in the growth in the number of Italian teachers registered and active on the platform.

Of all the countries participating in the Action, Italy ranks second after Turkey in terms of the number of registered teachers: more than 94,000 have registered since 2005[30]. Although not all of them have an active profile – as it is physiological for users of many digital platforms – in general, Italian eTwinners show good participation in both projects[31] and training opportunities[32] (cfr. FIG. 1.3), and are generally distinguished by a commitment, enthusiasm and creativity that often earn them recognition for their work in projects along with their pupils: indeed, many Italian teachers

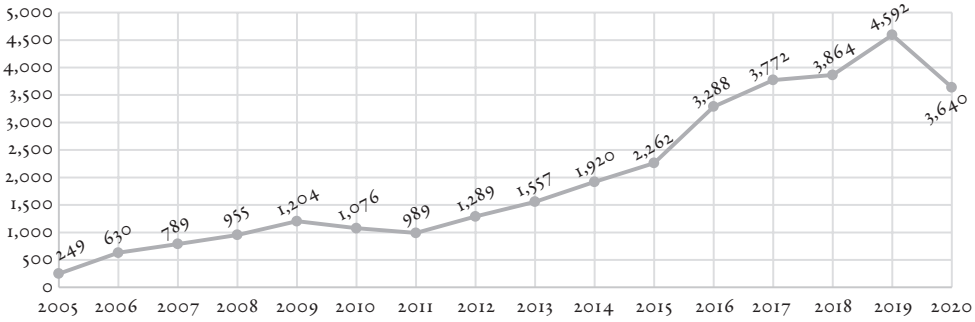
29. The complete lists of representatives and ambassadors for each Region/Autonomous Province, in charge until March 2022, are available on the eTwinning Italia national website (https://etwinning.indire.it/ambasciatori-e-referenti/).

30. Data: Italian eTwinning NSO as of 18/06/2021.

31. Among the more than 122,000 projects created in 16 years of eTwinning, more than 33,000 saw the participation of at least one Italian member (Italian eTwinning NSO data as of 18/06/2021).

32. In Italy, between 2014 and 2020, around 1,300 training events were organised regionally, both in person and online, involving a total of over 52,700 participants. Still in the 2014-20 period, more than 17,100 Italian teachers participated in nationally organised training events (15,300 in online events and 1,800 at in-presence events), while about 10,300 Italian eTwinners benefitted from European training (about 9,500 online and 800 in-presence). Italian eTwinning NSO data.

FIGURE 1.3
eTwinning in Italy: number of new projects with at least one Italian partner per year (2005-20)



Source: Italian eTwinning NSO.

receive official recognition for their eTwinning projects every year, both at national and European level[33]. Italy also has a substantial number of schools that have received recognition as eTwinning Schools, 142 for 2021-22[34] .

The Italian NSO is constantly committed to providing users with quality guidance and technical assistance, but also to enhancing the provision of basic training on the use of eTwinning tools and design[35]. Over the years, the NSO has updated and strengthened the training offer, both online and in person, in line with the orientation of the European CSS and with the most current topics at the national level; in addition, it has always sought to define its work plan in step with the educational policy guidelines dictated by the European Commission and the Italian Ministry of Education[36]. Actually, the Italian NSO has often offered the example of teaching practices in eTwinning that already implemented, in some way anticipating them, principles laid down by the ministerial guidelines: for example, when in the National Indications for Basic Schooling of 2012 it is affirmed that «the dissemination of information and communication technologies is a great opportunity and represents the decisive fron-

33. By way of example, in 2014, out of the total number of projects involving at least one Italian partner (1,906), 346 applications were submitted, and 269 National Quality Labels were awarded (77% success rate); in 2020, out of 3,680 projects with at least one Italian partner, 1,307 applications were submitted, of which 804 received the National Quality Label (61% success rate). Italian eTwinning NSO data.

34. The schools in Italy that have received the eTwinning School Label were 224 in the two-years period 2017-18, 130 in the two-years period 2018-19, 204 in the two-years period 2020-21 and 142 in the current 2021-22 two-years period.

35. An important part of this training is entrusted at the local level to the network of ambassadors and eTwinning representatives, but is also carried out by the NSO at national level through webinars and online courses.

36. Decision No. 2318/2003/EC of the European Parliament and of the Council of 5 December 2003 (cfr. footnote 1).

tier for schools»[37], eTwinning was already an innovative reality for learning through new technologies; it is no surprise that when the National Digital School Plan was launched in 2015, eTwinning projects were included among «the innovation labs on the most advanced digital issues in schools»[38].

The growth of participation in eTwinning, which for years has been a constant trend in our country, thus seems to confirm the validity of both the initiative in general and the strategy implemented by the Italian eTwinning NSO, thinking of the two cornerstones of the Action, on the one hand «the development of electronic twinning» and on the other «the promotion of training for teachers»[39].

BOX 1.6
The eTwinning Ambassadors

The idea of using the driving force of motivated teachers to support the growth of the community was born in 2008 with the creation of the first European taskforce on eTwinning Ambassadors; in line with this trend, this figure was established in Italy in 2009.

Ambassadors are teachers with expertise in teaching with eTwinning; they are selected to support the NSO in promoting the community and in the training and guidance of eTwinners, in collaboration with the institutional and pedagogical representatives of the Regional School Offices. Periodically, the Italian eTwinning NSO integrates and partially renews the network of ambassadors in order to ensure a balanced geographical coverage in all regions and an adequate variety of expertise.

The ambassadors were selected through official calls for applications by the National Support Organization[40], on the basis of the following selection criteria:
a) eTwinning experience (e.g. eTwinning projects, national and European quality labels and awards, various activities on the platform);
b) eTwinning training (e.g. user participation in eTwinning training seminars in person or online, regional, national or European);
c) experience as an eTwinning trainer/moderator (e.g. speaker, moderator or tutor in eTwinning information and promotion courses, groups or events at the regional, national or European level, in person or online);
d) specific skills and experiences relevant to the eTwinning community (e.g. technological skills, certified and non-certified, innovative teaching experiences, other experiences as a trainer);
e) personal motivation.

37. Decree No. 254 of 16 November 2012 containing the *Regulation containing national indications for the curriculum of the nursery school and the first cycle of education, pursuant to Article 1, paragraph 4, of Italian Presidential Decree No. 89 of 20 March 2009*, Annex (part 1), Section "La scuola nel nuovo scenario (Schools in the new scenario)", published in Italian Official Gazette General Series No. 30 of 5/02/2013.

38. Law No. 107 of 13 July 2015, *La buona scuola* ("The Good School"), National Digital School Plan (PNSD), Chap. 2.3, *La buona scuola esiste già (The good school already exists)*, p. 21.

39. Decision No. 2318/2003/EC of the European Parliament and of the Council of 5 December 2003.

40. The 2016 and 2018 selection notices are available on the eTwinning Italia national website (https://etwinning.indire.it/ambasciatori-e-referenti/).

Ambassadors are an active part of the community as trainers and mentors, but first and foremost as eTwinners, being in-service teachers themselves, carrying out eTwinning projects and participating in training events in Italy and abroad. National ambassadors are also part of the European network that was officially convened in 2013 at the first European Conference dedicated to this figure[41].

They receive constant targeted training, organised by both the National and the European eTwinning Support Organisations: courses and dedicated refresher events make it possible to increase the skills of ambassadors and thus obtain a positive multiplier effect on all teachers who are trained by them.

In order to meet the needs of a growing Action, over the years the number of eTwinning ambassadors has increased to 132 teachers in service[42]. In addition to its presence throughout the country, one of the strengths of this network also lies in the great spirit of cooperation and sense of community that characterises the group of ambassadors, who over time have forged professional and interpersonal relationships that have sometimes developed into genuine friendships.

1.5
Considerations on the future of the eTwinning action

Assuming that in the near future technological advances and digitalisation continue to register a significant acceleration, the vision of the European Commission is that the adaptation of education and training systems to the digital age takes on a vital strategic importance.

The Digital Education Action Plan (2021-27) underlines the importance of increasing the digital impact of the Erasmus+ Programme[43]:

Mixed mobility will be integrated into the Erasmus programme, with the introduction of a "virtual learning" component in the programme and the further strengthening of successful initiatives such as eTwinning for schools. This measure will bring together learners and teachers from different countries to collaborate online in joint projects, complement physical mobility and

41. The *eTwinning Ambassadors Mini-conference* (Catania, 17-19 October 2013) brought together more than 200 European ambassadors, who at the time were about 1,000 (https://etwinning.indire.it/supporto-e-formazione/formazione-in-presenza/conferenze-etwinning/conferenza-nazionale-2015-3/).

42. Figure updated as of June 2021.

43. COM (2020) 624 final, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions of 30 September 2020, *Digital Education Action Plan 2021-2027. Rethinking Education and Training for the Digital Age.* Already in 2018, in the European Commission's Press Release *New Measures to Boost Key Competences and Digital Skills, as Well as the European Dimension of Education,* Brussels, 17 January 2018 (https://ec.europa.eu/commission/presscorner/detail/en/IP_18_102), the eTwinning platform was mentioned as one of the tools to improve digital skills, while promoting common values and achieving inclusive education.

help improve the digital skills of educators and learners. This will also improve the quality of the overall digital learning experience. More use will also be made of virtual exchanges between young people and educational institutions in Europe and around the world, so as to involve young people more in intercultural dialogue and to improve their transversal competences.

By virtue of this, the Regulation that established the Erasmus+ 2021-27 Programme calls for[44]:

a more systematic and consistent use of online platforms such as eTwinning, the School Education Gateway, the Electronic Platform for Adult Learning in Europe, the European Youth Portal and online platforms for higher education and, where necessary, any other online platforms that may be created in the fields of education, training and youth.

With its increasing integration within the Erasmus+ Programme, eTwinning will therefore continue to play a prominent role in the landscape of European cooperation for school education. At the Italian level, this trend was confirmed with the decision by the Erasmus+ National Agency/INDIRE, of which the eTwinning National Support Organiation is part, to replace and expand from 2021 the figure of the current ambassadors by establishing the so-called School ambassadors: teachers with experience both in eTwinning projects and in Erasmus+ mobility and partnerships, able to inform and train the staff of schools in their area on the opportunities for internationalisation offered by the Programme for the school sector.

At the same time, eTwinning is undergoing a further transformation and evolution that will take place with the launch, planned for 2022, of a new platform that will complement the current eTwinning and School Education Gateway (cfr. box 1.7) by further developing their functionalities and improving their graphical interface, experience and navigation.

The new portal will be the main reference for all those interested in European initiatives in the field of school education, also constituting a single point of access to professional development opportunities for teachers and non-teachers, bringing together the educational offer in eTwinning and that of the Teacher Academy currently included in the School Education Gateway.

BOX 1.7
School Education Gateway

The School Education Gateway (SEG)[45] is an online platform created in 2015 on the initiative of the European Commission with the aim of representing a single access point for European school education.

44. Regulation (EU) 2021/817 of the European Parliament and of the Council of 20 May 2021 establishing the new Erasmus+ Programme 2021-2027, point 34. The budget for the 2021-27 period is approximately 28 billion euros, almost double the amount of the previous 2014-20 programme.

45. https://www.schooleducationgateway.eu/.

Like eTwinning, it is managed operationally by European Schoolnet and is funded by the Erasmus+ Programme. However, unlike eTwinning, it is not aimed exclusively at school teachers, but offers information, resources and professional development opportunities to all those who generally deal with school education: teachers, school heads, researchers, teacher trainers, politicians and all professionals working in schools, including the sectors of Early Childhood Education and Care (ECEC) and Vocational Education and Training (VET).

The platform publishes news, insights, expert comments, surveys, always up-to-date views on school policy and practice in Europe, and there are resources to consult and download, such as studies and research on school policies at the European and national level, tutorials with practical ideas for teachers, materials and teaching kits for activities to be carried out at school.

There is also a section dedicated to Erasmus+ opportunities for teachers and school staff, where one can find a catalogue of courses, teaching opportunities or support for mobility projects under Key Action 1 and a research tool for strategic partnerships under Key Action 2.

Starting from the assumption that, thanks to the continuous professional development of school staff, it is possible to increase work satisfaction, contribute to the improvement of schools and help teachers face social changes, the Teacher Academy was launched in 2016 within the SEG, which today represents a point of reference for the training and professional development of European teachers. Within the Teacher Academy there is a large offer of courses and webinars, free of charge and always available, realised by European Schoolnet experts, on many topics of interest to teachers and non-teachers, as well as teaching materials created by European institutions or within the framework of EU-funded projects.

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2

Documentation in eTwinning: from collaboration to quality highlights, to dissemination

by *Elena Bettini* and *Lorenzo Mentuccia**

2.1 Introduction

One of the major challenges for educational researchers is to find tools to help teachers reflect on and document their project experiences (cfr. CHAP. 7). Teachers' ability to document is, in fact, often inadequate for the strategic importance that the documentation activity has, since it is an activity outside the "doing", that is, the many daily tasks that teachers have to deal with in the classroom. It should, on the contrary, be included and made mandatory in their training. In addition, their time is generally occupied by formal and technical documentation, which has nothing to do with what one would term "generative" documentation, that is, one which allows teachers to start from a reflection of what has been done, and then reach a reinvention of their practice taking into account what has not worked.

In this context, eTwinning projects are a valid tool to help teachers become more skilled in documentation, to acquire increasingly significant documenting skills and methods, to the point of allowing them to think of documentation as an integral part of their professional practice.

An eTwinning project, being developed at a distance in a virtual classroom, requires by its nature a constant documentation activity, otherwise the project does not develop cannot continue, there cannot be exchanges and communication, and least of all collaboration.

While a basic partnership in an eTwinning project is with at least one other European teacher, much more often partnerships are broader and involve five to six teachers from different countries, along with their classes. Consequently, teachers have to keep track of what they do with their students in order to contribute to the European project.

The TwinSpace (cfr. *supra*, box 1.2) also makes it possible to document in addic-

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tion the interactions that take place among students and among teachers, thanks to the digital tools integrated into it such as forums, chats, polls, virtual notice boards. The use of other external digital tools must also be documented in order to continue together in the various project phases.

2.2
Documenting is necessary for projects

To participate in an eTwinning project is a different experience from having simply to describe and share a process that has been put into practice to foster the acquisition of skills; it offers teachers the possibility to get better in the documentation of a daily teaching practice. The teacher is primarily committed, as in all projects, to achieving goals, to involving students in learning and in their evaluation. However, as eTwinning projects are at a distance, based on digital technologies and collaboration, they become a natural context in which to start thinking about how to communicate to your partner(s) the type of educational activity carried out with your students within the project.

A first phase, which is common to all eTwinning projects, is that of getting to know partners: during this phase, activities enabling students to get to know their foreign peers are carried out. The TwinSpace thus becomes a space where teachers have evidence of what they have managed to do, or how their students have or have not contributed to the exchange of information, what tools have been used, the type of documentation (videos, padlets, drawings, etc.) that they have produced to describe themselves and their places of origin (school, city, country).

When the activities have not been adequately planned and organised among the various partners, or an individual teacher along with his or her students has not been able to respect deadlines, and thus actively participate in this get-to-know phase, the TwinSpace documentation will most likely turn out to be poor and not very explanatory. Reflecting on this shortcoming and its consequences can help teachers work more actively in this initial documentation phase once they undertake a new eTwinning project. The TwinSpace, in fact, makes it possible to reconstruct the pathway followed by each member teacher and his or her pupils, highlighting the traits that characterise it (e.g. environmental education, STEMs, foreign language or any other subject). When the documentation is poor or poorly readable from the outside, it becomes difficult to guess this path, and this is often due to a low involvement and activism of the teacher and his/her class: in short, to a low impact of the educational action triggered by the project. There are of course many different levels to how this reflection takes place and how activities are actually documented, and the knowledge of the Action allows us to say that much depends on the teacher's eTwinning experience. The new eTwinners, in general, document in an instinctive and unorganized way, while those with greater experience have acquired high-value skills, which enable

them to go far beyond the reflection that produces an improvement in their practice, going towards wide sharing up to becoming a model with repercussions on the practice network (cfr. CHAPP. 4 and 5).

When activating an eTwinning project, the teacher, as educator, is faced with the need to articulate his/her teaching activity in a way that is functional to the cooperation with other teachers and the direct involvement of students. The international dimension and the use of a virtual space and digital tools mean that TwinSpace is at the same time the space of the actual teaching action and the place where it is documented; a documentation is primarily aimed at being able to continue the collaboration with the other teachers and students involved, but, by its very nature, it leads the teacher to reflect on the form of his/her teaching practice and the processes he/she puts in place.

2.2.1. DOCUMENTING TO HIGHLIGHT QUALITY

As documented in CHAP. 1, in more than fifteen years of life the community has grown exponentially and, at the same time, the quality of eTwinning projects, in their infinite variety, has also increased greatly (cfr. TAB. 2.1). At the European level, an evaluation tool has emerged over the years that enables teachers participating in a project to be awarded a quality certificate: the National Quality Label (cfr. box 2.1). It is an external validation that is based on a framework[1] of 5 criteria, which allow evaluators to verify the level with which they express the characteristics considered fundamental for these projects: the level of pedagogical innovation that the project has had, with particular attention to innovative pedagogical methods that put the student at the centre; how much the project is integrated into the curriculum and study programmes of the various subjects involved; how the collaboration was achieved, or what coordination strategies among teachers were adopted, what interaction and real collaboration activities were planned and implemented for the students and what common products were created together; what attention has been paid to the use and choice of ICT, the use of the virtual space, the care of aspects related to eSafety; and finally the evaluation of the achievement of the objectives, the impact, and the documentation activity for dissemination.

Once an eTwinning project is completed, all the teachers who have participated in it, along with their classes, can individually apply to obtain the National Quality Label. eTwinning projects are flexible by nature: there is no predetermined number of teachers who can participate, except for the minimum of two, there is no fixed duration, there is no imposed topic, but there is the creativity of teachers, the tools of the virtual class and the international dimension of the community that fosters the meeting and the exchange of project ideas. This means that when a National Quality Label is awarded, what is evaluated is the contribution of the individual candidate

1. https://etwinning.indire.it/riconoscimenti-e-premi/criteri-di-qualita/.

TABLE 2.1
eTwinning projects and quality awards in Italy (2014-20)

Year	eTwinning projects activated in Italy	National Quality Label applications received	National Quality Labels awarded	European Quality Labels awarded
2014	1,906	346	269	154
2015	2,247	409	332	178
2016	3,275	764	649	402
2017	3,749	1,549	1,059	540
2018	3,933	1,494	1,091	710
2019	4,682	1,525	1,032	647
2020	3,680	1,307	804	514

teacher and his/her pupils based on the 5 criteria, and not the project as a whole. This makes it possible to give recognition that enhances the quality of project content and the ability to maintain the flexible characteristics of eTwinning projects. In fact, it can often happen that some partners, for a variety of reasons, abandon the project, or that due to obstacles or inexperience they are much less active than others and only carry out some project activities, and are therefore not worthy of the recognition.

We have already pointed out that the activity that takes place during the implementation of an eTwinning project necessarily involves a documentation effort. Through the application for the Quality Label, the documentation process also becomes more accurate, as the teacher is called to "reconsider" what he/she has achieved and to express it for the purposes of evaluation.

When filling in the application form, which is divided in sections that correspond to the five criteria, the teacher is prompted to analyse his or her own practice and document it through a description of his or her daily work in a reflective manner; thus, at that point, he or she has the opportunity to learn from what he or she has achieved with his or her pupils, to grasp the errors and virtues of a certain teaching practice and to draw lessons for the future. The other aspect that the candidate teacher is called upon to take care of is the organisation and quality of the documentation visible in the TwinSpace. Here, other elements come into play: the aspect related to the transferability of the practice as a model and the dissemination necessary to allow the training experience to have an impact.

Teachers with more experience in eTwinning are able, through the application form, to convey the training path that each of them has completed with their students, so that, through the TwinSpace, the evaluator can appreciate the originality. The clear organization of the TwinSpace pages allows those who observe the information from the outside to understand the timing and ways in which the project was carried out and to appreciate the results achieved thanks to the possibility of viewing the products created.

BOX 2.1
The eTwinning Quality Label

As the eTwinning platform is a large community whose strengths include peer learning and the exchange of good practice, it became clear from the very first years that it was necessary to build an award system taking into consideration the quality of projects. The first recognition, which is the basis of all the others, both at European and national level, is the National Quality Label. Once an eTwinning project has been completed, the teacher who completed it with his/her class can apply for such recognition. Common criteria have been established at European level for the award of this label, on the basis of which the National Support Organisation (NSO) of each country assess the applications they receive from teachers in their country, and grant or deny recognition and provide feedback. The evaluation consists in verifying whether there is correspondence between what the candidate teacher and his/her students have achieved and what is claimed and to what extent the project meets five fundamental criteria: pedagogical innovation and creativity, curricular integration, collaboration between partner schools, use of technology, results, impact and documentation. By obtaining the National Quality Label, the eTwinner, who is recognised as an expert, can have a greater ability to work in teams with other colleagues within his or her school, to give value to the work performed by the pupils and to disseminate it in the community of practice and in the local area. Once a National Quality Label has been obtained, the teacher can compete for national prizes and is eligible for the European Quality Label, which in turn allows the teacher to apply for the European prizes (FIG. 2.1).

FIGURE 2.1
eTwinning National Conference 2019 – Photo of the winning teachers of National Awards

For example, if we take into account the aspect of collaboration, a focal element of an eTwinning project, an experienced teacher is able to document it in all its forms. Often he/she does so using a timeline that traces the stages of the project, so that it is possible to retrace the various stages marked by collaborative activities, such as shared planning, the voting for a common project logo, the interactions in the forum where students discuss the issues to be put at the centre of their joint final product, the live moments of meeting by videoconference, the composition of the working groups with pupils from different countries, the joint product made by several hands, the final video to be disseminated within their own school, to other schools, to parents, to the local area in general, etc.

The documentation of eTwinning projects is therefore multiform and multifunctional; teachers with a long experience behind them have certainly reached levels of excellence in conveying their projects, and for this reason they also manage to receive national and European awards[2].

A teacher who decides to seek quality recognition is a teacher who stands critically and creatively before his or her daily teaching practice. For the sole reason of proposing his/her candidacy, he/she is encouraged to improve his/her commitment in describing what he/she has done, and to better organize the documentation in such a way as to make it clearer, or more readable, to himself/herself and to others. The national and European awards make it possible to increasingly foster a spirit of sharing and increase inclusiveness, and the eTwinning documentation of teaching practices is at the same time able to make teachers reflect on the validity of their training action, on its transferability, and finally on its dissemination as an innovative model that can inspire other teachers.

2.3
Documenting to disseminate

The documentation of a teaching experience through an eTwinning project is in essence a multimedia story that is created to share, with multiple audiences and multiple purposes, motivations, issues, hypotheses, strategies and results related to a specific teaching activity.

Sharing the history of the experience is the basis for an activity preparatory to maximising the effectiveness and impact of the documentation, which we will analyse here in relation to the eTwinning context: *dissemination*.

In European projects in particular, the term "dissemination" refers to the set of actions and strategies aimed at disseminating information on the results of the project, in order to maximise their impact on individuals, entities and communities. This

2. On the national eTwinning website there is a section with a summary of the winning projects of the national prizes of each school year: https://etwinning.indire.it/premi/premi-nazionali-20192020/.

is a fundamental process, as it fosters the transfer of results and their use by a wider, potentially interested public.

"Dissemination" and "communication" are, however, concepts that are often used interchangeably, even if there is a slight difference.

When we talk about dissemination, we refer to the transfer of results to encourage their use (even of an economic nature), in a practical perspective. In this case, the target audience will be composed of subjects specialised in a specific sector or potential stakeholders.

Communication includes information and promotion activities to increase the visibility of the project and therefore targets a more general audience (public opinion, the media). It may therefore be more effective to plan an overall strategic framework covering both activities so as to make the most of available resources.

Within the eTwinning context, the dissemination of best project practices is a primary activity among those included in the general communication of the Italian National Support Organization. Ensuring the visibility, dissemination and valorisation of eTwinning experiences at the national level has always been a primary, transversal task for the Italian eTwinning National Support Organization, based on 4 interconnected strategic objectives:

– increasing the number of teachers registered in eTwinning and increasing the number and quality of collaborative projects activated on the platform by teachers;
– providing content (information, statistics, support, training and good practices) preparatory to the development and updating of the national eTwinning community;
– strengthening the image, visibility and trust in eTwinning with the school sector and official stakeholders: INDIRE and the Erasmus+ National Agency, the national network of ambassadors, the Ministry of Education, the European Central Support Service (CSS) (European Schoolnet), the European Commission and EU institutions;
– creating and increasing general knowledge and awareness of eTwinning in public opinion, mass media, *influencers*, *policy makers*, associations, universities, foundations and research centres.

Methodologies, approaches, ideas and experiences of eTwinning educational innovation are undoubtedly some of the most effective contents for achieving the general communication objectives mentioned above, which, in relation to the dissemination of best practices, we can further break down into three specific aims:

– valuing the work by the teacher and the pupils;
– inspiring and motivating other teachers;
– promoting eTwinning at the national level.

The narration of an eTwinning experience requires a preliminary analysis and selection activity related to the conception, research and planning of narrative content, geared towards specific objectives, strategies and targets. It is essentially a question of operating a (re)construction of an "experiential puzzle", formed by actions, dialogues, activities, thoughts that, combined with each other, give rise to a content functional to the purposes of dissemination.

The eTwinning project is an experience that encompasses elements of irrefutable real life, experienced by people who directly testify to the impacts in terms of benefits, skills, innovations and improvements brought by eTwinning into their personal and professional path.

From the point of view of dissemination of results, we can say that the project activity in eTwinning involves both the dissemination of teaching competences and pupils learning competences, and more subjective and personal competences concerning the emotional sphere of the individuals involved.

The communication challenge of the National Support Organization therefore concerned the search for and realisation of a communication product that would be able to combine the two instances, and at the same time effectively convey both the technical-pedagogical and methodological component of the teaching activities, and the more subjective, intimate and emotional dimension of the teacher's experience; trying to highlight in particular, the value and help that the innovation proposed by eTwinning has brought in the everyday life of the individual teacher and school.

2.3.1. THE ETWINNING EXPERIENCE SECTION

In order to enclose in a common approach and communication product for dissemination both types of results anticipated in the previous paragraph (technical-methodological and intimate-experiential), since 2016 the Italian eTwinning National Support Organization has adopted a storytelling method that combines the multimedia languages of video and photographic narration with the potential of the web.

Best practices are collected in a specific section, called "Experiences", on the national website www.etwinning.it, which is periodically updated following a multimedia approach, to encourage the maximum use and dissemination of Italian schools' best practices, but also to inspire other teachers interested in working with eTwinning (FIG. 2.2).

The teacher's experience is disseminated through online forms, designed to enhance the digital content in the description of the objectives, activities and results of the projects, in addition to the teaching methodologies adopted, the key skills developed by the students and the teaching tools used, describing the multimedia materials produced, the photos, the videos made in the classroom, the interviews with teachers, school staff and students.

In order to collect testimonials and information on individual projects in a uniform, consistent, precise and sustainable manner over time, the Italian eTwinning National Support Organization has developed an online sheet called "eTwinning Experience Form", which contains a standardised hierarchy of questions to be addressed to the teachers being surveyed.

The document summarises the main points useful to describe both the personal experience of the teacher and the technical aspect carried out in the teaching activity, based on 4 standard points:

FIGURE 2.2
Project form published in the Experience section of the national eTwinning site

Costruiamo insieme dei piccoli robot

Altre esperienze

In questo progetto le scuole partner hanno collaborato per trovare tematiche mensili da esplorare attraverso le materie S.T.E.A.M.: Scienza, Tecnologia, Ingegneria, Arte e Matematica per creare un manuale condiviso. Gli alunni hanno collaborato alla progettazione e alla realizzazione delle attività e alla creazione di un video, di un racconto e di un e-book finale. A causa della chiusura delle scuole per il Covid-19, il progetto ha subito delle variazioni dal mese di aprile, ma le insegnanti hanno concordato di far realizzare in modalità DaD lavori a casa agli alunni, rendendoli così veri artefici del loro apprendimento. Il progetto ha vinto il Premio nazionale eTwinning 2020 ed è arrivato secondo ai Premi europei eTwinning 2021, nella categoria 0-6 anni.

Titolo progetto
S.T.E.A.M.-tastic

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Anno scolastico
2019/2020

Principali materie
Scienze, Tecnologia, Ingegneria, Arte, Matematica

Lingua di scambio
Inglese

Età degli alunni / Numero degli alunni coinvolti
Alunni della sezione coinvolti: 23 di 3, 4 e 5 anni

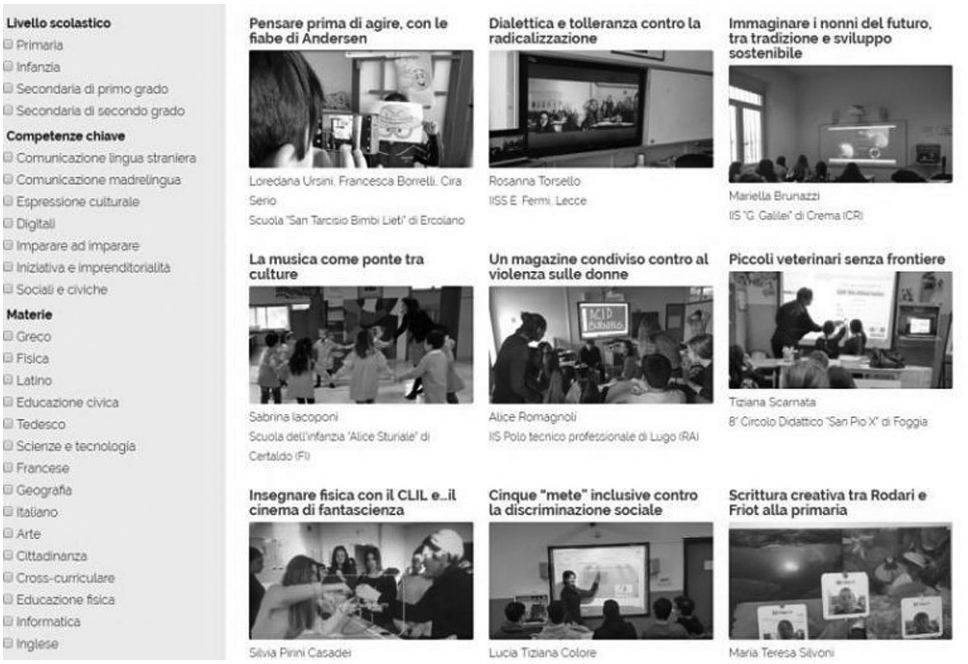
Link TwinSpace
https://twinspace.etwinning.net/91602/home

– abstract: general summary of the activity carried out;
– personal motivation: a personal description of the main reasons behind the teacher's willingness to get involved in eTwinning, which can range from personal to professional;
– teaching (objectives, activities, tools, methodology): the methodological and technical part of the activities carried out in the classroom;
– results: the overall impact of the project.

The forms have been designed to enhance the digital content in the description of the objectives, activities and results of the projects, in addition to the teaching methodologies adopted, the key skills developed by the students and the teaching tools used, describing the multimedia materials produced, the photos, the videos made in the classroom, the interviews with teachers, school staff and students.

To date, there are more than 40 experience forms on the website, which can be retrieved through search filters related to the school level, the competences developed by

FIGURE 2.3
Experiences section of the national eTwinning site



the students (taking the 8 European key competences as a reference), and the subjects involved in the projects, providing an interactive experience in the use and sharing of content for users (FIG. 2.3).

One of the most important aspects for the effectiveness of dissemination and, together, of the general promotion of eTwinning, concerns the motivational part present in the narration, that is, the description of the personal, subjective drive of the individual to activate eTwinning to overcome a work problem and, at the end of the path, the direct expression of a tangible result (a phrase, an exclamation, an expression or an anecdote) that empathizes and makes personal the value brought by the experience described.

This type of textual content, along with the video part and the photos, constitutes the main element used in the daily dissemination of experiences through social networks.

In FIG. 2.4 an example of disseminating the results through Instagram stories posted in the official account of the Italian eTwinning NSO.

The project videos are produced following a storyboard that combines direct interviews of the subjects (especially teachers, school heads and pupils) with fictional reconstructions of classroom activities during the eTwinning project.

FIGURE 2.4
Examples of dissemination through Instagram stories

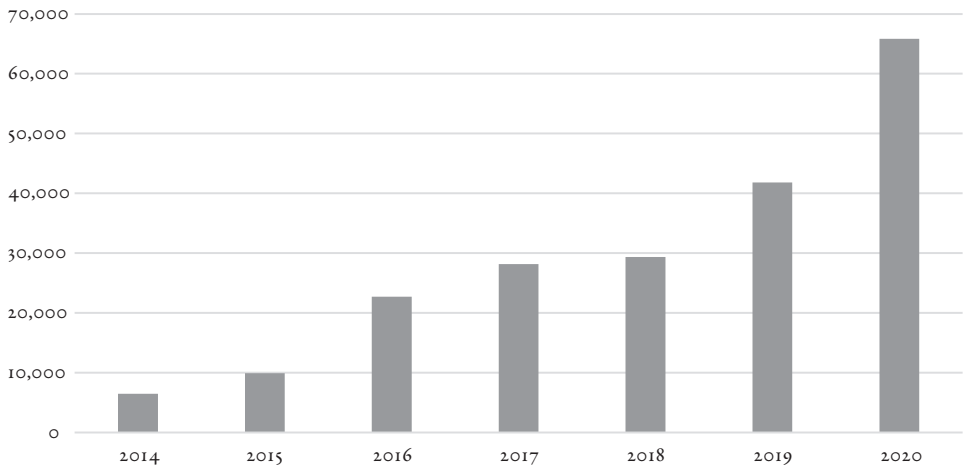
This element is fundamental to contextualize and give back the idea of what has been done, in addition to making the work more pleasant and communicative for the viewer.

Over time, this mode of storytelling has become a consolidated practice at the national level, as it allows, on the one hand, the documentation of projects from the direct voice of the protagonists and the contexts in which the experience was developed and, on the other, the creation of a more immediate and usable content system for web and social network users, a system that offers – like all digital content – the possibility of measuring real-time usage data and thus the general effectiveness of dissemination.

The new multimedia storytelling approach has led the Experiences section of the national website to a traffic of about 100,000 views from 2016 to 2020 (+100%), with an increase of over 430% in terms of accesses. The videos also contributed to increase the number of subscribers and the official "eTwinning Italia" YouTube channel came in 2020 to exceed 250,000 views (+1,000% from 2014) with 270 videos disseminated in total (+500%, still from 2014).

The multimedia storytelling of the projects was also particularly effective in transmitting the results of good practices in the months of the Covid-19 health emergency. During the national eTwinning Conference held online, the award ceremony for the winning projects was held in the presence of the former Minister of Public Education Lucia Azzolina; on this occasion, the projects were presented through video summaries broadcast on the eTwinning Italia YouTube channel (FIG. 2.5). Although

FIGURE 2.5
"eTwinning Italia" YouTube Channel Views by Year



lacking that atmosphere of sharing and friendship that characterises eTwinning appointments, the videos made it possible to describe and convey the project results in a pleasant, immediate and attractive way for a live stream that was a great success in terms of circulation and visibility (600 viewers in the live event and 5,000 views in total) compared to previous face-to-face events.

2.4 Conclusions

The structure of the eTwinning projects, the virtual work environment and the connection with foreign teachers and students have allowed, in more than fifteen years of the European Action, to develop an effective didactic planning from many points of view, including documentation.

The documentation in eTwinning offers the teacher the opportunity, during the activities and after their completion, to be a protagonist in the analysis of the teaching practice and its communication outside the classroom.

Despite the invaluable results of many teachers in the documentation of their eTwinning projects, however, there is no shortage of critical issues, in particular among the new eTwinners, that is, those who have less experience in the use of the platform and digital tools in general. The majority of teachers without previous experience struggle more to properly organise the documentation related to the project activities in the TwinSpace, therefore it happens to have virtual classrooms where the work carried out by the teacher does not show, because he/she did not understand,

for example, how to create a page with digital content (virtual bulletin boards, videos, photos, etc.), or did not know how to directly involve the students in the work space by making them access and participate in interactive activities such as chats and forums, or he/she was not able to follow the deadlines set by the project partners and complete the planned tasks. In these cases, it may happen that the teacher leaves the project or in any case that the negative experience does not encourage him/her to try to engage in new projects.

Another critical aspect, which emerged during the evaluation of Quality Label, occurs when the teacher and students involved in an eTwinning project develop it almost exclusively in their class, that is, without taking advantage of the international and collaborative dimension of the partnership, and this is also reflected in the documentation in the TwinSpace. In these cases, the element of greater pedagogical innovation of eTwinning projects, that is, the collaboration between teachers and students from different countries, is lost, and the TwinSpace becomes a space where materials are inserted that document the activity of a single class created in parallel with the other schools involved, but there is no evidence of active and autonomous involvement of students.

In addition to the teaching documentation carried out by teachers, the dissemination of best practices is also encouraged by the action of the eTwinning NSO, an action that, as far as the Italian context is concerned, sees the INDIRE staff engaged in a daily activity of research, selection, enhancement and dissemination of stories relating to the experiences of schools, teachers and students, with both dissemination and communication objectives, which, as we have highlighted, despite being related concepts, serve different purposes.

In general, we can affirm that the opportunities of the new web channels and of an increasingly multimedia storytelling have decisively broadened the possibilities of constructing messages more and more suitable for intercepting targets related to both one and the other activity: the first – as regards dissemination – which includes stakeholders and thus those somehow involved in the project; the second – as regards communication – which is broader and more varied, and which goes as far as to include mass media, policy makers and public opinion.

With regard to the dissemination of eTwinning project experiences, the most difficult aspect to transmit is the great flexibility and innovation of teaching through the platform. Teachers are often led to consider European projects as something additional to their normal teaching activities, they struggle to include them in their disciplinary programme and to grasp their great potential with regard to improving learning. Being able to better communicate how eTwinning projects can easily be integrated and thus become a daily activity, and not an extracurricular one, is a challenge yet to be overcome: it will be possible to do so through a more effective dissemination of simple eTwinning project models, but with a great impact on students' learning.

For this reason, the Italian eTwinning NSO is contributing to the new project, launched in 2021 to be launched, to build an Innovation Library, an online space that

collects the documentation, mainly audio-visual, of innovative educational practices. In fact, some of the eTwinning project experiences can be significant models for other Italian schools, for the implementation of educational activities that show a conscious use of digital tools aimed at learning.

For the future, a dedicated effort is planned in order to select, along with the most experienced eTwinners, educational content from their successful project activities, which can be valuable resources for the Library. We will certainly draw on projects that have received high quality awards, such as the national and European eTwinning awards, because they contain in their documentation innovative and easily replicable models, which will enrich the Library and provide a point of reference for schools that want to open up more to the international dimension.

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3

Adding value to eTwinning experience at all stages of teacher professional

by *Donatella Nucci*, *Alexandra Tosi* and *Maria Chiara Pettenati*[*]

3.1 Introduction

The eTwinning logo that has accompanied the Action since its origin in 2005, which has remained unchanged since then, depicts two stylised figures, a yellow and a blue, holding hands and forming a heart with their arms. The two figures are placed at a strange angle with respect to an imaginary floor, so much so that looking at them it is not possible to understand whether it is the yellow figure that tries to raise the blue one or vice versa: this is the true essence of eTwinning, collaboration, support and reciprocity between equals in carrying out a Value Action.

The history of eTwinning, outlined in CHAP. 1, shows that teacher training was at the origin of the initiative, so much so that the full name of the Action at the time of its launch within the eLearning Programme was precisely: *eTwinning and the in-service training of teachers.*

Many observers were surprised that this Action – which, unlike the Comenius Action, did not provide for direct funding to participating schools, contrary to initial scepticism – instead attracted a considerable and growing number of teachers in Europe.

The most important difference that eTwinning brought with respect to Comenius was precisely that of not providing any funding, and therefore not even the attached bureaucratic constraints, and of introducing a collaboration between only two partners, instead of the three provided for by the Socrates Programme.

With eTwinning, the European Commission proposed a sustainability exercise that made it possible to generalise school collaboration at the European level, thus producing large-scale results; eTwinning was presented as the opportunity to implement a European laboratory on the use of technologies for teaching, allowing to reach,

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with all teachers registered on the platform, that critical curve that could guarantee the dissemination of innovation in all schools in Europe.

What characterized eTwinning was the pedagogical and technical support at European and national level that was guaranteed to each teacher, whose individual participation was also free from the approval of the school head and addressed to all teachers, not only to "referents for European projects". The friendship relationship within the projects was seen, and rightly so, as an important component of eTwinning training: peer learning, now recognised by research as one of the characteristics of effectiveness in teacher training.

After many years of work dedicated to this important Action, the participants' testimonies allow us to state that its success is based on a need, sometimes explicit sometimes tacit, for teachers to change their training pathways: the professional development model offered by eTwinning is effective precisely because teachers participate spontaneously, motivated by a real need or interest, rather than by a sense of duty or a financial incentive for mobility. Within this framework, the relationship with the partner teacher is the fundamental aspect: teachers who become mentors, confidants, friends, advisors to one another. It is in this shared challenge, which becomes a human bond for the creation of value in the respective classes and with the students, that the origin of the success of the Action must be sought, and, with it, the need to give value to it for its impacts in terms of professional development.

3.2 eTwinning objectives for teacher training

According to the indications and intentions of the European Commission, eTwinning was to contribute to the training of teachers on several levels.

One of the objectives of the Action was to improve knowledge and skills in the use of technologies and to encourage their application in normal teaching practice. The help provided by the Support Units at the European and national level, and all training organised at national level were an integral part of this strategy. Even more important in the strategic vision of the Action was the contextualisation in the normal school activity: "Learning by doing", participating in and benefiting from the sharing of knowledge and skills of the whole community of teachers in the participating schools.

The Action has evolved enormously since 2005, as illustrated in CHAP. 1, although the combination that has always characterised eTwinning is certainly the *European dimension and information and communication technologies*. Within this latter dimension, the balance between the two elements, information and communication, has shifted over the years: originally, the emphasis was more on new technologies and their integration into teaching, while over the years more emphasis was placed on the communication aspect. This happened, in particular when eTwinning entered the

Lifelong Learning Programme in 2007 (Decision No. 1720/2006/EC of the European Parliament and of the Council of 15 November 2006).

The first five years of the Action have been full of innovations in terms of reflection on educational policy; important documents of the European Union are published in these years, first of all the *Decision of the European Parliament establishing the Lifelong Learning Programme* (No. 1720/2006/EC), then the *Recommendation of the European Parliament and of the Council on key competences for lifelong learning* (2006/962/EC) and the *Council Conclusions on improving the quality of teacher training* (2007/C 300/07). Teachers are increasingly being called upon as key agents in improving education systems at European level. The document containing the *Council Conclusions on the professional development of teachers and school leaders* (2009/C 302/04) also reiterates that «teachers themselves need to reflect on their own learning requirements in the context of their particular school environment, and to take greater responsibility for their own lifelong learning» (Council of the European Union, 2009) and how the networking of knowledge of teachers and school leaders can benefit all education systems.

The 2005-10 five-year period was also decisive for the development of the web. In fact, the birth of the social web dates back to these years when words such as blogs, wikis, podcasting began to enter the lexicon of teachers too, and tools such as Delicious, Picasa, Flickr, YouTube and many others caught their attention. The need to keep in touch with colleagues to discuss and exchange views has emerged very strongly here. To become, in other words, a community of practice.

3.2.1. FROM EXTRACURRICULAR PROJECT TO MORE EFFECTIVE WAY OF DOING SCHOOL

Many teachers who had started the eTwinning experience with elementary projects and simple tools were eager to try new applications and work with multimedia content. While at the beginning eTwinning projects were often extracurricular projects, with the passage of time the teachers themselves sensed the value of eTwinning within the school curriculum: an eTwinning project is no longer an extra compared to normal teaching activities but a different way of schooling. Thus, the strong cultural message underlying the Action was gaining ground.

Encouraging this cultural change have been the innovations that the working environment offered by eTwinning provides, which represent real evolutions in response to the contextual needs of the teachers who inhabit it: this was the case of the breakthrough of *eTwinning goes social* in 2008, which leveraged the emerging popularity of social networks by giving space to socialising, informal exchanges and other fundamental dimensions that were an implicit but essential part of eTwinning. For this reason, the development of the platform goes along with this natural progression of the web, which sees the proliferation of different applications in parallel. It is no coincidence that the development of the platform provides for an increase in space

in favour of greater and better multimedia documentation in the 2009 TwinSpace, the possibility of giving students the role of administrators of the TwinSpace, a real subversion of the teaching paradigm, which takes place in a digital and protected context, and much more. A strong propulsion to Action was further generated by the establishment of the first task force of the European eTwinning Ambassadors Network in 2008.

The foundations were thus laid for a cascading peer education model where experienced and motivated teachers have been able to train and inspire other colleagues with dedicated support from the National Support Organisations (NSOs).

3.3 European eTwinning experiences recognition

eTwinning has always been characterized by a very rich and varied training offer, which has evolved and grown over the years both at the European level and at the national and regional level in the Member States, while strengthening the formative value of community participation through peer interaction. The complexity and heterogeneity of the eTwinning experience, the presence of a mix of formal and non-formal training, the possibility of customizing one's training in a flexible and articulated way have always made it difficult to quantify the impact of eTwinning on the professional development of teachers. If we add to this the heterogeneity of the national systems of in-service training of teachers, it is easy to understand the great attention paid from the early years by the Central Unit both to the impact studies of eTwinning on the professional development of teachers, and to the monitoring of national initiatives for formal recognition of eTwinning in teacher training.

Particularly starting in 2010, the Central Unit decided to investigate how eTwinning interacts with teachers' professional development schemes in the participating countries, beginning to delve into the experience of some countries where eTwinning is not only formally recognised for in-service teachers' professional development, but is also taken into account for career advancement, namely Estonia, Spain and Poland (Vuorikari, 2010).

In 2010, among the 28 countries that had responded to the questionnaire administered by the Central Unit on the link between eTwinning activities and their formal recognition in the 33 participating countries, 7 stated that the activities were already fully considered as part of formal professional development, 11 that some synergy could be found, although not formal recognition, while in 10 countries no link was found (*ibid.*).

Since 2021, formal recognition of eTwinning in this context has also become the object of study of a European taskforce dedicated to professional development in eTwinning and composed of members of some NSOs, including Italy, and the Central Unit, with the task of both surveying what is happening in each country to mon-

itor the situation and share good practices, and to guide future developments in eTwinning in order to increasingly foster such recognition. The workgroup therefore works to identify those factors and criteria that, when applied to eTwinning training activities, could facilitate their recognition at national level, such as certification of training hours and content, standardisation of types of provision, adoption of strict quality criteria for defining training provision, and the presence of a final evaluation of participants' performance. Given the impossibility of identifying a unambiguous system at central level that can apply equally in different national contexts, the working group decided to try to move in several directions, working in clusters of countries with similar needs, in order to be able to satisfy as many States as possible, and at the same time focus its efforts on the study and dissemination of best national practices, so that they could serve to encourage the national and regional authorities of other countries.

In this context, a new questionnaire, similar to the 2010 one, was administered in June 2021 in order to map Member States' policies for recognising eTwinning training, monitoring what happened in the acceding countries ten years later and outlining the trend in the new countries that have joined in the meantime. An initial analysis of the results of the questionnaire, which are still partial and have been consulted by the Italian eTwinning NSO as part of the work of the Taskforce, shows that the number of countries where eTwinning activities are formally recognised as a professional development for teachers has grown. An additional level of detail was introduced in the new questionnaire, differentiating the recognition of the various eTwinning training activities: European training managed directly by the Central Support Service (CSS) or provided by other NSOs, national training managed centrally or locally, and participation in projects. The partial results of the questionnaire show a fairly widespread recognition with regard to national training – 76% of the respondent countries recognise this training in full or at least in part – while the percentage is reduced in the case of European training managed by the Brussels CSS (61%) or by other national NSOs (52%). Interestingly, in as many as 58% of the responding countries, teachers' work within eTwinning projects is formally recognised, totally or at least partially, as professional development[1].

3.3.1. POLAND, SPAIN AND PORTUGAL

To complete this brief overview of the recognition of eTwinning training in Europe, it may also be useful to refer here to some examples of best practices already identified in the 2010 Central Unit survey (Vuorikari, 2010) or that have emerged during the work of the aforementioned taskforce.

1. Data extracted from responses to the questionnaire administered between June and July 2021 by the CSS to all eTwinning NSO, with 34 responses out of 43 countries participating as of 15 July 2021. The questionnaire is currently still open, and the data are therefore only partial and not yet public.

Although in-service teacher training varies greatly from country to country, as does its recognition for career advancement purposes and the role that eTwinning can play in this context, there are some common traits in countries where the eTwinning experience has been formally recognised almost immediately as professional development for in-service teachers: a link between professional development and career advancement, the presence of a European dimension to the curriculum, the recognition of the importance of the benefits that can be derived from working on projects at a European level, and the crucial role of digital competences in teachers' professional development (*ibid.*).

Poland, Spain and Portugal, where teachers' work with eTwinning is formally recognised as professional development and linked to career advancement, are in this sense very interesting and relevant case studies.

In Poland, in-service training is not compulsory but is necessary for career progression, for which it is also necessary to demonstrate that one has developed digital skills and applies innovative teaching methodologies. Participation in eTwinning is recognised and can therefore be used to achieve career advancement. In addition, since 2017, eTwinning is explicitly mentioned in the national curriculum for modern foreign languages, demonstrating the increased authority it has also achieved at the ministerial level: «Schools should implement events and projects aimed at learning modern foreign languages, such as [...] participation in European programmes like eTwinning, which allow pupils to get in touch with native speakers and other pupils who are learning the same language»[2].

In Spain, the education sector is highly decentralised and the *comunidades* play a key role. Participation in teacher training provides credits that are necessary for career and salary advancement (1 credit equals 10 hours of training). Generally speaking, eTwinning training can be recognised where the selection of teachers to participate has been made through a public call for applications and the training, provided by the Spanish NSO or the *comunidades*, lasts a minimum of 10 hours. However, formal recognition of training varies greatly from region to region and according to the type of training activity considered. Participation in eTwinning projects is formally recognised in almost all regions in the presence of a Quality Label (cfr. *supra*, box 2.1). The number of credits recognised varies according to the duration of the project and the role played by the teacher, and can range from 1 to 5 (where the maximum is attributed to eTwinning projects of annual duration that have obtained the Quality Label and in which the teacher has played a coordinating role). Regional eTwinning training is carried out by the *comunidades* and recognised by them if it engages the teacher for at least 10 hours. Most eTwinning in-person training takes place at this level. Regarding

2. From the official Polish curriculum for teaching modern foreign languages at different school levels and types of schools: primary school (https://podstawaprogramowa.pl/Szkola-podstawowa-IV-VIII/Jezyk-obcy-nowozytny); vocational secondary school (https://podstawaprogramowa.pl/Branzowa-szkola-I-stopnia/Jezyk-obcy-nowozytny); secondary school (https://podstawaprogramowa.pl/Liceum-technikum/Jezyk-obcy-nowozytny).

the national eTwinning training, carried out by the eTwinning Spain Unit – at INTEF, the National Institute of Educational Technologies and Teacher Training of the Ministry of Education and Professional Training –, participation in the two eTwinning courses moderated online[3] is formally recognised, as they are included in the ministerial training offer and with a certificate attesting to 70 hours of work and thus 7 credits. On the other hand, the eTwinning MOOCs, NOOCs and SPOCs offered by the Spanish eTwinning Support Organisation are not recognised, although upon their completion teachers receive a digital badge certifying the skills acquired[4]. European eTwinning training is recognised in some regions when it meets certain criteria, such as the selection of lecturers through the INTEF public tender or the minimum duration of 10 hours. For example, European conferences and eTwinning seminars and long-term European courses are recognised in some regions, but European webinars and learning events are not (cfr. *infra*, box 3.1).

In Portugal, training is one of the necessary elements for career progression and must consist of a minimum of 50 hours in 4 years. The other areas of evaluation are the didactic dimension and participation in the school community. Each teacher must collect in an annual self-assessment report all the experiences gained in these areas, experiences that can be evaluated for career progression every 4 years. The eTwinning experience can contribute directly both to the area of training and professional development and to that of teaching through participating in quality projects. Training in Portugal must be validated by the national body responsible for in-service training, the Conselho Cientifico-Pedagógico da Formação Contínua (CCPFC), or be certified by a teacher training centre accredited by the CCPFC and then reported by the teacher in their final self-assessment report, presented to their school annually. The training is normally validated directly by the CCPFC before its completion, but in some cases the validation can be requested by the teachers even later, for those non-accredited training events such as, for example, the European eTwinning training. The training provided by accredited training centres is that of short duration, usually from 3 to 9 hours, and can cover the total of 50 hours for a maximum of 10 hours. All other types of training can be included in the self-assessment report, but will not be officially counted towards 50 hours. However, they can be used to demonstrate the teacher's motivation towards continuous learning and the concrete application of what has been learned in daily teaching. As regards eTwinning training, the Portuguese NSO, which is part of the Ministry's Directorate-General for Education (Direção-Geral da Educação-Ministério da Educação), organises training activities for which it may apply for recognition by the CCPFC. In this way, many of the actions promoted by the Unit are valid for the career advancement of teachers (these are usually activities

3. http://formacion.intef.es/course/view.php?id=663; https://www.educacionyfp.gob.es/servicios-al-ciudadano/catalogo/profesorado/profesorado-no-universitario/cursos-y-jornadas/formacion-en-red-profesorado.html.

4. http://etwinning.es/en/formacion/oferta-formativa.

between 15 and 25 hours). Participation in national MOOC and eTwinning webinars is not generally recognised, but can be included in the teacher's self-assessment report. For European eTwinning training teachers can request validation from the CCPFC upon completion of the training. The request for accreditation is made by each teacher who sends the certificate and details of the training carried out to the CCPFC to enable the Scientific Council to evaluate it. The eTwinning Professional Development Workshops (cfr. *infra*, box 3.1) are generally recognised, as are the MOOCs of the School Education Gateway (cfr. *supra*, box 1.7) and the Teacher Academy. For Learning Events and online courses, the teacher must demonstrate how that training is really necessary in the context of their school and consistent with the discipline taught. For webinars in general there is no recognition, but, as for national ones, the teacher can include them in their own self-assessment report. Participation in eTwinning projects that have received a Quality Label is taken into account for career advancement as a context within which the teacher has used the different innovative methodologies, relating them to the objectives of his/her school's Annual Plan. Within the self-assessment report, teachers must in fact present and motivate the pedagogical choices and teaching activities carried out in line with the objectives and in the context of his/her school (evaluation of the area of innovative teaching).

3.4 Italy: the growth of the eTwinning phenomenon and the need for recognition

Although the central European coordination places eTwinning at a natively and effectively supranational level, each Unit in the participating countries leverages and at the same time supports national strategic policies related to school development. In Italy, an increase in eTwinning participation can be seen both with Presidential Decrees Nos. 88 and 89 of 15 March 2010, implementing secondary school reform, which provide for the teaching of one non-language subject in a foreign language in the last year of high schools and technical institutes and two non-language subjects in a foreign language in high schools for linguistic studies, and with the issuance of the 2012 National Curriculum Directions in conjunction with the issuance of the National Digital School Plan[5] provided for in the *La buona scuola* ("The Good School") reform (Law No. 107 of 13 July 2015).

The Italian eTwinning NSO's decisions to strengthen its support for teachers and consequently its training offerings at the national level were thus successful in terms of the usefulness and expendability of the experience for teachers' professional practice.

On the other hand, with Law 107/2015, the training of teachers becomes «mandatory, permanent and structural». Note 35 of 2016 that anticipates some operational

5. https://www.istruzione.it/scuola_digitale/allegati/Materiali/pnsd-layout-30.10-WEB.pdf.

issues of the National Training Plan 2016-19 seems to use a paraphrase that is well suited to describe the eTwinning experience specifying that «[t]he best training experiences, to be known and to be valued, already make available a repertoire of innovative methodologies (laboratories, workshops, research-action, peer review, community of practices, social networking, mapping of skills, etc.) with a balanced dosing of activities in person, personal study, reflection and documentation, networking, reworking and reporting of the learnings made».

Therefore, in the light of the growth in the number of eTwinners (cfr. *supra*, FIG. 1.2), the impact in terms of professional skills that teachers recognise and transfer in their daily lives, the national regulatory context that relaunches training as a lever of the country's education system, the need to deepen the value and recognition of the eTwinning experience as real "continuous training" is also growing in Italy.

3.4.1. WHAT CONSTITUTES THE ETWINNING EXPERIENCE

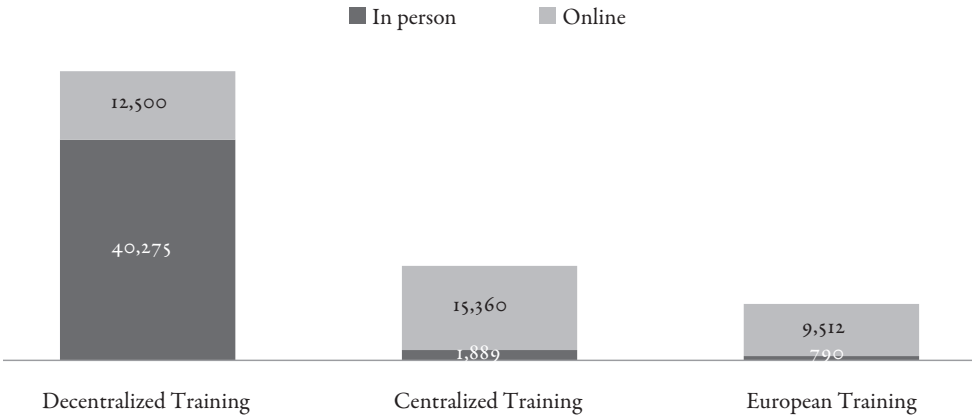
In addition to the more traditional and formal training opportunities, the eTwinning INDIRE Unit supports informal peer training and self-training that takes place in the eTwinning community, especially within projects, groups (cfr. *supra*, box. 1.3) and live events (cfr. *supra*, box 1.1), through continuous support provided to teachers, both from a technical and technology orientation point of view and from a planning point of view.

Twinning projects are undoubtedly at the heart of the eTwinning experience and consist in distance learning paths shared by several teachers with their pupils, based on collaboration and peer learning in an informal and flexible context, but calibrating project activities according to one's own interests and competences, as well as those of pupils and the school context. The teachers freely choose the topic to be addressed, the duration and period in which to implement the activities, and the partners to collaborate with. While this means that it is not possible a priori to predict the quality and content of the project launched, it also allows all teachers to have access at any time to a pathway that will put them in contact with different realities, with colleagues with whom they can share and experiment, and with multiple support and training opportunities that teachers can freely take advantage free of charge. Opportunities that, in the medium to long term, always guarantee professional progress. Moreover, often, from the individual teacher the impact extends to colleagues to the point of spreading, in cases of excellence, to the entire school.

The evaluation of a project for the award of the National Quality Label (cfr. *supra*, box 2.1) is based on the 5 criteria shared at European level:

1. pedagogical innovation (application of innovative teaching methods that favour the creative, responsible and autonomous work of students);
2. curricular integration (in the curriculum of the subjects involved and of the school);
3. collaboration between partner schools (interaction and complementarity of part-

FIGURE 3.1
Participation of Italian teachers in face-to-face and online training between 2014 and 2020. Decentralised training is managed in collaboration with the Regional School Offices, centralised training directly by the Italian eTwinning NSO, European training by the CSS, in collaboration with the other NSOs.



Source: eTwinning Data, https://etwinning.indire.it/statistiche-nazionali/.

ner activities, peer review and peer learning, co-production of content and products, both among students and among teachers);
4. use of technology (creative and functional use of ICTs for teaching purposes, education to awareness in using the Internet);
5. results, impact and documentation (evaluation of the results and impact of the project, documentation, dissemination and transferability of the adopted methodologies).

The different training opportunities, always in line with national and European education policies, but different in terms of delivery methods, targets and timing, are offered at different levels: at the national and regional level by the Italian eTwinning NSO in collaboration with regional school authorities, at the European level by the CSS and/or other NSOs. The eTwinning training offer, detailed in box 3.1, has grown considerably in recent years, and has reached more than 80,000 teachers in Italy in the 2014-20 period (cfr. FIG. 3.1).

This widespread training offer, along with the flexibility that characterises the eTwinning projects mentioned above, leaves a great deal of autonomy to teachers in "composing" their own development path within eTwinning, and ample room for customisation according to their own needs and those of the teacher's school. This is why we talk about the eTwinning experience, meaning the wealth and variety of activities that make it up, thus helping to define a training opportunity that has all the quality characteristics to support teachers' professional development.

BOX 3.1
eTwinning training opportunities

At the national level:
Online
– Webinars: online events of up to 2 hours conducted by experts from the worlds of school, work and academia, aimed at all teachers, or to specific targets, depending on the topic addressed. A practical focus of presentations and interaction with the audience is encouraged, within a question session and through the use of chats or other interaction tools. Except in special cases, such as the COVID 2020 emergency (cfr. *infra*, box 3.3), the Italian eTwinning NSO offers an average of one webinar per month. Since 2017, one event per year has been added, directly addressed to pupils who benefit from the webinar through collective viewings organised by eTwinning teachers at the class or school level.
– Basic eTwinning course: an intensive course lasting about 4 weeks with a commitment of 25 hours, aimed at new or recently enrolled eTwinning teachers. The course takes place within an eTwinning group and alternates between synchronous and asynchronous activities, group work and individual work, until a final test is passed and a project paper is produced.
– eTwinning insights: these are short webinars, maximum 2 hours, given by members of the Italian eTwinning NSO on various aspects of eTwinning, from planning to applying for the Quality Label, including insights into the TwinSpace or other topics that can help less experienced teachers find their way around the community, or even more advanced teachers explore certain issues. In 2021, insights replaced the eTwinning course.
– eTwinning Ambassadors course or webinar cycle: every year, the eTwinning NSO holds one or more online training events specifically dedicated to its territorial network of eTwinning Ambassadors and contact persons to ensure their ongoing training and to improve their skills as trainers.

Face to face
– Regional seminars: these are the seminars organised at local level in cooperation with regional school offices and the eTwinning Ambassadors Network. They can range from short meetings of a few hours, to whole days of training, and are aimed at variable targets according to local needs. These are mainly face-to-face events, although with the emergency state of 2020 the regional online training offer also increased considerably. It is assumed that in the future online training will complement face-to-face training to maximise energy and resources.
– National Conference: the eTwinning NSO organises a large event (150-200 people) once a year, combining the awards for the best Italian eTwinning projects with training activities dedicated to annual priorities and quality projects.
– National Coordination (territorial network and ITE): once a year, the eTwinning NSO brings together the territorial network of eTwinning contact persons and ambassadors with the dual purpose of training the ambassadors as eTwinning trainers, and coordinating with the Regional School Offices, facilitating the exchange of good practices and consulting them both to obtain feedback from the ground (training needs, support needs, platform requests, innovative proposals) and to discuss future developments of the action. The same is done with the contact persons of the universities involved in the eTwinning ITE (Initial Teacher Education).

At the European level:
Online
– Online Course: this is a course (one per year) of long duration, usually between 3 and 4 months, aimed at a maximum of 250 people, distributed over a national quota. They can be addressed only to eTwinning ambassadors or to all registered teachers and address issues that meet the needs of the eTwinning community, such as online moderation and the application of innovative teaching methods. The online courses are held in English, are conducted by a group of experts coordinated by the CSS, and are generally divided into asynchronous and synchronous activities.
– Learning Event: these are short intensive online training events lasting 12-15 days and aimed at about 200 participants. They deal with issues related to eTwinning and innovation in teaching and are organised at the European level by the Central Unit in collaboration with experts from the world of education, work and academia. They are in the main European languages, although most are in English. Generally, synchronous and asynchronous activities are alternated, with practical tasks to be carried out individually or in small groups. The training, reserved for teachers enrolled in eTwinning, takes place within the platform, in the Learning Labs, virtual learning environments that promote interaction among participants and exchange among peers. Active participation, completion of the assignments and passing the final assessment, if any, allow the teacher to receive a certificate of participation attesting to 15 hours' work.
– Expert Talk: short events (1-2 hours) led by experts on specific topics of interest and relevance to the eTwinning world, in the main European languages, with the possibility for participants to interact with the speakers through Q&A sessions.

Face to face
– Training courses (Professional Development Workshop, PDW): these are three-day in-person training courses that focus on a specific topic, bringing together experts of international standing and alternating plenary sessions, workshop activities and thematic workshops. They are normally held in one of the main European languages and organised by NSOs in cooperation with the central one. The target varies according to the topic addressed, for a maximum of 100 participants.
– eTwinning seminars: these are events co-organised between two or more NSOs, without the cooperation of the CSS, lasting 2 or 3 days, generally aimed at a smaller group of participants, between 30 and 60, and mainly aimed at specific training on eTwinning and the creation of eTwinning projects among participants.
– Thematic conferences: these are larger conferences, usually for 200-250 people, dealing with topics of particular relevance or involving specific targets, such as institutes and universities involved in ITE (Initial Teacher Education) or eTwinning Schools. They typically last 2 or 3 days and often also play an important dissemination role to inform and create awareness on eTwinning.
– European Conference: the Annual Conference is a three-day celebratory event focusing on a European-wide topic, usually the eTwinning topic of the year. In this context, many training workshops are offered on the topic addressed and on the award-winning eTwinning projects. In general, about 500 people participate in the event, including the award-winning teachers and delegations of the various NSO.

All eTwinning training activities are attested by a certificate of participation that also contains the number of hours. For national events, the certificate is issued directly by INDIRE for centrally managed training, and by the Regional School Office or lead schools regarding decentralised events organized in collaboration with the Regional School Offices. For international events, the certificate is issued either by the CSS or by one of the eTwinning NSOs organising the event.

FIGURE 3.2
National and European topical priorities over the last eight years. Each year, the Commission establishes an eTwinning theme that eTwinning NSOs are encouraged to follow and develop in the planning of their promotion and training activities. Added to this are the national priorities of each country

3.5
eTwinning in the light of quality criteria for training

The favourable context generated by the 2016-19 National Training Plan and the compulsory nature of the training (Law 107/2015) within which it was created have made the Italian eTwinning NSO question both the validity of the eTwinning experience on professional development and the possible ways to formally describe it to highlight its value in light of the *Council Conclusions on Improving the Quality of Teacher Education* (2007/C 300/07).

Parallel to this research path, documented through the various chapters of this volume, the monitoring of the 2016-19 National Training Plan conducted by INDIRE on behalf of the Ministry (Pettenati, 2021) has made it possible to identify strengths and weaknesses with regard to three essential components of the teacher training implemented with the Plan: governance, quality and impact of the training. Some of the main problems identified by the monitoring find structural and consolidated solution approaches in eTwinning, as summarised in TAB. 3.1.

TABLE 3.1
Comparison between the main critical issues identified for the 2016-19 National Training Plan and the eTwinning approach to overcome them

Areas of investigation	Main critical aspects of the training offered by the 2016-19 National Training Plan	eTwinning approach for overcoming critical issues
Governance of training	Mainly cross-disciplinary training offerings, thematically complex also due to training priorities added annually.	eTwinning annually identifies cross-disciplinary strategic thematic priorities (cfr. *supra*, FIG. 3.2 on priorities) at the European level, in relation to the priorities and changes that intervene in society, and constructs the training offer around these macro-priorities, leaving teachers total freedom in the development of projects.
	A distributed governance with different levels for the institutional roles of coordination, management and organisation (regional school offices, lead schools, schools).	The CSS and the Italian eTwinning NSO apply towards the regions (Regional School Offices and schools) mechanisms of territorial support and delegation with a precise definition of tasks among the stakeholders and ample room for experimentation and best practices (cfr. *infra*, boxes 3.4 and 3.5). The role of ambassadors is particularly functional to support a cascade training model.

TABLE 3.1 (*following*)

Areas of investigation	Main critical aspects of the training offered by the 2016-19 National Training Plan	eTwinning approach for overcoming critical issues
Governance of training	Lack of a single, integrated digital ecosystem to support training.	The eTwinning platform offers the possibility for all teachers to take advantage, in teaching with pupils, in peer learning among teachers and in formal training, of secure and free online learning environments designed to foster distance collaboration and documentation of activities, equipped with an integrated videoconferencing system. In support of the platform there is an efficient helpdesk system and a widespread technical and educational support network that runs from the central level in Brussels, to the NSOs, to the local network of ambassadors.
	Strong discontinuity of training along the different steps of the teaching career (initial training, induction training, in-service training).	The eTwinning experience is highly inclusive, runs across the career stages of teachers and takes place, structurally or experimentally, both in initial training (cfr. *infra*, box 3.2) and in induction training (cfr. *infra*, box 3.4).
Quality of training	Training offers poorly linked to the training needs of teachers.	Multi-level governance, the definition of thematic priorities (and therefore training) at both central and European level, combined with a highly customisable support for eTwinning planning and suitable for the various levels of teachers' expertise make the eTwinning training experience responsive to the various training needs and applicable in daily teaching.
	Excessive frontality of training.	The eTwinning experience is by definition composed of a variety of training activities that include moments of traditional training, in-depth educational research, peer to peer and team-teaching, collegial work, individual study, school experimentation, documentation, reflection and dissemination, etc.
	Limited use of the different training models.	The diversification of the tools deployed in eTwinning actually uses effective training models in relation to the specific objectives of the training (from MOOCs to communities of practice).

(*following*)

TABLE 3.1 (*following*)

Areas of investigation	Main critical aspects of the training offered by the 2016-19 National Training Plan	eTwinning approach for overcoming critical issues
Impact of training	Feeling of lack of use of the training: while there are good results at the individual level (professional area of the individual teacher), there is still room for improvement both in terms of impacts at the classroom level (in the teaching area) and, especially, in terms of impacts at the organisational level (on the educating community).	The whole eTwinning training offer is characterised by a strong pragmatic and hands-on approach. From workshops, to conferences, to European and national webinars, it is the very governance of the action that aims to give a practical edge to the training experience, also thanks to the strong focus on exchange of practices and peer learning. Research has shown that the eTwinning learning experience finds its greatest value in the educational dimension where eTwinning realises the whole experience, but also – albeit to a lesser extent – in the area of teacher professionalism and school participation (cfr. CHAP. 4).

3.5.1. DESCRIBING ETWINNING IN TERMS OF CERTIFIED TRAINING UNITS

If it is true that the eTwinning experience is by definition composed of a variety of training activities, and in view of the proven validity of the experience as a whole with regard to the training impacts, the next step can only be to describe the eTwinning experience as a whole in terms of training units (Di Stasio, 2021) that can be concretely valued.

Training units are elementary parts that can consciously and consistently be traced back to certifiable elements, as they have a measurable and consolidated value in terms of professional growth experience.

The proposal (Bianchi *et al.*, 2018) to describe the eTwinning experience in terms of Certified Training Units introduces the use of a device called "Skills self-assessment" that enables the eTwinner to accompany in an initial and orientation self-assessment and then a final one, mapping skills in three areas: professionalism, teaching and school participation, precisely in order to also favour the reflexivity process that supports professional development.

In this way, the five main activities that make up an eTwinning teacher's ideal experience can become building blocks of a documented and measurable learning path containing all the ingredients of an effective learning experience: national or international peer-to-peer, classroom experimentation, participation in face-to-face and online courses and seminars, documentation for project evaluation and quality assurance, and skills report.

BOX 3.2
eTwinning in Initial Teachers Education (ITE)

eTwinning training also includes an initiative aimed at the initial training of teachers, eTwinning for Future Teachers, which Italy has joined since 2013. The initiative was introduced as a pilot action, but it soon proved to be very far-sighted and very successful, being welcomed with great enthusiasm by students and trainers, especially in Italy, where, after the first years of experimentation, the initiative grew exponentially, now involving more than 20 universities[6] active in the initial training of teachers (mainly future primary and pre-school teachers), and bringing Italy to the first place in Europe, both in terms of numbers and relevance of the experience.

The universities involved agree with the Italian eTwinning NSO on a path to include eTwinning in the training of future teachers, to be realised in collaboration with the Regional School Office and the ambassadors network, including one, or possibly more, of the following activities: introduction to the platform and presentation of best eTwinning practices through short face-to-face lessons to all the students in a given year; intensive workshops of medium-long duration (12-36 hours) aimed at groups of students who register on the platform and explore both the technical aspects related to the functioning of the platform and the use of the virtual classroom made available for the projects, and the teaching aspects related to the adoption of innovative methodologies with eTwinning planning; collaborative eTwinning projects among different universities, both Italian and foreign, in which students discuss topics of common interest and/or their own experiences at school during placements, learn to collaborate remotely and, at the same time, familiarise themselves with the eTwinning virtual classroom. In addition to this, to make the training experience truly complete, students themselves can carry out a "real" eTwinning project along with their tutor during the direct internship hours. To this end, in collaboration with the Regional School Office, where this is possible, students are sent to schools where eTwinning is already active, or tutors of the host schools are invited to regional eTwinning training events, so that students can find a favourable ground for the development of their own eTwinning project, and thus can test in the field what they have learnt. There are many students who in recent years have decided to dedicate their thesis to eTwinning and especially to their eTwinning experiences in the classroom.

The Italian eTwinning NSO helps universities identify the path that best suits their context, which varies greatly according to multiple factors, such as: contact person and motivation, year of course and subject involved (or indirect internship), number of hours that one can or wants to dedicate to this path, more or less active collaboration with the Regional School Office. The suggestion is generally to follow a gradual approach for consecutive steps, to allow newcomers to understand the many facets of this initiative and better organize the activities.

The first stage usually involves an agreement with the Regional School Offices and the ambassadors' network to organise a series of meetings dedicated to the training of university trainers, in parallel with short-medium-term initiatives aimed at students. Particularly useful for newcomers in this phase are the observation of best national and European practices and contacts with other Italian universities, from which they can learn and draw inspiration,

6. https://etwinning.indire.it/etwinning-for-future-teachers-ite/.

and with which they can start the first national collaborations, enabling them to approach remote collaboration in a gradual manner, without the burden of the foreign language.

After the first experiences, with generally very positive feedback from the students and where a certain continuity and support and involvement of university staff can be guaranteed, and thus preventing eTwinning from remaining something external managed only by eTwinning ambassadors and Regional School Offices, the initiative gradually becomes more developed and rooted, finding a stable and official space that is formally recognised and that lasts over time, regardless of the individual actors involved. This can also lead to the construction of multi-year paths involving complementary activities in different course years, leading to eTwinning planning in the classroom in the final years of the internship. Collaborative eTwinning projects between universities from different countries are also generally carried out at a later stage, when the university staff is well aware of the initiative and is able, albeit always with the support of ambassadors, to manage this further level of complexity, which implies the sharing of educational objectives, the use of the foreign language, the reconciliation of often very discordant timeframes of internships and initial training abroad.

The effectiveness of the initiative and the level of integration into the university curriculum varies greatly from case to case and, although in different ways, depends on the same factors that make eTwinning a success story in some schools rather than others:

– training and motivation of the personnel involved and effectiveness of the support network;
– creation of a working group that cooperates in a coordinated and harmonious manner;
– "political" support and willingness of the top management for the initiative to succeed, regardless of the enthusiasm of the individuals involved, and thus official integration into the training course;
– motivation of students and their active involvement;
– recognition of the work of students for the purposes of assessment and progression.

Since 2019, the year in which the role of *Teacher Student* was introduced in the eTwinning platform, and therefore students have been able to register freely, although always monitored by the NSOs and with a temporary status valid only for the current academic year, almost 3,000 students have registered in Italy, of which over 1,500 were active in the 2020-21 academic year. Preliminary data from eTwinning research on initial training reveal that more than 3,700 students were trained on eTwinning in 2019-20.

BOX 3.3
eTwinning and the pandemic

During the first lockdown, the Italian eTwinning NSO reacted to the emergency situation by opening, with the help of a group of eTwinning ambassadors and expert teachers, the group "SOS Didattica a Distanza (SOS Distance Learning)"[7], a virtual environment of sharing and mutual support which more than 1,800 teachers have joined. Within it, the most experienced eTwinning teachers made their knowledge and expertise available to their peers by using the tools and channels specifically created by the coordination group, and in particular the "Activity Proposals for remote teaching" section, with ready-to-use kits of simple collaborative teaching activities, and the online meetings section, with numerous appointments,

7. https://groups.etwinning.net/112169/home.

at times even on a daily basis.

The strengths of this initiative were, on the one hand, the promptness of the offer (the group in fact came into being only a few days after the start of the first lockdown, representing for many a first lifeline and a place where they could find practical advice on how to deal with everyday difficulties) and, on the other hand, the human and competent dimension of peer sharing, the possibility of finding support but also comfort in the group network, with small meetings and events characterised by strong interaction between speakers and participants, and by individualised support. In total, 38 meetings on remote learning and useful tools were organised between mid-March and early June 2020, including those of the eTwinning Help Desk, in order to provide targeted advice. Some of these proposals have also been documented within the Innovation Library, in the channel dedicated to online collaborative teaching[8] and all have been merged into the eBook "SOS Didattica a Distanza (SOS Distance Learning)"[9].

The offer of eTwinning webinars, normally monthly, was also intensified to provide not only *peer learning* but also expert training on the various aspects of distance learning, leading to the organisation of 11 webinars between mid-March and the end of April 2020 alone, some of which were included in the INDIRE webinar schedule. Particular attention has been paid to support and inclusion in distance learning, to the dangers related to digital overexposure, to methods for effective remote communication, to media disinformation. In addition, the Italian eTwinning NSO identified and emphasised some good eTwinning practices developed by teachers in the first lockdown period, and made them available to all teachers to find inspiration and ideas for effective and meaningful distance learning. The set of initiatives carried out by eTwinning Italia during the first lockdown, the success of which is proven by the boom in registrations, which tripled compared to the same period of the previous year, is collected in the national website's section dedicated to the COVID emergency[10].

3.6 Conclusions

eTwinning was created with the aim of supporting the training of teachers in cross-disciplinary and strategic sectors at the European level and translates into different national contexts, dealing with the regulatory context of the countries in which it is applied. However, while Italy is certainly one of the most industrious countries in the eTwinning world, it is also true that eTwinning inherits some approaches that do not always facilitate its adding value for the purposes of professional development.

By its nature and content, eTwinning touches three aspects: the dimension of internationalization, teacher training, digital didactic innovation. Because of this, the greatest benefit for the Action's impact and value would come from a greater involve-

8. https://biblioteca.indire.it/canale-tematico/16.

9. https://etwinning.indire.it/wp-content/uploads/2021/03/Ebook-eTwinning-didattica-a-distanza_-1.pdf.

10. https://etwinning.indire.it/sos-didattica-a-distanza.

FIGURE 3.3
Proposal for a certified training unit (CTU) for the eTwinning training experience

Source: Bianchi *et al.* (2018).

ment at governance level of all the Directorates belonging to the Ministerial Department for the Education and Training System, a path already effectively taken with the involvement of eTwinning in the PNSD (Italian National Plan for Digital Schools).

eTwinning, seen from its perspective of professional development of teachers, however, expresses numerous strengths: a consolidated model of multi-level governance (CSS, Italian eTwinning NSO, Regional School Offices, teacher training schools, ambassadors), an important role of ambassadors as testimonials and trainers of trainers, a strong and systematic connotation on issues of general interest for the school, namely digital and didactics for skills, along with the strategic priorities defined at European and Italian level (cfr. FIG. 3.3). It also expresses a robust training model consisting of a variety of activities recognised as effective for training purposes, open to any level of teacher expertise, and a centrality of the network and community dimension that contributes to supporting the affective and relational components of training.

Last, but not least, there is an attention to introducing mechanisms to enhance the impact of the experience, from the individual teacher and his/her teaching, towards the school community by means of the eTwinning Schools.

While it is true that the individual dimension of the eTwinning experience, in relation to its potential to spread from the individual teacher to the school dimension, is also one of the weaknesses of the system, it is also true that the Action itself is careful to introduce mechanisms to enhance the impact of the experience, from the individual teacher and his/her teaching to the school community, both through eTwinning Schools (cfr. *supra*, box 1.5) and through the role and training of school heads, thus combining the bottom-up and top-down approaches.

In the 2014-20 period, the Italian eTwinning NSO has strengthened and developed its training offer for teachers, mainly along two paths: the strengthening of the ter-

ritorial network and regional training in collaboration with eTwinning ambassadors and regional school offices – a strengthening that has also led to the intensification of training aimed at the ambassadors themselves – and the integration of online training, increasingly prevalent with the success of blended learning and the widespread use of videoconferencing tools, and as in-person training was managed increasingly efficiently and effectively by the local network.

The regulatory context, from Law 107/2015 to the National Digital School Plan, to the National Teacher Training Plan, has – as mentioned – contributed to increasing the importance of the action over time. Not least, the experience of the pandemic and the remote learning and integrated digital learning context in which Italian schools and schools around the world found themselves operating (cfr. *supra*, box 3.3) helped make it clear how valuable the skills teachers had gained through eTwinning were in coping with the emergency. Indeed, the most experienced eTwinning teachers, who had been used to working remotely in collaborative environments for years, found themselves willy-nilly to be the point of reference for many colleagues who in "normal" times had been disinterested in eTwinning and had only minimally embraced the digital transformation taking place in schools. In schools where eTwinning had not yet become a shared and relatively widespread initiative, eTwinning teachers, from being lone pioneers who were often confronted with mistrust and lack of cooperation, found themselves at the centre of attention and with an important support and informal peer learning role to play in their school community.

Despite the progress made in this direction and the numerous pilot experiences, the most critical element remains the fact that eTwinning training, understood as consisting of all the components discussed in this chapter (from in-person training to online training of a European, national, regional nature, to the project, to the Quality Label), is not currently clearly and immediately recognisable in our country in terms of training at the various stages of the teaching career (cfr. TAB. 3.2).

To address the limitations related to the lack of recognition of the experience and to support the validity of the concrete impact eTwinning has on teacher training, the Italian eTwinning NSO and INDIRE have collaborated on a proposal for a description of the eTwinning experience in terms of a Certified Training Unit, which is currently being considered by the relevant ministerial directorates.

The nationwide sharing of the cultural valuation framework proposed here would make it easy for school heads to verify and thus validate and certify the eTwinning experience in terms of quality-certified training units, obviating the limitation due to the difficulty of distinguishing the quality of teacher participation, and thus the level of training. This is why, when describing the eTwinning experience in terms of Certified Training Units, reference is made to the Quality Label, which documents and attests to the quality and innovation dimensions of an experience.

In the future, we expect that all the eTwinning experiences that a teacher has during his/her career can be collected in a facility, an eTwinning dossier, which ultimately flows into a teacher's training portfolio.

TABLE 3.2
Type of eTwinning training offer (provided at European, national or regional level and divided by target, initial, incoming and in service) and type of formal recognition

	eTwinning Initial Teacher Education (cfr. *supra*, box 3.2)	Incoming Training	In-service training
European Training (organised by CSS)	There are training initiatives aimed specifically at all ITE students. Students can also take part in all the other online training initiatives offered at the European level. Whether or not it is recognised depends on each university involved, but as a rule, training at this level is undertaken by students on an individual and voluntary basis and is not recognised.	There is no targeted training for this target group at European level. Newly recruited teachers and school heads can participate in the training offered by eTwinning at European level like other in-service teachers and school heads.	Recognisable by school heads on an individual basis. Regional experience of recognition Emilia-Romagna – Regional School Office Marconi Service (cfr. box 3.5).
National training (organised directly by the Italian eTwinning NSO)	There is normally no eTwinning training for this target group managed directly by the Italian eTwinning NSO.	There is no targeted training for this target group managed directly by the Italian eTwinning NSO.	Recognisable by school heads on an individual basis (attendance certificates issued by INDIRE). Starting from the 2021-22 school year, the eTwinning Basic Course will also be present on the SOFIA platform.
Decentralised national training (co-organised by Regional School Offices)	The training offer for students is co-designed by the Italian eTwinning NSO and Regional School Offices with the universities involved, and is therefore usually formally recognised. The forms of integration and recognition vary in each university.	For several years in some regions modules on eTwinning have been included in the training of newly-recruited teachers and school heads, although not in a continuous or systematic way. The most successful experience is that of the Piedmont Regional School Office, described in box 3.4. With circular	Recognisable by school heads on an individual basis (attendance certificates issued by Regional School Offices or eTwinning lead schools).

TABLE 3.2 (*following*)

	eTwinning Initial Teacher Education (cfr. box 3.2)	Incoming Training	In-service training
Decentralised national training (co-organised by Regional School Offices)		letter 30345 of 4/10/21 eTwinning was indicated by the Ministry of Education as a tool to be used in support of the training of newly-hired teachers, https://www.miur.gov.it/web/guest/formazione-in-ingresso-neoassunti.	
eTwinning Project	Participation in eTwinning projects by ITE students can be recognised by universities in terms of credits, laboratory hours and/or internships, partial contribution to the passing of an exam, contribution to the final grade of the thesis, or in other ways agreed upon during the course of studies.	Not recognised	Not recognised
Quality Label	Not recognised	Not recognised	Not recognised

BOX 3.4

Getting off to a good start with eTwinning: Piedmont's experience in training future teachers and training of newly-recruited teachers and heads

by *Silvana Rampone*

Office 1 of the Piedmont Regional School Office, Training and International Projects Area, has for some time been pursuing the precise strategic will to promote the modernisation of Piedmont schools in a European dimension through the various actions of the Erasmus Programme and the initial and continuous training plans for teachers. The challenge is to help train future teachers for a school based on principles such as equity, sustainability, inclusion, entrepreneurship, active citizenship, intercultural dialogue; a school that can develop soft skills and promote motivation, autonomy, metacognitive reflection, creativity and cooperative learning.

Due to its characteristics of flexibility, openness to innovation and European comparison, eTwinning is particularly suitable for the training of future teachers as a vehicle to introduce a different way of schooling through the development of professional skills, the

integrated use of new technologies, communication in one or more foreign languages, and collaborative learning in multicultural contexts.

Since 2015, the Piedmont Regional School Office has started an active collaboration with the Degree Course in Primary Education Sciences, as part of the European ITE (Initial Teachers Education) initiative, culminating in the offering of 9 webinars, between March 2020 and March 2021, as an alternative proposal to the direct internship of 260 students of the 5th year in the period of the Covid-19 pandemic (Emergency Rectoral Decree No. 1064/2020-21). The main objective of the webinars, led by Piedmont eTwinning ambassadors, was to engage pupils in an exploratory journey of the platform, its potential and new teaching methodologies in order to learn, communicate and open up to Europe. Before each webinar, a design sheet was distributed so that students could view it in advance and use it to analyse the best national practices presented during the webinars and subsequently prepare an eTwinning project hypothesis to be implemented in the classroom. Given the short time available (2 hours of videoconferencing and 15 days of autonomous work), the students were able to integrate all eTwinning quality elements into their projects, with a focus on creativity and collaborative activities.

Since 2016, eTwinning has also been included in the National Training Plan for newly-hired teachers, first through some regional seminars, then as a generalized offer to all lead schools for training, in the belief of the importance of making the new generation of incoming teachers aware of the existence of this valuable opportunity for innovation and modernization in a European perspective. In particular, starting from the academic year 2019-20, eTwinning training was included in the programme of "training workshops" organised by each regional teacher training school (Art. 8 of Ministerial Decree 850/2015). The educational value of the eTwinning workshops was illustrated by the Piedmont Regional School Office to the representatives of the lead schools during the service conferences dedicated to the organisation of the Training Plan at regional level. Each teacher training school then collected the applications of newly-recruited teachers interested in the workshop and forwarded them to the Regional School Office, which took care of scheduling the meetings and any pooling at territorial level to maximise the resources included in the regional eTwinning plan. In order to make the Erasmus Programme increasingly "inclusive" on the regional territory and thus guarantee access to training even in the most peripheral areas of the region, some workshops were opened to all teachers in the region.

Thanks to the synergy between the pole schools and the Regional School Office, 7 in-person seminars and 5 webinars were held in the 2019-20 school year, with a total attendance of 717 teachers. The workshops, run by eTwinning ambassadors, offered an overview of the platform's potential and how to effectively collaborate between partner schools by analysing best practices, both national and European, that can be easily transferred to different levels of school education. In the 2020-21 school year, access to eTwinning workshops was also extended to tutors of newly-recruited teachers to ensure greater synergy between the two figures (approx. 800 participants) and to facilitate the potential launch of eTwinnings with European schools. Teachers interested in learning more about eTwinning were invited to participate in subsequent regional webinars in April and May 2021. A teacher training school, at the request of teachers who had participated in the workshop, then started a 10-hour eTwinning mini-course with its own funds.

In the last two years, eTwinning in Piedmont has also officially entered the regional

training of all newly-recruited school heads (260) as key figures in promoting innovation in schools. The training was structured in two stages: a plenary meeting to present the Erasmus+ Programme and the impact of European projects on the competences of students and school staff; four workshops on the use of the platform and discussion on how to motivate teachers and create a school Erasmus team.

BOX 3.5

Model for the enhancement of European eTwinning online training: the experience of the Regional School Office for Emilia-Romagna

by *Annalisa Martini* and *Elena Pezzi*

For years, the Marconi IST Service[11] of the Regional School Office for Emilia-Romagna[12] has established fruitful synergies with the regional group of eTwinning ambassadors and with the main European initiatives aimed at teacher training, such as eTwinning, the Teacher Academy of the School Education Gateway (cfr. *supra*, box 1.7) and the European Schoolnet Academy[13].

In particular, in order to facilitate the recognition of this training for teachers provided at European level, the Marconi Service has arranged to be able to offer, in a certain sense duplicate – within its platform dedicated to training and connected to the Regional School Office[14] official website – some European training events carried out within the framework of the aforementioned initiatives, accompanying the activities with an additional tutoring, and finally issuing a fully recognised Italian certificate of participation.

This initiative stems from a 2019 pilot project managed by the School Education Gateway-Teacher Academy, in which the pedagogical eTwinning contact person for Emilia-Romagna (Elena Pezzi, professor at the Laura Bassi High School in Bologna and member of the Marconi IST Service) represented Italy in an experimentation at European level[15], which saw ten teachers from as many European countries working together to find innovative solutions regarding the in-service training of teachers, especially with regard to the use of online courses (the so-called MOOC)[16]. The Italian experimentation was divided into a number of key moments: creation of a working group within the schools involved, experimentation of a blended training course with a research-action perspective, monitoring and evaluation of the experience with a final on-site visit by Teacher Academy's Pedagogical Advisory Board[17]. The extremely positive results of this course have offered ideas and suggestions for further implementation and enrichment of the Teacher Academy training offer. Thanks to the collaboration with the Marconi IST Service, the proposal was also extended to teachers from

11. https://serviziomarconi.istruzioneer.gov.it/.

12. https://www.istruzioneer.gov.it/.

13. https://www.europeanschoolnetacademy.eu/.

14. Those who subscribe to this platform receive a weekly newsletter that reaches the almost 15,000 registered teachers (from the region and beyond) with updates on training opportunities (https://serviziomarconi.istruzioneer.gov.it/).

15. https://www.schooleducationgateway.eu/en/pub/teacher_academy/teaching_materials/teacher-academy-study-group.htm.

16. https://www.schooleducationgateway.eu/en/pub/latest/news/using-moocs-in-schools.htm.

17. https://www.schooleducationgateway.eu/en/pub/teacher_academy/about-teacher-academy.htm.

other schools in the region by organising similar training courses in blended mode to support the Teacher Academy MOOCs.

From the initial experimentation phase, the initiative was progressively strengthened and expanded until it was fully formalised in 2021 with the approval of the Order of the Emilia-Romagna Regional School Office, Prot. 0012724 of 17/06/2021, with which the Marconi Service activated an action to support teachers enrolled in the regional platform mentioned above, creating a *EurosMOOC* for each training path[18].

The methods of participation are very simple and are also explained in the access sites of the European initiatives[19]: The teacher enrolled in the European course will be able to enrol in the corresponding path created in parallel on the regional platform, carrying out the activities required by the European training initiatives also thanks to the synchronous and asynchronous meetings proposed at the regional level. This possibility can be used primarily by teachers from Emilia-Romagna; however, the Marconi Service platform is also open to teachers from the rest of Italy.

Teachers who successfully complete a course (Learning Event, MOOC, etc.) proposed by eTwinning, Teacher Academy and European Schoolnet Academy, receiving a certificate and a badge, also obtain the corresponding certificate issued by the Regional School Office for Emilia-Romagna, and can thus boast formal recognition at the official national level.

This is a particularly significant initiative for teachers in Emilia-Romagna and for the institution as a whole, since it represents a further step in the opening of the Regional School Office in a European direction, which for years has been implementing a policy of great involvement and collaboration for the implementation of European programmes (Erasmus+ training, coordination of consortia, etc.) and the dissemination of best practices (eTwinning days, participation in international experiments, participation in the MENSI[20] project, etc.).

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4

Theoretical framing and analysis of the eTwinning impact on Italian teachers' professional development

by *Francesco Fabbro*, *Maria Ranieri* and *Enrico Imbimbo**

4.1 Introduction

This chapter presents and discusses the results of a research conducted in 2020 by the Department of Education, Languages, Interculture, Literatures and Psychology (FORLILPSI) of the University of Florence in collaboration with INDIRE and the Italian eTwinning National Support Organisation (NSO). The research was carried out with the aim of evaluating the impact of the eTwinning experience on the "innovative professional development" of the Italian teachers. The willingness to tackle the challenge of evaluating the educational value and the professional growth of eTwinning is linked to the need of better understanding the dynamics of knowledge creation and socialisation within a community that, over time, has not only expanded quantitatively but also qualitatively, multiplying its activities. Catching the value of this unique initiative in the global panorama as well as identifying possible areas for improvement in an on-going project are two objectives that cannot be postponed, in order to preserve and nurture this experience.

In the following paragraphs, we first illustrate the theoretical framework that inspired the study by referring to the national and international literature, and with a focus on specific contributions useful to outline a framework of skills for operationalizing the concept of "innovative professional development" of eTwinners[1]. Subsequently, the research methodology is introduced, based on a mixed qualitative-quantitative strategy, and the research questions guiding the survey are described together with the research tools adopted. A large part of the chapter is devoted to the presentation and discussion of the results, and their triangulation, making numbers and words dialogue

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1. An early explanation of the conceptual and methodological background is included in Nucci *et al.* (2021).

in order to construct the most reliable representation of the reality under investigation. The chapter ends with some concluding remarks on the past, but above all on the future of the community and its growth prospects.

4.2
Teachers' professional development: a conceptual framework

4.2.1. PROFESSIONAL DEVELOPMENT AND PEDAGOGICAL INNOVATION

Nowadays, there exists an extensive literature on teacher training and pedagogical innovation , ranging from theories which emphasise the reflective dimension of work practice as a trigger for professional growth and development – think, for example, of the work of Schön (1983; 1987) and his successful image of the reflective practitioner – to communities (Wenger, 1998) and/or networks (Brown, Duguid, 2000) of practices as places of professional knowledge production and with a significant impact on the transformation of pedagogical practices in terms of innovation, improvement and change (Fabbri, Romano, 2017). Here, we focus in particular on three constructs that are useful for framing the conceptual assumptions that have fuelled the research presented in this chapter, especially on the analytical and interpretative level. A first reference is provided by the concept of co-design, enabling a deeper understanding of two increasingly relevant dimensions of the teaching action (Rivoltella, Rossi, 2012), that is, the design and the collaborative one. The idea of the teacher as designer (cfr. Scott, Lock, 2021) has progressively entered into the research on teachers' professional development and innovation processes, also under the impulse of the growing relevance of information and communication technologies (ICTs) to support teaching and learning processes. The research in the field, indeed, has shown how the introduction of technological tools increases the levels of complexity of the learning experience, requiring an accurate design by the teacher (Persico, Pozzi, Goodyear, 2018). In parallel, the emphasis placed by authors such as Wenger (1998) on the social and participatory nature of the professional development processes translates, in schools, into the promotion of reflective communities of teachers who collaborate and learn by each other (Fabbri, Striano, Melacarne, 2008), also through the co-design of teaching practices. In this regard, the international literature focuses on three issues, namely: the benefits of collaborative design, its mechanisms and the enabling conditions. More specifically, Voogt, Pieters and Handelzalts (2016) highlight how co-design promotes professional growth, both in terms of epistemological-disciplinary competence and in a strictly design sense, as it requires greater systematic and explicit definition of objectives, methods and curricular contents. As for the mechanisms related to co-design, the authors also underline how a virtuous circle between group design and teachers' professional development can emerge. In fact, the design activities can lead to professional growth and, in turn, professional growth can lead to a further

improvement of shared projects. In short, through co-design, teachers collaboratively build professional practical knowledge. Finally, with regard to the enabling conditions, it is unanimously recognised that team design, in order to be effective, must be adequately supported both in terms of training and at institutional levels. This is why initiatives involving training and institutional recognition are a favourable condition for professional development.

A second reference to catch the educational and innovative value of environments such as the eTwinning space, concerns the concept of networking schools (Ranieri, 2010). The networks of schools can be considered as multifunctional systems, that is, as Sliwka (2003, p. 49) explains:

> they are entities with social value oriented towards quality, rigour and results. They can also be an effective means of supporting innovation in changing times. Networks in education promote the dissemination of best practices, improve the professional development of teachers, support teachers' capacity building, mediate between centralised and decentralised structures, and offer support during the process of restructuring and cultural reconfiguration of educational organisations and systems.

This definition highlights three main aims for networks of schools: support for professional development, improvement of teaching practices and change processes. One of the main objectives of a network of schools is, in fact, to generate suitable situations for exchanges and collaboration among teachers and, more generally, education professionals. Typically, school networks offer their members a variety of opportunities for vocational training and exchange of knowledge: conferences, short courses, meetings with experts, exchange of innovative practices between peers. Educational networks can also facilitate the sharing on a larger scale of the "best practices" carried out by their members, producing benefits in the area of teaching and learning. From this point of view, the Internet and digital technologies can play an amplifying role in disseminating best practice. Some educational networks are mainly oriented towards the professional development of their members and the improvement of school activities; others look more outside school to promote a broader systematic change, acting as pressure groups to influence those actors playing an important role within the educational system.

Finally, a third reference concerns the theme of digital technologies and their integration into teaching practices (Ranieri, 2011; 2018; Rivoltella, Rossi, 2019). We cannot summarize in a few lines the breadth and complexity of the topics covered in the literature associated with this field. We merely observe how, on the one hand, models for representing teachers' professional knowledge on ICT in teaching have multiplied over the years, while the formalisation of a framework for teachers' digital competences is a rather recent acquisition. In terms of models, one of the most significant references is represented by the ICT Competency Standards for Teachers (UNESCO, 2011), which contemplates three different understandings of

digital technologies and the related competences in the professional context of the teacher: they are seen as an object of knowledge on which the teacher must develop knowledge and skills; and as an object of knowledge to be transmitted to students in the school environment; and as tools to transmit knowledge to students in a world that communicates and works increasingly through information and communication technologies. Alongside the UNESCO framework, we can mention the TPACK (Technological Pedagogical and Content Knowledge) by Mishra and Koehler (2006). It includes three domains of knowledge that interact dynamically with each other, namely: technological knowledge (TK) relating to the technical specificities of the tools in use from the book to the Internet; pedagogical knowledge (PK) concerning the teaching and learning processes, teaching and evaluation strategies, pedagogical theories; and, finally, content knowledge (CK) with reference to the knowledge of the disciplinary area of a given school teaching. More recently, the European legislator has promoted initiatives aimed at formalising more systematically and explicitly the scope of digital competences needed to manage teaching and learning processes supported by technologies. This is the European Framework for the Digital Competence of Educators (DigCompEdu) (Punie, Redecker, 2017), a framework of digital competences for educators published in 2017 by the Joint Research Centre of the European Commission. On this framework we will focus more extensively below.

4.2.2. PROFESSIONALISM AND COMPETENCES OF THE ETWINNER TEACHER

The DigCompEdu (*ibid.*), along with the eTwinning Teacher Competence Assessment (Cinganotto *et al.*, 2017) and the European Framework for Digitally-Competent Educational Organisations (DigCompOrg) (Kampylis, Punie, Devine, 2015) provided the ground for the development of the methodological framework and tools adopted in the study here presented. The three frameworks were compared and integrated to derive a synthesis framework capable of conceptually representing the competences of the eTwinner teacher. An analytical presentation of the synthesis framework is documented in Nucci *et al.* (2021), while in this paragraph we just provide a brief summary of the work carried out to facilitate the understanding of the methodological approach and the analysis of the results. Let's start with DigCompEdu. This tool was designed to systematically represent the digital competences of teachers (Bocconi, Panesi, 2018), emphasizing the methodological-educational aspects rather than the technical-procedural knowledge components. From this point of view, the DigCompEdu appears consistent with the ICT Competency Standards for Teachers (UNESCO, 2011) and the TPACK framework (Mishra, Koehler, 2006), mentioned above. The framework is structured in six conceptual areas for a total of 22 competences, as specified below:

– teaching and learning: planning and adoption of digital devices and resources

in teaching; improvement of the effectiveness of digital teaching interventions and ability to manage them in an appropriate way by properly orchestrating resources;
– digital resources: searching, creating and sharing resources appropriate to the learning context and the needs of individual learners;
– student empowerment: fostering the individualisation and personalisation of learning paths, to increase the active involvement of students;
– evaluation: innovative use of digital tools to improve evaluation and feedback;
– promotion of digital competence of students: prepare students culturally, cognitively and socially to be ready to live in the digital age;
– professional commitment: strengthening and opening up communication and collaboration strategies, both within and outside the organisation.

Going back to the eTwinning Teacher Competence Self-assessment Tool (Cinganotto *et al*., 2017), it should be noted that this framework highlights three areas of competences characterising the eTwinning teacher profile, and pays attention to the reflective dimension of professional knowledge:
– competences related to teaching (Teaching): it concerns the organisation and management of learning situations with attention to transdisciplinary, multicultural and technological aspects; formative evaluation; the involvement of students in the learning process favouring collaborative work with repercussions on self-esteem and motivation;
– competences related to school participation (Organisation): it concerns the school as an organisation and the role of the teacher with respect to it; it includes the ability to work in a group with colleagues, to co-design educational paths and to participate in the management of the school, including relations with the family;
– competence related to training (Professionalism): it concerns the professional development of the teacher and includes teacher's ability to face the ethical dimensions of the profession; the constant attention to updating and continuous training; the ability to make use of new technologies for design, organisational and training activities.

Finally, further inspiration is provided by the European Framework for Digitally-Competent Educational Organisations (DigCompOrg) (Kampylis, Punie, Devine, 2015), promoted by the European Commission to support the innovation processes of educational institutions. In this case, 7 key dimensions (and 15 sub-dimensions) are identified, i.e.: 1. leadership and governance practices; 2. teaching and learning practices; 3. professional development; 4. assessment practices; 5. contents and curriculum; 6. collaboration and networking; 7. infrastructure.

The comparative analysis of these contributions allowed researchers to build a comprehensive competences framework, structured in three areas and nine subareas for a total of 37 descriptors (or performance indicators) (Nucci *et al*., 2021, pp. 250-4).
– Area 1 – Teaching: this area concerns the ownership of the knowledge and skills necessary to design situations and/or significant and situated learning paths, teach using different methods both in the physical class and in the virtual class, promote

and support the learning of all students also through the use of digital technologies, evaluate both in a formative and summative perspective the learning processes and results, also through digital technologies and the involvement of students. Specific subareas are: 1.1. Design; 1.2. Teaching; 1.3. Learning; 1.4. Assessment.
– Area 2 – Teacher professionalism: this area concerns the ownership of attitudes, skills and information functional to increase one's own and others' awareness of an ethically oriented use of digital technologies, and to cultivate one's own professional training also on the use of digital technologies in different ways (hetero-directed training, self-training and peer training). Specific subareas are: 2.1. Professional ethics (digital); 2.2. Professional development (digital).
– Area 3 – School participation: this area concerns the ownership of skills that allow teachers to collaborate with each other, with the whole school community and with partners from other schools, to effectively manage both in presence and at a distance the development of educational projects in coherence with the school curriculum and the territorial context, to involve parents and third parties in the organisation and implementation of educational interventions, also through the use of digital technologies. Specific subareas are: 3.1. Collaboration; 3.2 Management; 3.3. Involvement of external parties.

The methodological tools described in the next section conceptually reflect this articulation, with the aim of guiding the systematic examination of the knowledge and competences gained through the participation in the eTwinning community.

4.3 Research methodology

In this section we present the research methodology adopted in conducting the empirical study. First, we describe the strategy and the research questions that guided the study of the impact of the eTwinning experience on participants' professional development. Afterwards, we present the data collection tools, namely the questionnaire and the interview. Finally, in the last subparagraph, we linger on the methods and procedures for analysing data.

4.3.1. RESEARCH QUESTIONS

The research aimed to assess the impact of eTwinning on the innovative professional development of in-service teachers in Italy. The evaluation of the eTwinning's impact is based on the quantitative and qualitative exploration of the relationships between the participation of teachers in eTwinning activities (projects, groups, online seminars, Learning Events, face-to-face workshops) and the competences outlined in the previous paragraph. The mixed methods research (Trinchero, Robasto, 2019) triangulated a quantitative survey of teachers' perceptions of eTwinning's contribution to

their professional development with a collection of case studies on their teaching, training and participation practices in their eTwinning experience. This latter, by its very nature, simultaneously takes place in the local school community and in the international eTwinning teachers' community. As openly shared with research participants, in this study we adopted a rather broad and multidimensional concept of "eTwinning experience", defining it as the set of experiences within the community, from participation in projects to whole range of training opportunities, including episodes of peer learning.

The two general research questions formulated to guide the empirical study are both anchored in the three competence areas of the framework outlined above.

1. To what extent does the participation of teachers in eTwinning activities affect their perception of teaching competencies, teacher professionalism and school participation?
2. How do teachers make sense of the relationship between their eTwinning experience and the development of competencies related to teaching, teacher professionalism and school participation?

The first research question, on the one hand, focuses the investigation on teachers' perceptions of whether their eTwinning experience has improved their competences related to teaching, teacher professionalism and school participation. On the other hand, the question aims to verify the hypothesis that longer and more intense the eTwinning experience, the better the perception of the development of their own skills will be. The second question explores more in depth the meanings that teachers give to their teaching and training practices within the eTwinning community.

4.3.2. DATA COLLECTION TOOLS

A questionnaire was administered to collect data to answer the first quantitative question, while semi-structured interviews were conducted for the second qualitative question. The final version of the questionnaire was finalised after a pilot study to test the reliability of the instrument by administering it to a sample of 333 teachers from the eTwinning community (Nucci *et al.*, 2021, pp. 255-60).

The questionnaire is divided into 5 sections and 51 items. The first section (10 items) collects information on respondents (gender, age, years of teaching, participation in eTwinning training events, etc.); the second, third and fourth sections respectively detect teachers' perceptions of the competences in the area of Teaching (16 items), Teacher Professionalism (11 items) and School Participation (10 items); the fifth section (4 items) examines the uses of the eTwinning platform during the Covid-19 emergency.

For the three sections corresponding to the three competence areas, items were created that focused explicitly on the impact of eTwinning, and a Likert scale was used for each item. As exemplified in FIG. 4.1, each item derives from an indicator present in the competency framework.

FIGURE 4.1
Example of questionnaire item

eTwinning has improved my ability to develop Project Based Learning paths*
- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

* Student-centred teaching model based on guided solutions to real problems and/or the development of significant teaching projects.

The final questionnaire was sent to members of the eTwinning platform in Italy on 11 June 2020, excluding those who had already taken part in the pilot study. The questionnaire was sent online using the Lime Survey service. At the end of the survey period, 701 completed questionnaires were collected which, added to the 333 questionnaires previously collected in the pilot study, constitute a total of 1,034 questionnaires taken into account for the analysis.

In order to collect data to answer the second research question, we decided to use the interview instrument. In this study, a type of semi-structured interview was chosen to ensure a high comparability of answers, as well as a certain flexibility in adapting some questions to the emerging contents (Kanizsa, 1998).

In the course of the interview, each question focused on a specific subarea of competence included in our theoretical frame. For example, the following question contained in the interview is aimed at understanding whether and how the eTwinning experience has contributed to the development of competences related to the Design subarea.

Did the eTwinning experience influence your ability to design teaching? If yes, how? Which particular activity(ies) within the eTwinning community (projects, training events, interactions with other teachers) has/have contributed more than others to the development of your teaching design competence?

As shown in TAB. 4.1, 9 individual interviews were conducted with as many teachers from different geographical areas, with different levels of experience and participation in the eTwinning community and different school grades at which they work. The nine teachers with these different characteristics were randomly chosen among those who had participated in the quantitative survey, i.e. the respondents to the questionnaire.

In this study, the 9 interviews conducted with in-service teachers in different geographical and school contexts constitute a multiple case study (Yin, 2003). All interviews were conducted remotely by a researcher through Webex in August and September 2020. Each interview lasted about 1 hour, except in two cases, in which the interviews lasted 40 minutes and 1 hour and 30 minutes respectively.

TABLE 4.1
Characteristics of the teachers interviewed

Teacher identification number	Geographical area	Experience and participation in eTwinning	Grade level
1	Southern Italy	Average (4-8 projects)	Upper Secondary School
2	Northern Italy	Average (4-8 projects)	Primary school
3	Central Italy	Minimal (1-3 projects)	Upper Secondary School
4	Central Italy	Average (4-8 projects)	Lower Secondary School
5	Northern Italy	Minimal (1-3 projects)	Lower Secondary School
6	Southern Italy	Minimal (1-3 projects)	Primary school
7	Central Italy	Advanced (>8 projects)	Primary school
8	Northern Italy	Advanced (>8 projects)	Upper Secondary School
9	Northern Italy	Advanced (>8 projects)	Upper Secondary School

4.3.3. DATA ANALYSIS METHODS AND PROCEDURES

As regards the quantitative analysis, descriptive analyses of the sample were carried out beforehand, such as gender, age, work experiences, region of origin, contractual status, role in the school, role in eTwinning and number of projects carried out. Secondly, the descriptive analyses of the operational variables obtained through the questionnaire were carried out by calculating average, minimum and maximum standard deviation.

Finally, in order to calculate the relationship between operational variables, Pearson's correlation *r* was calculated between the scores referring to the perception of the eTwinning experience for innovative professional development related to the three competence areas and the number of events, number of projects and time of enrolment (in months). Pearson's coefficient *r* is a linear correlation index that measures the strength of the relationship between two variables (Howell, 2012).

With regard to the interviews, a thematic analysis was conducted (Braun, Clarke, 2006) in order to identify recurrent and significant patterns (themes) in the text corpus. The coding of the texts deemed to be relevant for the research question was carried out by adopting a theory-driven approach, which involves the definition of ex ante codes derived from pre-existing theories (Boyatzis, 1998). In our study, the a priori defined codes corresponded to the competence sub-areas of the developed framework, e.g. the sub-areas Professional Ethics (digital) and Professional Development (digital) of the Teacher Professionalism area.

The coded texts were then set out in three coding tables corresponding to the three areas of competence, in order to facilitate a systematic comparison between the codes identified in the various interviews, which allowed the researchers to identify topics of particular interest to answer the research question.

4.4
Results of the questionnaire analysis

4.4.1. THE RESEARCH SAMPLE

1,034 (943 females and 91 males) members of the eTwinning platform in Italy, aged between 18 and 70, took part in this study ($M = 51.20$; $S.D. = 7.5$).

96.62% ($n = 999$) of participants reported being employed or in a role within the school in which they work. 92% of the participants ($n = 951$) work as teachers and 0.8 per cent as headteachers, and both declared a minimum of one year and a maximum of 55 years ($M = 21.41$; $S.D. = 9.25$) of teaching experience. 31.2% ($n = 323$) of participants worked only in upper secondary schools, 30.2% ($n = 312$) in primary schools and 27% ($n = 279$) in lower secondary schools. 7.1% ($n = 73$) reported having teaching experiences only in nursery schools. 4.6% ($n = 47$) of those who participated in the survey reported having teaching experiences in more than one school order and/or grade. 84.6% ($n = 875$) of the study participants are enrolled in the eTwinning platform as a teacher, 9% ($n = 93$) as an ambassador, and finally there are an Adviser and a Teachers Trainer. As of 1 June 2020, the participants in the survey have been enrolled on average for 4 years, with a minimum of 3 months to a maximum of 184 months, about 15 years ($M = 50.36$; $S.D. = 40.19$).

From TAB. 4.2 it can be observed that Lazio and Campania are the most represented regions in the study, with 15.7% and 10.2% of the participants, respectively. Friuli-Venezia Giulia and Valle d'Aosta, on the other hand, are the two least represented regions in the study, with respectively 0.9 and 0.2%.

TABLE 4.2
Frequencies and percentages of teachers by region

Region	*n*	%
Lazio	162	15.70
Campania	105	10.20
Puglia	96	9.30
Sicilia	96	9.30
Lombardy	70	6.80
Emilia-Romagna	61	5.90
Abruzzo	60	5.80
Veneto	48	4.60
Tuscany	42	4.10
Piedmont	40	3.90
Calabria	34	3.30
Umbria	29	2.80

TABLE 4.2 (*following*)

Region	*n*	%
Marche	26	2.50
Liguria	25	2.40
Sardinia	21	2.00
Molise	19	1.80
Basilicata	12	1.20
Trentino-Alto Adige	10	1.00
Friuli-Venezia Giulia	9	0.90
Valle d'Aosta	2	0.20
Missing	67	6.50
Total	1,034	100

TAB. 4.3 shows some descriptive data regarding the participants' experience with the eTwinning platform. On average, participants have carried out 9.34 projects since they were enrolled in eTwinning (*S.D.* = 26.17). In the 2018-19 school year, on average, they carried out 0.76 (*S.D.* = 6.47) national and European eTwinning training events in presence, 0.97 (*S.D.* = 9.01) regional seminars, 0.59 (*S.D.* = 4.21) online courses of long duration, and 1.54 (*S.D.* = 2.24) online courses of short duration.

TABLE 4.3
Descriptive statistics on both the number of projects carried out by participants since their registration and the events held in the 2018-19 school year

Variable	*n*	Median	*S.D.*	Minimum	Maximum
No. of projects while enrolled in eTwinning	977	9.34	26.17	0	151
No. of face-to-face national and European eTwinning training events you participated in the 2018-19 school year	1,034	0.76	6.47	0	10
No. of face-to-face regional eTwinning seminars you attended in the school year 2018-19	1,034	0.97	9.01	0	10
No. of long-term online eTwinning courses you attended in the 2018-19 school year	1,034	0.59	4.21	0	10
No. of short-term online eTwinning training meetings you attended in the 2018-19 school	1,034	1.54	2.24	0	10

4.4.2. DESCRIPTIVE ANALYSIS

TAB. 4.4 shows the descriptive analyses based on the questionnaire regarding the perception of the eTwinning experience in the 3 areas (Teaching, Teacher Professionalism and School Participation).

Participants reported high satisfaction with their eTwinning experience, believing that they have improved their comptences in the areas of Teaching ($M = 64.14$; $S.D. = 9.88$) and Teacher Professionalism ($M = 44.21$; $S.D. = 6.81$). As for the School Participation area, the trend is to consider the eTwinning experience as an improvement in their competences, but the result is less marked than in the two previous areas ($M = 37.15$; $S.D. = 6.66$).

TAB. 4.5 shows the descriptive analyses relating to the use of the eTwinning platform during the Covid-19 emergency of 2020. For all four types of use, the results indicate less use of the eTwinning platform during the emergency than in the previous period.

TABLE 4.4
Descriptive summary of operational variables related to satisfaction in the eTwinning experience

Variable	*n*	Median	*S.D.*	Minimum	Maximum
Teaching Area	1,034	64.14	9.88	0	80
Teacher Professionalism Area	1,034	44.21	6.81	0	55
School Participation Area	1,034	37.15	6.66	0	50

Note: High scores indicate high satisfaction in the eTwinning experience.

TABLE 4.5
Descriptive summary of the operational variables relating to the use of eTwinning during the Covid-19 emergency in Italy in 2020

Variable	*n*	Median	*S.D.*	Minimum	Maximum
I used the eTwinning platform to teach my students	1,034	2.54	1.12	1	5
I used the eTwinning platform for my professional training	1,034	2.84	1.19	1	5
I used the eTwinning platform to interact and cooperate with other members of my school community	1,034	2.54	1.05	1	5
My degree of use of the eTwinning platform has been... (1 – Much less than before; 5 – Much more than before)	1,034	2.76	1.21	1	5

Note: high scores indicate greater use.

4.4.3. CORRELATIONS

TAB. 4.6 shows the correlations based on the calculation of Pearson's r coefficient between the scores on satisfaction with the use of the platform for personal growth, on the one hand, and the number of events, the number of projects and the time of registration (in months), on the other hand. The results indicate that there is a significant and positive relationship between the time of registration on the platform and the score in all areas of the questionnaire, that is Didactics ($r = 0.221$; $p < 0.01$), Teacher Professionalism ($r = 0.205$; $p < 0.01$) School Participation ($r = 0.128$; $p < 0.01$) and also the total score ($r = 0.204$; $p < 0.01$). In addition, it emerges that there is a significant positive relationship between the number of projects carried out during the eTwinning enrolment and the score in all areas of the questionnaire, including Didactics ($r = 0.295$; $p < 0.01$), Teacher Professionalism ($r = 0.285$; $p < 0.01$) and School Participation ($r = 0.190$; $p < 0.01$).

As shown in TAB. 4.6, all of the event types undertaken during the 2018-19 school year appear to have a significant and positive relationship with the areas of the questionnaire that indicate the respondents' perceived effectiveness of the eTwinning experience on their competences development.

TABLE 4.6
Correlation between eTwinning experience satisfaction questionnaire scores and time of registration, number of events and number of projects carried out

Variable	*n*	*M*	*S.D.*	1	2	3	4	5	6	7	8	9
1. Teaching Area	1,034	64.14	9.88	–								
2.Teacher Professionalism Area	1,034	44.21	6.81	0.852**	–							
3.School Participation Area	1,034	37.15	6.66	0.756**	0.742**	–						
4.Registration time (in months)	970	50.36	40.19	0.221**	0.205**	0.128**	–					
5.No. of projects while enrolled in eTwinning	977	9.34	26.17	0.295**	0.285**	0.190**	0.490**	–				
6. No. of face-to-face national and European training events during the 2018-19 school year	1,034	0.76	6.47	0.168**	0.165**	0.151**	0.123**	0.213**	–			

(*following*)

TABLE 4.6 (*following*)

Variable	*n*	*M*	*S.D.*	1	2	3	4	5	6	7	8	9
7. No. of face-to-face regional seminars during the 2018-19 school year	1,034	0.97	9.01	0.233**	0.243**	0.169**	0.307**	0.352**	0.399**	–		
8. No. of long-term online courses during the 2018-19 school year	1,034	0.59	4.21	0.253**	0.249**	0.168**	0.163**	0.373**	0.367**	0.368**	–	
9. No. of short-term online training meetings during the 2018-19 academic year	1,034	1.54	2.24	0.277**	0.269**	0.181**	0.216**	0.466**	0.373**	0.420**	0.503**	–

** $p < 0.01$

Finally, a positive and significant relationship was observed between the registration time and the number of projects carried out ($r = 0.490$; $p < 0.01$).

The analyses suggest that there is a significant and positive relationship among the number of events participants attended during the 2018-19 school year, the number of projects, the amount of time they have been eTwinning members and the perceived effectiveness of the eTwinning experience related to the development of the competences in the three areas.

TAB. 4.7 shows the relationships between the use of the platform during the pandemic and the number of events, seminars and projects carried out. This relation is in all cases positive but weak ($r < 0.2$). As the number of seminars, courses and training meetings held during the 2018-19 academic year and the number of projects carried out on the platform since registration increases, the use of the platform during the pandemic also increases.

TABLE 4.7
Correlation between the use of the platform during the pandemic and the number of events, seminars and projects attended

Variable	*n*	*M*	*S.D.*	1	2	3	4	5	6	7	8	9
1. Use of platform for teaching	1,034	2.54	1.12	–								

TABLE 4.7 (*following*)

Variable	*n*	*M*	*S.D.*	1	2	3	4	5	6	7	8	9
2. Use of platform for professional training	1,034	2.84	1.19	0.641**	–							
3. Use of platform for relations with other members of the school community	1,034	2.54	1.05	0.712**	0.705**	–						
4. Generic use of the platform	1,034	2.76	1.21	0.77**	0.8**	0.76**	–					
5. No. of projects while enrolled in eTwinning	977	9.34	26.17	0.14**	0.15**	0.14**	0.17**	–				
6. No. of face-to-face national and European training events during the 2018-19 school year	1,034	0.76	6.47	0.08**	0.07*	0.06*	0.08**	0.21**	–			
7. No. of face-to-face regional seminars during the 2018-19 school year	1,034	0.97	9.01	0.1**	0.15**	0.11**	0.13**	0.35**	0.4**	–		
8. No. of long-term online courses during the 2018-19 school year	1,034	0.59	4.21	0.13**	0.14**	0.09**	0.13**	0.37**	0.37**	0.37**	–	
9. N No. of short-term online training meetings during the 2018-19 academic year	1,034	1.54	2.24	0.15**	0.18**	0.13**	0.18**	0.47**	0.37**	0.42**	0.5**	–

4.5
Triangulation and discussion

In this section, we discuss in the light of the scientific literature on teachers' professional development, some trends summarised in the previous section and compare them with those emerged from the analysis of the interviews, thereby carrying out

a triangulation (Yin, 2003) between the quantitative and qualitative results of the study.

The analysis of the responses to the questionnaire clearly showed that teachers believe that their teaching and training experience in the eTwinning community has strongly contributed to the development of competences in the area of Teaching and Teacher Professionalism. As for the area of School Participation, the trend is to consider the experience as positive for the improvement of professional competences, but the result is less strong than in the previous two areas.

In line with these positive trends, the thematic analysis of the interviews revealed several widely shared benefits of the eTwinning experience in all areas of competence. However, the analysis also allowed researchers to identify some poorly expressed but particularly significant potential of the eTwinning initiative for the professional development of teachers, as well as some areas of possible improvement of the initiative itself. Below we first focus on the professional development benefits that have frequently emerged across the nine interviews conducted, and then focus on some issues that indicate potential, weaknesses and areas for improvement of the eTwinning initiative.

4.5.1. PROFESSIONAL DEVELOPMENT BENEFITS IN ETWINNING COMMUNITY

Compared to the Teaching area, the perception of improvement explored through interviews seems to focus on the ability to co-design educational interventions, in the expansion and diversification of the use of digital technologies for teaching and in the promotion of cross-disciplinary and students' digital competences.

The common perception is that the Project Based Learning (PBL) model that characterises the implementation of eTwinning projects allows teachers to better learn how to design education systematically and collaboratively. In general, such learning is portrayed as innovative in a teaching career or in any case crucial in the development of competences for instructional design.

> I had never managed projects of any kind so definitely yes, eTwinning influenced my design ability. Already the fact that it requires defining the phases of the project in advance, having to agree with colleagues on the times, for me it was always difficult, so it certainly gave me the basis of designing (Teacher No. 9).

In addition, the cooperative dimension of the teaching design practice is often emphasised and appreciated in the eTwinning design mode.

> In eTwinning you define the basic points, but then there is always a re-discussion, this is done continuously, especially through the eTwinning channel (Teacher No. 4).

Considering the interviewees' constant reference to project management, it seems that teaching design skills are acquired through collaboration and coordination among colleagues participating in a project rather than in eTwinning training events.

From this perspective, the eTwinning platform represents an enabling digital framework (or layout) within which teachers cooperate in educational design (Rivoltella, Rossi, 2019), making the digital design artefact an effective mediation device system (Rossi, 2016).

Many respondents also highlighted how the eTwinning experience has allowed them to expand and diversify the use of digital technologies for teaching. As for teaching design, the development of this competence is almost always described in the field of didactic practice. In this sense, education technology training seems to be strongly favoured by the concrete experience of teaching through eTwinning and its sharing within a community of practices (Wenger, 1998) or, to put it differently, in a network of practices (Brown, Duguid, 2000). However, the co-construction of technological and pedagogical knowledge (Mishra, Koehler, 2006) can assume different meanings depending also on the specific digital teaching experiences of teachers. For example, in the interviews, some teachers refer to their unprecedented discovery of new digital applications and tools, when conducting eTwinning projects, while others explain how the eTwinning experience enabled them not so much to discover new digital technologies, but rather to use the digital tools they were already familiar with in their daily teaching.

Another widely shared benefit of eTwinning concerns the learning processes and outcomes of pupils in eTwinning projects. In particular, all teachers observe that the active participation of students in eTwinning projects is generally strongly motivated by the opportunity of interacting online among peers, and that through this interaction they have the chance to develop their relational and communication skills in a virtual and multicultural environment.

> I have seen how much hold it has on the guys and therefore how much willingness they then put in, how much energy. Definitely for exchange and comparison, this is something the guys are very interested in (Teacher No. 1).

As some teachers point out, the promotion of the transversal skills of students in a multicultural context such as eTwinning is also accompanied by a more significant learning of the English language, as it is more situated in interpersonal relationships between peers.

> I see that children have a different way of approaching the English language if they know that they have to meet with other children, or in any case that their work is seen by other children like them: it has another value (Teacher No. 7).

Closely related to the theme of promoting cross-disciplinary skills was also the development of digital skills, in particular the ability of students to create media products. In this regard, six respondents observed that many students in eTwinning projects have learned to make and share videos and multimedia presentations with teachers and their peers. The benefits of media production in terms of motivation and the development of students' sense of self-efficacy were particularly emphasised.

In the end [students] are satisfied because they see the history, the evolution of the work, so they realise where they started from, where they arrived and their sense of effectiveness increases, gives them a positive reinforcement, stimulates them, motivates them (Teacher No. 5).

More generally, the accounts and considerations of the interviewees with respect to the promotion of students' cross-disciplinary and digital skills tend to represent eTwinning as a "third space" (Gutiérrez, 2008) located between the first space of informal learning and the second space of formal learning, a space of active and continuous negotiation of learning and broader socio-cultural literacy in which the student's agency is more valued.

As regards the area of Teacher Professionalism, the eTwinning initiative has been appreciated as an opportunity to cultivate a digital ethic in a safe and secure environment. The theme of cultivating a digital ethic (Calvani, Fini, Ranieri, 2010) in a safe environment has emerged in almost all interviews. In this case safe and secure environment refers to the eTwinning platform, whose high level of security teachers appreciate: the promotion of a digital ethic is first and foremost a process of continuous training in the safe and responsible use of digital technologies. For some interviewees, the raising of awareness in this regard takes place predominantly through direct teaching, while for others it takes place in a more self-directed or collaborative manner among peers.

I have also followed, here on the eTwinning platform, the course INDIRE organised in collaboration with "connected generations". Then in eTwinning there are always, both on *Safer Internet Day* and *Code Week*, online events that are offered; then there are groups, I for example have joined several groups including one concerning digital matters (Teacher No. 8).

Secondly, the topic is more specifically concerned with knowledge of the laws governing privacy and copyright on the web, as well as the responsible management and sharing of digital resources (Punie, Redecker, 2017). Several teachers have recognized that the eTwinning experience has represented a valuable educational opportunity in this regard.

In addition, four teachers explained how the eTwinning experience helped to promote a digital ethic not only at the individual level, but also with reference to the school community. In this respect, the interviewees mention a number of practices aimed at promoting teachers' and parents' awareness of an ethically oriented use of digital technologies.

We have also tried to update the dedicated section of the school website, dedicated to network security, so it has encouraged other initiatives that have increased the awareness that was already present perhaps among teachers, have expanded it, perhaps even among those who had not participated in specific projects (Teacher No. 5).

It seems interesting to note that in some cases the cultivation of a digital ethos within the eTwinning experience is accompanied by its broader promotion among colleagues

in the school by eTwinners, especially the more experienced ones. This dynamic can be interpreted as further evidence of the effectiveness of peer education in the eTwinning community. In addition, it represents peculiar line of professional development that can be integrated into the education of the school community. In fact, the development of the ethical dimension of digital competence (Calvani, Fini, Ranieri, 2010; Ranieri, Fabbro, Nardi, 2019) does not only affect young students, but also the teachers (Punie, Redecker, 2017) with whom the rules of conduct in the school community are negotiated.

In the School Participation area, the substantially positive trend is reflected in the synergetic collaboration with project partners, the ability to integrate eTwinning projects into the school curriculum and the involvement of parents in the projects.

While collaboration between project partners was rather predictable, as the cooperative dynamic between teachers is intrinsic to eTwinning projects, it is interesting to understand how and why collaboration within this professional development network seems to be more synergetic than collaboration between teachers in the same school. What seems to make the difference is a greater willingness of teachers to support each other and the symmetric relationships between teachers in the eTwinning community.

First of all, a very symmetric relationship that sometimes is not even at the level of your school was detected.

> Seniority I feel quite a bit in schools. So it's not like you can come along, propose something, there's not much desire to change. While in the eTwinning community there is a desire to exchange, to learn, but also to make knowledge available, there is a much more equal exchange (Teacher No. 9).

Moreover, sometimes interviewees pointed out that collaboration between project partners is also fostered by the quality of the interpersonal relationships created between teachers, as well as by the mutual recognition of each other's competences. In this sense, as the following excerpt exemplifies, the emotional dimension of relationships between teachers can also play a key role in the process of co-construction and enhancement of their professional identity (Hargreaves, 1998).

> For that period [of the eTwinning project] you have a travelling companion with whom you interface and you feel good and you exchange ideas, you like to be told that you did a good job, you like to tell someone else that they did a good job, because we all need that (Teacher No. 8).

The integration of eTwinning projects in the school curriculum is conceived by all respondents as a crucial aspect to effectively and sustainably manage projects within their teaching profession, and therefore in their school routine.

> Basically, I have always tried, in eTwinning projects, to work on content that I would have to face in the school year, always (Teacher No. 1).

In addition, it should be noted that the identification of convergences between eTwinning projects and the school curriculum also needs a certain awareness on the part of eTwinners regarding the emerging strategic objectives among colleagues in their class and at school. More generally, taking up the three knowledge domains of the TPACK (Mishra, Koehler, 2006), the importance attributed by participants to integrating eTwinning projects into the curriculum (or vice versa) can be interpreted as the need to promote not only teachers' technological and pedagogical knowledge, but also their content knowledge. However, as we will explain below, the ability or willingness to integrate the micro-design of an eTwinning project within the broader curricular macro-design may encounter different resistances.

In almost all the interviews, the teachers have testified some form of involvement of the students' parents in the eTwinning projects. Sometimes participation is limited to the interest and enthusiasm expressed by parents for the results of projects disseminated by teachers and students through dedicated events or at the beginning of the school year, when they are informed about the contents and objectives of the projects.

More often, the involvement of parents seems to take the form of active support for the educational activities of their children, in particular the youngest who attend primary school or the first years of secondary school.

> There was the involvement of the family, because there was also an interview at home: they had to see how they engaged in recycling at home, how the father went to work. All things related to pollution and calculating the ecological footprint a bit, so that was very engaging for the family (Teacher No. 7).

Despite this, obviously not all parents are involved in eTwinning projects in the same way and, as a teacher suggests, the absence of interest or participation of some may depend on the fact that parents perceive eTwinning educational scenarios as extra-curricular activities.

4.5.2. POTENTIAL AND AREAS FOR IMPROVEMENT OF THE ETWINNING INITIATIVE

As we have observed above, in the Teaching area it has emerged that some teachers have had the opportunity to apply their digital and teaching competences acquired in the context of eTwinning experience also in their ordinary teaching. Two interviewees observed how some digital skills acquired within the eTwinning experience were successfully integrated into their teaching practice, in particular in distance learning.

> In distance learning I used Book Creator to work with my students, in my own subject and not through eTwinning, so I learned these things there and then used them in my ordinary teaching (Teacher No. 8).

Sometimes the eTwinning experience can therefore promote not only the development of these skills, but also the transfer of good digital teaching practices. This dy-

namic can in turn be interpreted as evidence of particularly incisive didactic innovation in the long term.

Another significant educational potential concerns evaluation and, specifically, the way in which the eTwinning experience can contribute to diversifying evaluation methods.

From the accounts of seven teachers on their assessment practices, what emerges is the difference between the approach to assessing pupils' learning processes and outcomes in the context of eTwinning projects and the approach that tends to characterise assessments in the school environment. In the teachers' experience, the latter usually corresponds to a summative assessment of the learning outcomes of a specific discipline through written and/or oral tests. Conversely, assessment in eTwinning projects usually includes both formative and summative assessment, which are sometimes integrated into the assessment of the subject(s) taught by the teachers involved in the project.

> Often eTwinning projects involve the collaboration of the pupils, then it is difficult to give due credit to each one, because then the assessment has to be individual. Then I try to use it as an extra element, for example I see who has been more proactive and then I put a judgment, I note it on the register if there is the possibility of writing something down, for example the words "punctuality in the delivery of the work", maybe I write excellent as a judgment and then in the end everything flows into the assessment [of the subject], it is more the attitude I value (Teacher No. 1).

However, the diversification of the assessment methods also emerges in another sense, that is, as a diversification from one teacher to another of the methods of integrating the eTwinning assessment in the formal school assessment, whether it refers to the subjects or cross-disciplinary skills. Specifically, it seems that some teachers manage to integrate systematically the assessment of eTwinning projects into the school assessment of all students, while others do not.

As one teacher also states, the difficulty of always integrating eTwinning into school assessment suggests that there is an educational need regarding assessment methods.

> I would like eTwinning to train us a bit more on assessment, to help us understand what and how to assess (Teacher No. 1).

From this point of view, the potential of the PBL model incorporated in eTwinning teaching consists in being able to carry out assessments that take into account not only individual but also collective learning in the group work that often characterises eTwinning projects, as well as the cross-disciplinary skills of students and not only the knowledge related to the different subjects. In addition, also with regard to evaluation, the possibility of tracking and storing the content processed by students in the eTwinning platform suggests how the eTwinning experience can be an opportunity for teachers to learn to support evaluation through digital technologies. For example, it

has emerged that for some the storage of projects in the eTwinning platform facilitates the process of formative and summative assessment.

By putting all the materials produced in a shared repository, eTwinning makes it easier for you to find them again, to go back and look at them again. Or within the projects there are videos, so maybe one looks at the video again to point out if some observation was missed (Teacher No. 5).

In sum, the eTwinning experience can represent a valuable opportunity for teachers and schools to innovate assessment practices (Galliani, 2015) as it allows teachers not only to implement a learning assessment (summative assessment) within a perspective of control, but also to carry out an assessment for learning (formative assessment) with a view to development and improvement (Weeden, Winter, Broadfoot, 2002). In addition, the eTwinning platform also allows teachers for distributed (or embedded) assessment in which "opportunities to evaluate student progress and performance are integrated into the learning materials and are virtually indistinguishable from ordinary classroom activities" (Wilson, Sloane, 2000, p. 182).

A further potential highlighted in some teachers' reports concerns the increased inclusion of pupils in the learning process within eTwinning projects.

All the eTwinning projects I have done have always been very inclusive, even the children, I have always tried to involve them, make them participate even with their profile, and I have always found them very interested because for once they do the same things as others. For example, in the computer room we all go on the platform, they feel like the others (Teacher No. 8).

In some cases, it is specified that students with special educational needs and/or migrant backgrounds are the main beneficiaries of this increased educational inclusion.

Children with special needs are very happy because they really feel included, they are such simple activities, so fun that the children participate (Teacher No. 2).

I managed to do an interview with my students with a relative of mine, a retired person, a lady of a certain age, who had always worked in business. She remembered the switchboard calls, the life before the photocopier, before the fax machine, before everything. She described a bit how her professional life had changed; but above all she was also the daughter of Italian immigrants and then this aspect in the interview emerged, having many foreign students they identified very much with her story (Teacher No. 9).

While the occasional recognition of more inclusive learning cannot be automatically interpreted as evidence of the inclusive nature of teaching practices in the context of eTwinning projects, on the other hand, from teachers' stories emerge some peculiarities characterising inclusive educational practices, such as the enhancement of cultural diversity through educational paths that involve cooperation between students from different countries, the contingency and authenticity of learning and evaluation activities, the multimedia and multimodality of the teaching resources used to intercept

the different learning styles, and the empowerment of students through their active positioning in the process of co-building of knowledge and skills (Ranieri, Fabbro, Nardi, 2019; Rivoltella, 2018).

Concerning the area of Teacher Professionalism, the results of the interview analysis strongly suggest an alignment between teachers' digital professional development in the context of the eTwinning experience and their educational needs, but at the same time it also shows how the need for formal recognition of the eTwinning training experience in terms of teachers' scores is not fully met. In particular, a teacher, while acknowledging the alignment between eTwinning's digital professional development and her training needs, noted that the need for institutional recognition of eTwinning in Italy is not fully satisfied compared to other countries.

> Now I am working on it and I am trying to improve myself more and more because, in fact, it is a very useful channel that in my opinion should be taken into account as they do in other European countries, also with regard to teacher scores (Teacher No. 4).

The lack of such recognition by the Ministry of Education can be an obstacle to the continuous active involvement of some teachers in the eTwinning community, as well as a resistance to initial access to the community. Consequently, more institutional support and recognition are necessary for the future of the eTwinning initiative.

The main criticality of the eTwinning experience is related to the area of School Participation and corresponds to the difficulty in involving colleagues in their schools in eTwinning projects. In six interviews, the difficulty for teachers to involve colleagues from the school in which they teach in eTwinning projects clearly emerged. Since the eTwinning educational paths in are often interdisciplinary, the collaboration between colleagues teaching in the same classroom is very often searched for, but is not always fully realised.

Although the interviews include examples where two teachers of the same class are involved in eTwinning projects, the attempt to extend the collaboration to several teachers seems to be met with some reluctance. According to some respondents, the difficulty for other teachers to participate in the projects depends on perceiving this involvement as a work overload which is far from the school curriculum. As we have shown above, indeed, the micro-design of eTwinning activities can be easily integrated into the curricular macro-design, but this requires instructional design competences that cannot be taken for granted.

According to one of the teachers interviewed, the difference between the level of collaboration between school colleagues and between the partners – Italian or foreign – involved in eTwinning projects also depends on a different conception of educational priorities within the school system.

> While at school the focus is on the programme, here [in eTwinning] you can perceive a greater open-mindedness. People are more open-minded, there is more discussion than just sharing

with colleagues of the same school, perhaps because we always tend to finish the syllabus, the lessons, and we forget some important concepts (Teacher No. 6).

Two additional reasons for the reluctance to collaborate in eTwinning projects seem to be the fear of engaging with digital technologies for teaching, and a lack of knowledge of the English language.

The difficulty in engaging colleagues can be interpreted as a possible explanation for the fact that respondents felt their improvement in the area of School Participation limited when compared to the other areas. Nevertheless, in terms of school participation, from the interviews it also emerged that, in some cases, the participants' eTwinning training and teaching activities led to the involvement not only of teachers, managers, students and parents, but also of some local stakeholders, and to develop eTwinning projects in line with the local context.

As reported by four teachers, sometimes the eTwinning projects also manage to involve local stakeholders, specifically municipal administrations, teachers and pupils from other schools not directly involved in the project, local businesses and/or non-governmental organisations.

According to the interviews, the inclusion of actors from outside the school community seems to occur most often in the context of civic and/or ecological education projects. The potential of eTwinning in this sense can be seen as a valuable opportunity to concretely promote a «whole school approach» (Goldberg *et al.*, 2019) able to integrate the knowledge and skills available in the territory in the teaching and educational action.

4.6 Conclusions

Now in its sixteenth year of life, the eTwinning community appears as a project that is still vital and promising. The results of the research here presented, in fact, indicate how the educational and training experience of eTwinners has been generally positive in terms of professional development and innovation of pedagogical-educational practices. Quantitative data collected through questionnaires suggest that longer and more intense participation in eTwinning activities is associated with a better perception by teachers of the impact of this experience on their teaching, professional development, and participation in the life of the school community. The reasons for this association can be found in the teachers' own words, which have enabled us to deepen our qualitative understanding of the added value of this experience. From co-design to the effective use of digital technologies to teaching, from the promotion of digital ethics to continuous peer education, from the integration of eTwinning projects into the school curriculum to the involvement of parents, teachers have clarified the reasons underlying a generally very positive perception of the experience examined.

However, there are also critical issues that must be examined to unlock possible directions of development. The main difficulty for teachers concerns the involvement of their school colleagues in eTwinning projects, as emerged both from the answers to the questionnaires, pointing to school participation as an area of lesser incidence, and from the interviews. In this respect, it is interesting to note that, according to several eTwinners, greater involvement of colleagues can be achieved through specific training on how to integrate eTwinning projects into the school curriculum (or vice versa) and a clear official recognition of this learning experience.

A second issue of particular interest concerns the difficulty some teachers experience in integrating the evaluation of eTwinning projects into regular school assessments. This apparent incompatibility is also put forward by some teachers as one of the obstacles to a wider dissemination of the eTwinning Action at school. However, this difficulty can be mitigated by outlining and suggesting different evaluation methods to teachers, as well as specific strategies for integrating different types of assessment into the school routine. Not only would the eTwinner community benefit from this shift in evaluation from a summative to a formative perspective, but it would also take advantage from it the quality and significance of the evaluation in the overall school environment. This is particularly true for the Italian school system, where the evaluation is often limited to the summative and individual evaluation of disciplinary knowledge, leaving out both the cross-disciplinary skills and the social dimension of learning that innovative teaching approaches, instead, tends to enhance.

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5

Training for assessment and assessment of training: the eTwinning virtuous example

by *Margherita Di Stasio* and *Laura Messini**

5.1 Introduction

In September 2014, the publication of the document *La buona scuola* ("The Good School", MIUR, 2014) placed the emphasis on the theme of teacher professionalism and its development.

This brought to the forefront an element that over the years, although not brought to the fore, had found its own evolution: the professional profile of the teacher and the skills that shape it.

It is necessary, in a perspective of analysis, to bear in mind that the references to the teacher profile in *The Good School* (document and law No. 107 of 13 July 2015) bring the issue to the fore, but are part of a much broader process of reflection. To account for the evolution of the teaching profile in the last fifteen years, we consider four profiles, two of a descriptive nature and two implemented or implementable; among these, two have constituted the theoretical or even instrumental basis for training and professional growth (cfr. FIG. 5.1).

Filippi and Romei (2006) draw a teacher profile consisting of "content skills", disciplinary and otherwise, and "instrumental skills", technological, pedagogical, legal and organisational. In a "reflective" perspective, the interweaving in place of these skills constitutes the horizon of meaning and the motivation within which the professionalism of the teacher is substantiated.

A profile that is not impositional, but orientative of the development of the teacher, as part of the school, and therefore of the school itself, a «reference capable of orienting professional practices in the direction of reflexivity and the construction of the community of practice within the school» (Bertone, Pedrelli, 2014) in which disciplinary, psycho-pedagogical, methodological, relational and communicative, and applied research skills are developed. We can thus describe the profile

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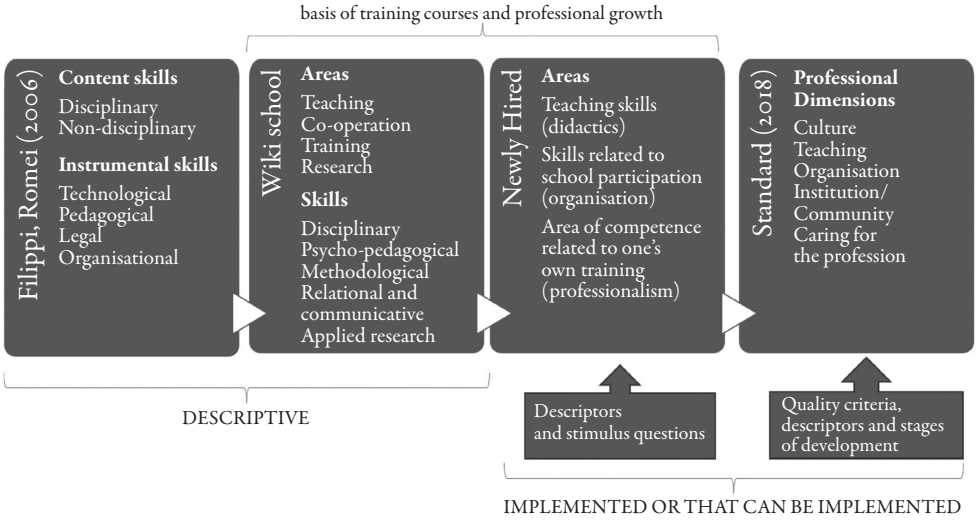
FIGURE 5.1
Professional profiles compared



underlying teacher professionalism as described by Wikischools, the «network of laboratory schools for the professional development of teachers» of which "Rinascita Livi" of Milan, "Scuola Città Pestalozzi" of Florence and "Don Milani" of Genoa are part.

The profile that has certainly had the greatest impact in the school's recent history is the one that guided the drafting of the "Competence self-assessment" proposed to newly qualified teachers in their induction period since 2014. The subject of various evolutions in the format, the "Competence self-assessment" guides the teacher along a path of reflection on his or her own professional trajectory, in which descriptors and stimulus questions lead to the analysis of three areas of competences relating to teaching, school participation, training under various dimensions. (Mangione *et al*., 2015; Rossi *et al*., 2015).

The most recent profile is that presented in the section dedicated to "Professional standards" of the document *Sviluppo professionale e qualità della formazione in servizio (Professional development and quality of in-service training)* (MIUR, 2018). Here the teacher professionalism is expressed in 5 dimensions: culture, teaching, organisation, institution/community, care of the profession, articulated in specific standards described by a definition of quality criteria and indicators. The path is traced through three stages of competence development: initial, basic and expert, intended not with a classificatory or merit value, but aimed at describing the evolution/progression of the traits that characterise professionalism.

5.2
Training and evaluation: how to acquire and support skills

For years now, the literature has spoken of the teacher as a "reflective practitioner" on the basis of the well-known and successful model identified and described by Schön (1987), characterised, therefore, by a metacognitive capacity and a researcher's attitude, which is first and foremost expressed in reflection on action.

This image also seems to be reflected in the legislation and in particular in the *Regulation laying down rules on the autonomy of educational institutions* (Italian Presidential Decree No. 275 of 8 March 1999) which emphasises the dimensions of autonomy (Pandolfini, 2014), teaching (Art. 4), organisational (Art. 5), research, experimentation and development (Art. 6), and which highlights the role of the teacher as a professional characterised by two essential notes: planning and research.

As we have seen, the theme of reflection and that of reflexivity are central to the logic underlying the development of the profiles of teaching competence.

This aspect leads us to two fundamental elements for the construction of professionalism: training and assessment, which, if read through the lens of reflexivity, assume peculiar characteristics both in their own definition and in the relationship that can occur between them.

5.2.1. TRAINING

The idea of training has long crossed the boundary of the hetero-directed and formal training event, of the traditionally understood course. It has primarily assumed multidimensional and open characters in the dimensions of space and time.

The characterisation of learning opportunities as formal, informal and non-formal (Law No. 92 of 28 June 2012) as serendipitous learning (Ranieri, Manca, 2013) allows the now shared recognition of the value of many ways, places and times for learning. This finds an explanation both in teaching and in training in a lifelong learning perspective that becomes particularly significant in the teacher's development path as a professional.

This is also the direction taken by the regulatory movement implemented following and as a corollary to the National Training Plan, such as, for example, the Ministry of Education Note, Prot. No. 35 of 7 January 2016, which refers to «a balanced mix of in-presence activities, personal study, reflection and documentation, networking, and the reworking and reporting on learning achieved», or the Ministry of Education Note, Prot. No. 47777 of 8 November 2017 by the Personnel Directorate, which speaks of «encouraging the use of didactic research and field training activities focused on observation, reflection, comparison of teaching

practices and their results in specific contexts, also with reference to documented successful innovative experiences».

5.2.2. ASSESSMENT

Even more pronounced, if possible, is the cultural change that is taking place around the topic of evaluation and enhancement of teacher training and professionalism, so much so that it finds particular prominence in the 2018 edition of the *Teaching and Learning International Survey*, known as TALIS (OECD, 2019), which devotes a special in-depth study to the topic *Aligning incentives and opportunities with teachers' professional development needs* (OECD, 2019, p. 179), describing the innovations compared to the previous edition that have emerged in Italy and Georgia.

While in the 2013 edition the TALIS (OECD, 2014) reported that only 57% of Italian teachers (TALIS average: 88%) stated that they had received some form of feedback, highlighting a strong lack of moments of reflection, exchange and comparison, in 2018 (OECD, 2019) 27% of teachers (media TALIS: 10%) stated that they had never received feedback within their school.

The delta detected by the TALIS is also evidenced in the *Teachers in Europe: Careers, Development and Well-being* report (Education, Audiovisual and Culture Executive Agency, 2021) where, however, it is connected, with an approach that can be partial, not so much to the broad movement of change generated by Law 107/2015, rule and preparatory document, but to the specific introduction of the pecuniary bonus. This element also brings with it an anomalous characterisation of the Italian system compared to those of other countries, where the assessment is aimed not at the financial payment but at all those factors that characterise the aspects of reflexivity, improvement and sharing typical of feedback.

The reflection on the assessment and comparison methods leads us to a further recent characterisation of the teacher professionalism framework.

The link of circularity between training, reflection and feedback methods is read as a concomitant and congruent element in the professional growth of both the teacher and his or her community, where it is expressed through collaboration and collegiality. This circularity factor is particularly highlighted, both, on the international scene, by the *Supporting Teacher Professionalism: Insights from TALIS* 2013 (OECD, 2016, p. 34) which called for «a transition from the vision of teaching as a solitary activity, owned by each teacher, to a vision of teaching as a professional activity open to collective observations, study and improvement», and, at the national level, in the section dedicated to "Quality and governance indicators" of the document *Sviluppo professionale e qualità della formazione in servizio (*"Professional development and quality of in-service training", MIUR, 2018).

5.3
Professional development, assessment, and comparison in the eTwinning framework

eTwinning is configured as a professional and scholastic community, one of the most significant both in terms of numbers and the approach it proposes to Italian teachers. That virtuous relationship between the development of the individual, the community and the network, wished for the training track strongly desired at the national level, seems to find a home here (cfr. FIG. 5.2) (MIUR, 2018).

Some elements in particular place it as a paradigmatic environment in which to experiment and support that path of professional development that norm and culture are designing, in which training, reflection and feedback are intertwined.

The formative dimension of practice, as already pointed out (cfr. CHAP. 2), has always been very present for the members of this community. Cooperation, comparison, sharing and a virtuous peer review dimension are almost endemic in a community that is based on the idea of "twinning".

For the dimension of comparison, the reference is to Quality Labels, for which teachers voluntarily submit documentation of their experience.

For the assessment dimension – widely understood in a perspective that includes self-assessment and peer assessment – we refer to a process that culminates with the MeTP tool and that can be followed through three reports: *Professional development of teachers: A study on current practice* (Vuorikari, 2011), *eTwinning seen closely: A pilot project on teacher skills development* (Kearney, 2016) *and Measuring the impact of activities on teaching and teacher skills development: Framework for monitoring eTwinning practice* (Pateraki, 2018).

Already the titles clearly represent the focus and purpose of this process: to support teachers' competence development in eTwinning practice.

To do this, the international eTwinning community has over time built and modified MeTP, a self-assessment tool.

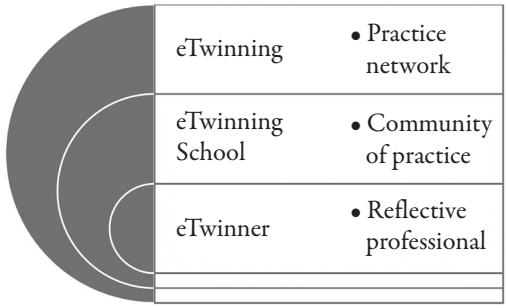
In its first version (Kearney, 2016) it consisted of 4 components:

1. pedagogical and digital skills;
2. levels at which a teacher can experiment and achieve these skills (from 1 to 5 with a descriptor for each level);
3. affirmations or statements for self-assessment that relate each competence to the action and the teaching reality;
4. data, that is, suggestions to identify supporting documentary data.

In version 2.0 (Pateraki, 2018) MeTP consists of:

1. digital and pedagogical skills to which collaborative work is added;
2. levels, articulated similarly to the previous version;
3. initial questions, i.e. a first questionnaire with nine demographic questions and a second with eight questions on the usefulness of MeTP 2.0 and their participation in eTwinning activities compared to the first version;

FIGURE 5.2
From the individual to the community in eTwinning



4. overall score for each of the three competences (1 to 3);
5. feedback page within an eTwinning group.

5.4 Structuring circularity between training and practice, reflection, and evaluation

The search for application routes useful for the formative enhancement of the eTwinning experience of teachers was the subject of research in 2016-18 by a study group consisting of INDIRE researchers and the Italian eTwinning National Support Organisation (NSO).

This Action has developed around two main lines, which have taken into account certain tools that have found particular value in recent times, in particular the Skills Balance Sheet and the Training Unit (Di Stasio, 2021).

Therefore, we proceeded to:

– the construction of a Competence Self-assessment Tool useful to represent the competence profile of the eTwinner teacher;

– the reading of the eTwinning experience in terms of recognisable training units within the National Teacher Training Plan, which in Italy regulates «mandatory, permanent and structural» training, starting from the provisions of Law 107/2015.

In order to accompany the eTwinning experience and characterise it from a training and development perspective, a "Competence Self-assessment" tool (Cinganotto *et al.*, 2017) was produced in order to guide the composition of the teacher's path, allow for teacher self-assessment, and encourage reflection aimed at making the eTwinning path more effective as a training experience. For this reason, the "Competence Self-assessment" tool was in synergy with the objectives of the Quality Label.

The "Competence self-assessment" tool had already been positively tested in the training of newly qualified teachers and, along with the self-assessment and the peer review, it is also indicated among the key contents of professional evaluation.

For this reason, the "Competence self-assessment" tool drawn up for the eTwinner uses the structure created for newly qualified teachers in 2016 as a basis, from which it borrows the areas and competences:

1. area of competences related to teaching (didactics);
2. area of competence relating to school participation (organisation);
3. area of competence related to training (professionalism).

However, to respond to the specificities of the eTwinning teacher, the skills descriptors were identified on the basis of the *Ten Years of eTwinning* document.

The specialisation process was then continued through a series of instrument validation steps with eTwinners.

During the design phase:

– we conducted 5 mini-focus groups with a sample of ambassadors;
– we conducted a focus group with the compilation of the "Competence self-assessment" and a questionnaire with ambassadors and eTwinners.

During the pre-test phase:

– we proposed the completion of the online Skills Profile and the completion of a questionnaire to a subset of the ambassadors involved in the project;
– we have read the eTwinning experience in a logic of continuity between the reference to the best training experiences in place in Ministry of Education Note Prot. N. 35 of 7 January 2016 and the exemplification of the moments of professional growth to be taken into account in the definition of training units, as provided for in the National Training Plan, namely: in-person and distance training, documented didactic experimentation and action research, networking, personal and collegial reflections, documentation and forms of return/reporting, with impact on the school, planning.

5.4.1. CONVERGENCE HYPOTHESIS

Self-assessment is a practice that, as seen, the international eTwinning community has been practicing for a long time through METP experimentation.

The cultural profile described by the Competence Assessment carried out by the Italian eTwinning NSO and the INDIRE researchers is derived from the results of *Ten Years On* and is also set in the Italian regulatory context. It is a type of device that has become customary among a large cohort of Italian teachers, their tutors and their school principals, as a consequence of the training probationary year.

Although the two instruments have a structure that does not make them immediately comparable (questions/statements vs. indicators/guiding questions/descriptions of competence levels), we have attempted below to provide the schematisation contained in TAB. 5.1.

TABLE 5.1
Comparison eTP-eTW-IT and hypothesis of convergence

MeTP		eTW-IT	
Areas	Questions (articulated on 5 statements of progressive positioning)	Indicators (related to guiding questions and related to 4 levels of positioning)	Areas
Pedagogical competence	8	30+	Area of competence related to teaching (Didactics)
Collaboration skills	8	16+	Area of competence related to school participation (Organisation)
Digital Competence	9	8*	
	4**	11	Area of competence related to training (Professionalism)

* in eTW-IT there are competence indicators distributed in the three areas and they are not grouped in a single dimension.
** MeTP contains competences distributed in the areas of pedagogical competence and collaboration competence.

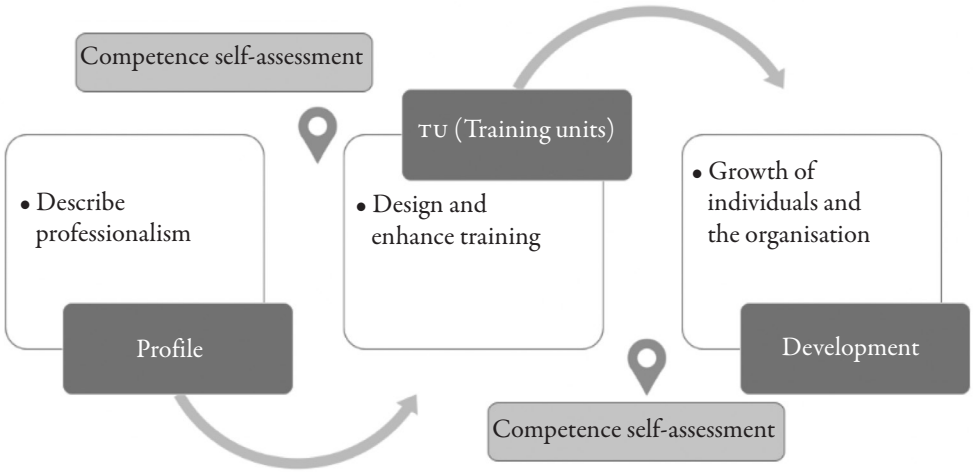
5.5 Conclusions

In this context, the idea of evaluation, in all its facets – expert evaluation, self-assessment and peer evaluation – is configured as a support for reflection on practice, in a dimension of recognition and visibility in the community within the context of professional development.

For the eTwinner, evaluating one's own work, one's own practices, in constant comparison with colleagues and the community, is an established practice. Evidence of this is the fact that, in the in-depth surveys carried out after the pre-test with a selected contingent of teachers who had participated, 6 out of 7 hypothesised the use of the "Competence self-assessment" for evaluating the effectiveness of the training course and as a basis for peer comparison. A constructive attitude and predisposition towards all elements of professional development, from formative assessment to reflection on practice and the valorisation of informal and non-formal experiences, are experienced by individuals, the community, and the practice network.

This appears to be the ideal terrain for proposing and testing pathways in which the description of professionalism through a competence profile is a conscious description of one's own professionalism (cfr. FIG. 5.3). The training unit is the node for designing and enhancing training to support the development of individuals and organisations. In this context, the cadenced use of the "Competence self-assessment"

FIGURE 5.3
Hypothesis of professionalism description path with the help of profile, "Competence self-assessment" and training units



tool at several moments, in self- or peer assessment, can become a real assessment exercise as training, and a practice that guides the construction of an assessment culture as support for personal, cultural and professional development and growth paths.

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6

Transferability of teachers' competences from eTwinning context to teaching of civic education

by *Maria Chiara Pettenati*, *Anna Tancredi* and *Sara Martinelli**

6.1 Introduction

From the 2020-21 school year, civic education has become compulsory in Italy since the first cycle of education. It is based on two principles (Law No. 92 of 20 August 2019, Articles 1 and 2):

1. Civic education contributes to forming responsible and active citizens, and to promoting full and conscious participation in the civic, cultural and social life of communities, with respect for rules, rights, and duties;
2. Civic education aims at increasing the knowledge of the Italian Constitution in educational institutions and the institutions of the European Union to promote the sharing of the principles of legality, active and digital citizenship, environmental sustainability and the right to health and personal well-being.

The civic education curriculum is divided into three conceptual nuclei (Constitution and legality, Sustainable development, and Digital Citizenship) with objectives and goals of competence already partially specified in the profiles of the National Indications both for the first and the second cycle, but also integrated with Ministerial decree No. 35 of 22 June 2020[1]. The didactics, which involves at least 33 hours of teaching and periodic and final assessment of students, enhances a cross-disciplinary approach and provides a strong co-ownership among all the teachers in the class coordination is assigned to a teacher and a contact person for civic education at the school level.

Although 2020-21 was a complex year to experiment with the introduction of this new teaching, some experiences show how it can represent an opportunity for an

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1. Italian Ministerial Decree No. 35 of 22 June 2020 and Annex A – *Guidelines for teaching civic education*, https://www.istruzione.it/educazione_civica/norme.html.

TABLE 6.1
Comparison of civic education thematic clusters and annual eTwinning thematic priorities

Thematic Nuclei of Civic Education	Annual eTwinning Thematic Priorities
Constitution, Law (national and international), Legality and Solidarity	Active citizenship (2015), Inclusion (2017), Democratic participation (2019)
Sustainable development, environmental education, knowledge, and protection of heritage and territory	Cultural heritage (2018), Climate change and sustainability (2020)
Digital Citizenship	Social media (2014), Digital citizenship (2016), Media literacy and disinformation (2021)

actual reversal of education and innovation of the curriculum where its introduction rests on three fundamental axes:

1. the interconnection among disciplinary bits of knowledge, i.e. overcoming disciplinary fragmentation, and among social, demographic, cultural and economic disciplines, and phenomena;
2. creativity, i.e. the use of innovative didactic and organizational models that make conscious and expert use of different media languages for documentation and action, also open to alliances with parties outside the educational institutions;
3. internationalisation as a connection with European citizenship and mastery of languages that use digital environments and foster the development of global citizenship skills.

All three dimensions mentioned above are indeed also characteristic elements of the eTwinning experience: interdisciplinarity, also supported by the thematic priorities (cfr. TAB. 6.1) that the Central Support Service (CSS) defines annually and that guide the support actions of the national and regional Organisations; the use of innovative teaching models, also supported by the accompaniment to the planning, management and adequate documentation of twinning; internationalisation, as a vision of a shared space for quality European education that goes beyond the borders of individual States.

There is, therefore, a great resonance between the thematic nuclei of civic education teaching and the interdisciplinary contexts that are commonly the subject of projects within the eTwinning world, as well as being accompanied by a targeted and qualified training offer at regional, national, and European level (cfr. CHAP. 3).

Following the introduction of the teaching of civic education, the Training Plan (cfr. Ministerial Letter of 16 July 2020, No. 19479) addressed the referents of schools with cascade training for all teachers.

It also provided a model to strengthen teachers about the three thematic nuclei (Constitution, Digital, and Sustainability) and their interconnection to the disci-

plines. That should possibly offer concrete examples of curriculum development and evaluation grids in connection with the profiles defined by the Guidelines concerning the different paths.

Although the Training Plan provided the necessary ingredients to support such complex and essential teaching, it was confronted with the limitation of training courses aimed only at referents for a total duration of at least 40 hours, with the commitment for these referents to become cascade trainers of their colleagues. The monitoring of the Plan conducted at a national level is still ongoing; however, some critical issues have emerged about key aspects both for schools and for referents and teachers in general:

– finding trainers trained in all the aspects mentioned above (schools);
– involving colleagues in the "transversality" (referents);
– linking disciplinary inputs to the three thematic clusters (referents);
– understanding and designing the cascade training (referents);
– understanding and implementing the documentation of organizational and teaching practices (referents);
– defining categories and grids of assessment suitable for the new teaching;
– designing the curriculum and teaching activities without "fragmenting" the didactics in the 33 hours per year to divide among the various disciplines.

eTwinning – which, by its nature and construction, makes the expert and conscious use of digital technology its vehicle, internationalization and interdisciplinarity its annual priority, and teacher training in methodological and technological innovation its working method – has already faced and overcome many of the above-mentioned challenges. Because of this premise, the connection between the two contexts finds its reason for further research.

6.2
Research questions

The analysis of the educational impact of the eTwinning experience on teacher training has allowed us to hypothesize that eTwinner teachers have been facilitated in the introduction of civic education as a subject at school, thanks to the mastery of innovative methodological and didactic approaches aiming at didactics by competence and the use of digital tools as a tool of citizenship and an amplifier of didactic effectiveness.

This intuition led us to formulate the following research questions related to the theme of transferability of experiences from eTwinning to civic education teaching:

1. What do the teaching experience in eTwinning and the teaching of civic education have in common?
2. What digital and methodological skills are valuable and transferable from the eTwinning context to the context of civic education?

3. Does the eTwinning experience foster in any way the transversality process that Law No. 92/2019 attributes to civic education?

6.3
Research methodology

As we decided to explore whether having experience in eTwinning projects can activate the transfer of competencies in teaching and organizing civic education's didactics, we felt that the focus group instrument was adequate to stimulate a fruitful discussion in a group. The group is homogeneous in terms of professionalism and experience in the context, albeit composed of teachers from different school levels, geographical areas, and schools of various sizes.

The focus group is a qualitative survey technique used in social research based on the information that emerges from a group discussion (4 to 12 people) on a theme or topic, with the contribution of a moderator and in an informal setting (Zammuner, 2006). The method is used to explore the opinions, attitudes and behaviour of social groups that are «protagonists of the research, able to elaborate a vision of the phenomenon to be investigated collectively» (Acocella, 2005, p. 83).

Cinzia Albanesi (2004) defines the focus group as a form of group interview that aims to produce data on a specific topic through the comparison among the participants, carried out in a relaxed atmosphere, based on planning with the support of a moderator and potentially secondary moderators. In this specific case, there was a moderator, a secondary moderator, and an observer.

The methodological choice led us to work with a small group of 4 eTwinning ambassador teachers aged between 45 and 57, who were representative of the experience, rather than building a representative probabilistic sample of the population (TAB. 6.2).

Participants in the focus group were offered a single theme, the transferability of experience from the eTwinning context to the teaching of civic education, investigated through the following guiding questions:

TABLE 6.2
Teachers who participated in the focus group

Teacher	Years of service at school	Years of eTwinning experience	Subject	School level
Emanuela Boffa Ballaran	27	10	Italian, English and Art	Primary
Caterina Bastianello	20	10	English	Lower Secondary
Laura Maffei	21	16	Humanities (Italian, History, Geography)	Lower Secondary
Giuseppina Gualtieri	18	7	History and Philosophy	Upper Secondary

1. Experiences of teaching in eTwinning and civic education: what elements do you think the two contexts have in common?
2. From the point of view of digital use and teaching methodologies, which elements that you experienced in eTwinning did you re-use in teaching civic education?
3. The teaching of civic education has its original character in the transversal perspective proposing to «go beyond the canons of a traditional discipline by assuming more properly the value of a transversal value matrix that must be combined with the study disciplines [...] to develop processes of interconnection between disciplinary and extra-disciplinary knowledge» (Italian Ministerial Decree 35/2020, Annex A, p. 3). How do the eTwinning experience and teaching foster or not foster these processes?

The focus group was conducted online in the "meeting" setting for 90 minutes.

6.4
Experience in eTwinning teaching and teaching civic education

6.4.1. WHAT ELEMENTS ARE IN COMMON BETWEEN THE TWO CONTEXTS?

The first research question aims to investigate what elements can be shared between the eTwinning experience and the teaching of civic education as it was introduced in our country with Law 92/2019 and described in the Guidelines produced by the Technical-Scientific Committee of the Ministry of Education.

Knowledge of the European area

eTwinning, initiated by the European Commission, is today Europe's largest community of teachers active in collaborative projects between schools. The introduction of civic education as a subject – focusing on the development in educational institutions of the knowledge of the Italian Constitution and the institutions of the European Union – consists of the possibility of developing and experimenting with a shared design between schools in other countries, putting teachers and students from all over Europe in communication.

Liaising with others implies

> accepting diversity... not everything happens as in our country. Knowing different cultures, coming into contact with them, and being "educated" to do it in a certain way, I believe, makes our pupils grow in a remarkable way. eTwinning fosters discovery through the experience of aspects of other cultures (Caterina, Lower Secondary).

Multicultural confrontation offers great potential but also significant challenges.

Meeting others in an international context allows «an approach to diversity through direct encounter and not the stereotype, being played out on the level of a real meeting, even through multimedia tools» (Caterina, Lower Secondary). One teacher

reports, as an illustrative case, a debate among the students on the Bataclan massacre, a discussion in which «an Italian pupil participated in an offensive and racist manner towards Tunisian students», generating a critical moment for the project teachers, but also allowing an opportunity for growth for all the classes and the student himself (Giuseppina, Upper Secondary).

The space in which we work is a European space... the best thing is to know and establish friendly relationships... it is a political function in the noblest sense, the creation of "a European area of education" (Giuseppina, Upper Secondary).

I have carried out projects with a focus on the European Union, a project with ad hoc European partners, and in other projects carried out in a transversal way beyond the chosen theme... The theme of eSafety always emerges in eTwinning projects (Emanuela, Primary).

Digital citizenship as education for communication and meeting through digital tools

In the eTwinning reality, digital citizenship is acquired directly "in the field" by exercising active citizenship through dialogue and debate with teachers and pupils of a different country, language, and culture through the use of digital tools, of which one must acquire competence and awareness.

There are many dimensions of eTwinning confirmed by all the teachers as having the potential to develop citizenship competencies: respecting deadlines and rules for communicating and building activities and projects together protecting personal data; rules on codes of conduct, the so-called "netiquette", through clear rules that all participants must follow to hold a dialogue and cooperate in a shared online space learning about copyright licenses for multimedia documents.

These aspects are not learned from a theoretical point of view but experienced first-hand through authentic relationships and communication with the other.

[In eTwinning projects], everything has to do with civic education because it is active citizenship: the first thing I teach students as they enter TwinSpace are the rules they must respect and follow: eSafety, copyright netiquette, meeting deadlines, and knowing how to distinguish the virtual language from the real world (Giuseppina, Upper Secondary).

The eTwinning experience teaches students that "online is real":

There is a wide variety of topics, but through eTwinning, we constantly engage in civic education. The online dimension of eTwinning allows you to teach kids that what's online is real, an essential dimension. eTwinning supports this kind of education a lot: the other is real. Beyond the video, there are real people, regardless of the issues addressed in eTwinning projects, this dimension always emerges. It gives an identity to what usually is different. It is a civic education and is highly topical. It is an exercise in proper relationship with the other (Laura, Lower Secondary).

Exercising judgement

Digital citizenship education experienced in an immersive manner in the space offered by TwinSpace necessarily entails the exercise of judgment, a competence objective that the teaching of civic education also aims for, seeking to form responsible and active citizens by promoting «full and conscious participation in the civic, cultural and social life of communities» (Law No. 92, 20 August 2019, Art. 1).

I see civic education as a way of helping pupils to exercise their judgment consciously. Through eTwinning they effectively develop judgment and evaluation skills that go beyond the single issue addressed in the project: sustainability, environment, digital citizenship (Caterina, Lower Secondary).

Dialogue with students from other countries offers the opportunity to leave your space and enter a wider world:

In primary school, young children enter the TwinSpace, sometimes in groups of 4 or 5. I pursue many topics related to the 2030 Agenda. We live in a small country with multiple classes. [For the students] it means opening their minds. In this mountain village [you can see] maps and flags... they become European citizens, eTwinning allows children to travel (Emanuela, Primary).

The first question posed in the focus group then concludes with a shared summary in which, starting from the eTwinning projects that offer the possibility of creating a space for training in European citizenship – understood as a space of shared and deeply learned rules – general characteristics emerge that unite civic education with the eTwinning experience on other meta-levels education for multiculturalism, the relationship with the other, digital citizenship which makes us see the other even when he or she is at a distance, the exercise of awareness and judgment, all necessary and indispensable qualities for tomorrow's citizens.

6.4.2. WHICH DIGITAL TOOLS AND METHODOLOGICAL SKILLS ARE TRANSFERABLE?

The second question within the focus group was instead to investigate more specifically which digital tools of eTwinning and which methodological skills can also be replicated within ordinary teaching and, in particular, in the teaching of civic education.

The teachers unanimously confirmed that everything that is learned in eTwinning can be spent on digital citizenship and that the many years of experience make it possible to integrate the eTwinning method in teaching "beyond eTwinning fully." All perceive the transfer of technological, methodological, and content skills as extremely important.

Tools and instruments

Teachers cite the well-prepared videoconference followed by ex-post reflection activities as highly significant in terms of transversal and citizenship competencies and a substitute for the experience of face-to-face contact among students from different countries. On the other hand, videoconferencing is considered less effective for higher students in favor of various tools such as the padlet, in the direction of a co-building of knowledge, collaboration, and co-writing aimed at a shared product, and in any case connected to a reference methodological framework. eTwinning has a set of tools to achieve goals by learning to use

collaboration spaces, such as Google docs, presentations, virtual whiteboards, etc. to create collaborative products in supranational groups (Laura, Lower Secondary).

I, for example, love video conferences, which are the focus. I organize them very well because the children must not have disappointments. At the end of a video conference, I had them make a shared Autobiography poster with their impressions: I took sentences that the children wrote to me and placed them in relation to how they learn English best, cooperative learning, learning while having fun, awareness about their education, and the respect they have for us [cfr. FIG. 6.1]. They realize they have unique experiences and see the teacher's hard work. And then also to feel part of Europe... (Emanuela, Primary).

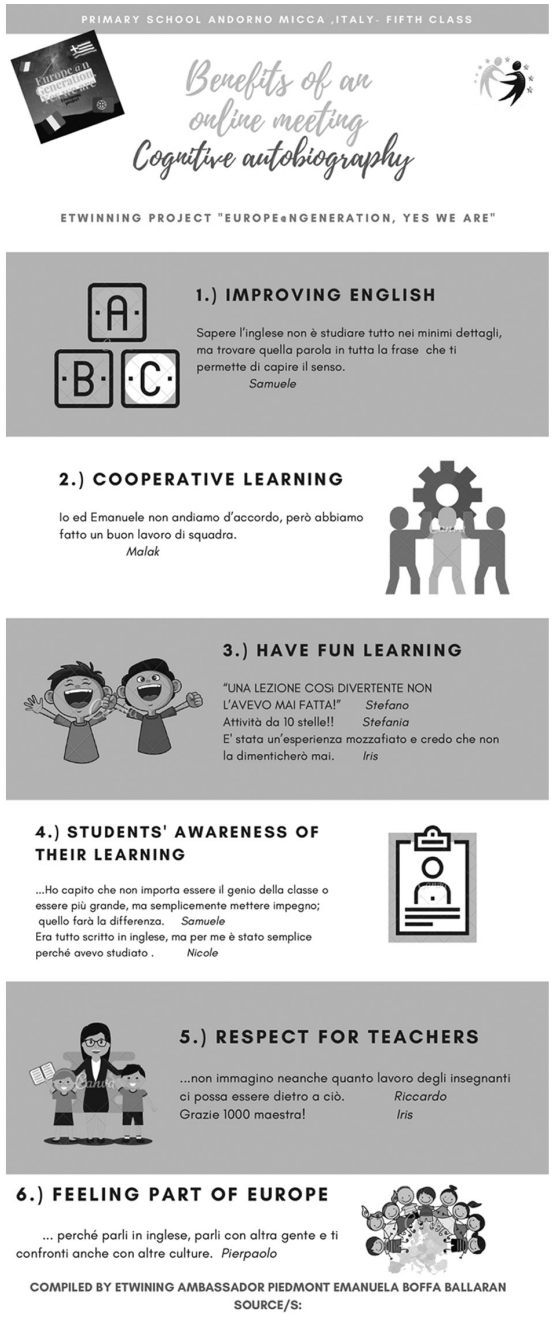
The tool I have reused the most is video conferencing. I used to be much more fearful. Now there's no problem. We need to see each other. I used to think it was enough to exchange letters. We used the forum, but the chance of seeing each other is exceptional. The video is second to none for getting to know each other. In addition, the videoconference has its own set of steps. It does not come on and you go. There is a schedule, there are turns to be taken. You agree first what you say, like... [...] If you ask at the end of the year what the students preferred, it was "the video call" (Laura, Lower Secondary).

Teaching in a three-year high school, I see no enthusiasm for video calls, quite the opposite. We have to urge them to turn on the cameras at every lesson. They are shy to show themselves, there are many factors related to adolescence. I was struck by what L. said about the method. Other tools used include the padlet. My school uses the GSuite for Education and the classroom can connect directly to the padlet. A tool that I use all the time. Even simple *brainstorming* can be transformed into a pdf. I find it very easy to structure, interesting because it allows you to treasure things and is easy to use with students. [...] I also adopted the MLTV See Think Wonder method using the padlet. It is very easy and it was simple but also successful for them (Giuseppina, Upper Secondary).

The possibility of exploring the strategy of gaming has emerged from different points of view, especially in the first cycle.

[The tools I reused are] the games we created for partner countries. My students are young (first, second year of middle school), they really enjoy interacting with others through play. They work, they create games, they share, we play together during the live shows and they

FIGURE 6.1
Emanuela Boffa Ballaran, poster realised by the pupils of class V of the primary school of Andorno Micca, s.y. 2019-20, concerning the project Europe@nGeneration Yes, We Are



have a lot of fun. I'm a little in love with this mode. I use this mode and have transported it to eTwinning. It is a mode that I use with and without eTwinning. The kids like it a lot, they ask "but when do we play?" (Caterina, Lower Secondary).

From tools to methodology that becomes pervasive throughout teaching

Regardless of the instrumental arsenal that eTwinner teachers are equipped with, the great potential for transferability and transformation that is triggered by the experience in eTwinning is the methodological dimension. The TwinSpace platform is experienced by teachers not only as a digital tool, but as a "method" that, as such, can also be transferred within daily teaching. A concrete proof of the effectiveness and immediacy of this transfer was experienced by all the teachers in conjunction with the start of remote learning.

Frankly, I [reuse] everything. It's the working method. I think whoever was an eTwinner when there was remote learning we survived, while others were tearing their hair out. At first everyone considered us nerds... then... «ah but did you know how to do it?» and I: «yes» (Laura, Lower Secondary).

Beyond all these tools, it is precisely the method that is different. For us teachers, working on the TwinSpace means building asynchronous activities for students, giving them tasks to work on and monitor them synchronously. When we build the pages, which we can make visible when we have finished them, we create a series of educational activities with the tasks that students have to perform. That is the way to proceed. The first days of remote learning, when we still didn't know how many hours we could do asynchronously, we weren't sure, we shared the time with colleagues... this methodological expertise that we had acquired on TwinSpace was very useful. We were able to create asynchronous activities for the kids to do later and to monitor. It was what Laura said: that from nerds we became teachers capable of building well-structured synchronous and asynchronous pathways (Giuseppina, Upper Secondary).

Now all the teaching I'm doing... thanks to all the experience in the years of eTwinning... Disjointed teaching is also always linked to all these technological skills that I have acquired over the years. I can no longer distinguish... everything has been integrated into my teaching (Emanuela, Primary).

Another characteristic element of eTwinning cited by teachers is the strong resonance with the vision of civic education teaching that sees the thematic nuclei as spaces of interconnection between disciplinary knowledge, opportunities to innovate the curriculum, to affect knowledge, skills, behaviours, in an organizational design that offers keys to understanding the phenomena of the world, well beyond the 33 hours provided for this teaching.

By teaching through eTwinning, everything falls into the curriculum. In the 3 pillars for the teaching of civic education, the one on digital citizenship I play it all on eTwinning

because it is perfect, it responds exactly to the goals laid down by the guidelines (Laura, Lower Secondary).

I teach English... this year I would have had three hours for the civics activity. This year I created projects based precisely on the civic education objective: for example for a third year class the theme was "Children's Rights", with another third year class the theme was "Environmental Sustainability". The teaching of civic education was not limited to those 3 hours, but all the activities were carried out, amplified for a whole year. The use of eTwinning makes it possible to go deeper into what would otherwise remain fragmented within that annual amount of hours (Caterina, Lower Secondary).

Still on the level of methodology, another element of enhancement that affects this time the teacher professionalism dimension is the acquisition of a working method that makes it possible to document, and thus enhance, the richness of the experience, thus contributing to increasing teachers' perception of self-esteem and self-efficacy.

One of the most rewarding things for us teachers. We perform, we leave no trace. Instead, the thing I've always liked about eTwinning is the ability to make my work visible. To be able to see it and remember it. And this I think is really extraordinary for those teachers who work so hard, do so much teaching: to have the opportunity to see what we have done (Giuseppina, Upper Secondary).

6.4.3. THE VALUE OF TRANSVERSALITY

The answers shared in the fourth question posed in the focus group, aimed at investigating the possibilities offered by eTwinning to foster the transversal perspective for the teaching of civic education in order to develop interconnection processes between disciplinary and extra-disciplinary knowledge, revealed several relevant topics.

The involvement of colleagues

The involvement of colleagues is a key feature of eTwinning. While agreeing on eTwinning's potential for collegiality – a founding requirement of civic education teaching – the reported experiences were heterogeneous. What emerges, also with reference to increasing school levels, is the difficulty in involvement, the effectiveness of the support of the head teacher and the whole school for eTwinning Schools.

For me [eTwinning] helped bring in colleagues. Many have joined my eTwinning projects. Once I talked about it in class councils it was quite evident that it lent itself well to civic education precisely because of the transversality, because it is based on collaboration... and then... I tell you, the pandemic also helped. Colleagues realised that it could be done online even without being computer scientists (Laura, Lower Secondary).

On the other hand, the ministerial indications say that civic education is a discipline, that it has a transversal slant and we have to work together, and we work together with this didactic

that has always worked for working together. On the other hand, if you can work with your colleague on the other side of Europe, why shouldn't you be able to work with your colleague next door... you pull in your colleagues when you see that it works. It works both from an organizational point of view, from the organization of work, it is practical, effective, efficient. Above all, it works with young people because there is participation. Otherwise doing civics classes with kids sitting there in frontal lessons would be pretty sad... the risk of them sleeping is high, even with the fact that they can't move from their chairs. You can't do group work in person. Many colleagues told me «everything I was good at no longer exists» – group work can't be done – that's where incorporating digital enables us to work together safely (Laura, Lower Secondary).

I really admire what I hear from Laura, who manages to involve her colleagues. Unfortunately, I have been working on this for years. Currently I have only succeeded with the support teacher who is in conjunction with me in the classroom. I can't get the class council involved, and I think it's a missed opportunity. Because, as colleagues have said, more transversal, more digital tools than that... I am in a school where digital is appreciated, but this working together for civic education is not yet there [...] maybe there is distrust because not everyone knows this world (Caterina, Lower secondary).

I, too, started alone but thanks to internal courses and the will of the head teacher, also because we are an eTwinning School, the year before the pandemic I started several projects and I followed them up by helping my colleagues and I was a bit of a coordinator, especially on sustainable development and my whole class was involved, even the English teacher, the science teacher... then this year with Covid everyone was afraid and I only did the project within my class with my class colleague and the support teacher. There are still three of us so it went very well (Emanuela, Primary).

Now I will do another internal course because the head wants us to plan several projects for next year. She pushes this a lot because she really sees the effectiveness of eTwinning... and families are also involved in these projects: even from the outside they see that the children are learning. This year there was a bit of a lull. But thanks to technology, we have managed to close several gaps as my colleague said, with collaborative whiteboards, tools, even though we in primary school have been lucky enough to be almost always present (Emanuela, Primary).

Some critical issues in relation to involvement are instead identified in the increased workload required to start an eTwinning project or offer support within one's own school as an ambassador.

I actually have a hard time involving colleagues in high school. It is a school level where we are less used to collaborating. We are more individualistic. The programme to be completed out is sacred. Then there is so much to do and, you will agree with me, doing eTwinning projects means "doing something more", working more. The construction of the TwinSpace is a time-consuming design and programming job. These are two main reasons why it is difficult to involve colleagues [...]. This year, perhaps because eTwinning was linked to an Erasmus+ project, and therefore to a European budget to be used, working on eTwinning became almost a must as there was a budget to be used, to be implemented. I managed to involve colleagues

from the same class, but also colleagues from different classes. The project we did for Climate Change was good, we worked on it in philosophy, Italian literature, English, physics, science, it was anchored in an Erasmus project, and we were many teachers from at least 5 different disciplines (Giuseppina, Upper Secondary).

I teach many courses with the Piedmont Regional School Office. It always seems to take on extra work, and from a certain point of view it is so at the beginning. Then it becomes a method of work. Sometimes I don't use textbooks because I bring them along with the project; of course starting is not easy, you have to have a bit of a desire to get involved, but then you see the results (Emanuela, Primary).

From the push of the pandemic to the prospects for the future

As already highlighted in relation to technological and methodological skills, the context of the pandemic has made evident the transferability potential of what has been learned in eTwinning, the emergency teaching situation, and the sense of *empowerment* that eTwinners have experienced. This facilitation was also helped by a timely adaptation of eTwinning itself which – if until before the pandemic admitted projects only among teachers also from the same country but at least in different schools – in conjunction with the emergency immediately revised this constraint to encourage inter-school projects in support of distance learning. However, the experience of this change of context also opens up a new horizon of explicit connection between eTwinning and civic education: the proposal to create the civic education curriculum through the TwinSpace.

At the beginning of the pandemic the capacity that the school had... certainly not all the schools given the different technological equipment... the ability of the school to withstand the impact... on 5 March they closed everything and on 9 March we were doing remote teaching. I experienced this at the beginning with an extraordinary euphoria because teachers are always seen as a category that does little... the bare minimum of hours... this remote teaching experience is as if it had given us the possibility of guaranteeing a right, the right to study... a right even in an extreme situation. And above all to show that the school is able to cope with an unexpected, unpredictable, unmanageable emergency. In my opinion it is important to say this and to value it, and to finally say it (Giuseppina, Upper Secondary).

I realise from talking to you that there may be a possibility of presenting a structured civic education course on Twin-Space to the class council next year. It could be a feasible thing to propose upstream. The structure of TwinSpace allows you to do this because it is a hypertext that allows you to link the pages [...] TwinSpace as a tool for the implementation of the civic education curriculum (Giuseppina, Upper Secondary).

It would be nice if eTwinning were also proposed at the top level as a tool to develop civic education... it is complete and has everything to develop everything you need. So there would no longer be something left in the classroom but it could be shared with others. Something that does not stop there at that teaching of those hours but can be shared with others beyond those hours... (Caterina, Lower secondary).

6.5
Conclusions

The debate, of which some salient passages have been highlighted above, not only emphasises the points of contact between the eTwinning experience and the teaching of civic education, in the plans investigated by the research questions, but also offers itself for further reading.

Firstly, there is a transfer of learning between the two contexts, that is, what has been acquired – in terms of process, knowledge and tools – is applied, with the necessary adaptations, to the new context.

The transfer of learning has been addressed and conceptualised according to extremely heterogeneous points of view and theoretical frameworks since the beginning of the last century. The expression identifies the ability to abstract any learning from the specific context in which it was acquired and to use it in a different context. According to Gagné, Maragliano and Mancina (1990), a lateral transfer and a vertical transfer can be distinguished. When learning is transferred laterally, there is a generalisation of knowledge that extends over a wide range of situations at more or less the same level of complexity. When, on the other hand, learning is transferred vertically, we refer to the effects that skills learned at a given level of cognitive complexity have on the learning of others at a higher level. In more recent times, the transfer is included in the group of metacognitive[2] and self-regulatory skills; among others, Poláček (2005) identifies it as a meta-skill that allows the subject to transfer skills, processes and structures acquired in one context, and to use them in another similar, or completely different from the one in which they were acquired. Although the transfer of learning has been studied particularly in schools, there is no lack of insights in the field of adult training and the development of skills such as problem solving.

The first research question therefore concludes with a shared synthesis that sees in the eTwinning experience the possibility of creating a "real" online space for training in European citizenship, with the possibility of defining and learning shared rules through relationships and cooperation. If digital is therefore the environment, the space made real by the system of relationships and rules, and the conceptual cores can be the content of the projects, the points of contact between the eTwinning experience and the teaching of civic education relate to education for multiculturalism, the exercise of citizenship and respect, awareness and judgement.

The question aimed at investigating which digital and methodological skills are useful and transferable from the eTwinning context to the context of civic education finds wide consensus around the awareness that everything that is learned in eTwinning can be spent for the effective use of technologies in teaching, and that the multiyear experience of eTwinning is highly transformative from a methodological point

2. In this contribution, metacognition is generally understood as the ability to self-reflect and self-regulate one's own cognitive phenomena.

of view, so much so that it is the eTwinning environment that also becomes prevalent in daily teaching. The TwinSpace platform is experienced by teachers not only as a digital tool, but as a "method" that, as such, can also be transferred within daily teaching and affects the professionalism of the teacher offering an environment-method of documentation and enhancement.

As the teachers also pointed out, in the emergency conditions experienced during this period, which induced sudden forced changes, their ability to transfer meant that they were able to intervene effectively, making the acquired knowledge dynamic and creative.

The transfer process is then based on deep and motivated learning, as reflected in the testimonies collected. The pleasure of using their knowledge to achieve fruitful results for their students first and foremost, but also for their colleagues and their school, is an important lever for these teachers. Added to this is the tangibility of the results, recognised within the relevant social group. It then triggers a circle of positive motivation that supports commitment.

Finally, the in-depth study of eTwinning in relation to the transversal requirement of civic education led to the confirmation of how challenging it is in the involvement of colleagues and of the various disciplinary domains. The lack of aptitude for collaboration within the school is the main obstacle and to some extent it grows with the school level. eTwinning, however, manages to be a transformative experience also on this side as it offers tools and methods, and is recognizably effective in the educational repercussions, in the participation of students, also thanks to the external recognition that parents give to the learning of children. A significant contribution to overcoming this resistance to collaboration is certainly given by the emphasis with which the school head supports and promotes eTwinning throughout the school community.

The experience of the pandemic, where experienced eTwinner teachers played a leading role within their schools to effectively and promptly guarantee the right to education in an extreme situation, also opened up new scenarios due to the adaptability of the eTwinning Action in relation to the emergency in enabling inter-school projects. From these, the next and immediate step that the ambassadors come to formulate in a shared way is the proposal for the realization of the civic education curriculum through the TwinSpace: a structured space in terms of tools, methods and support to exercise that transversality that civic education invokes and of which the entire school – not only the teaching of civic education – strongly needs to achieve that regenerative impulse capable of projecting it into the future.

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7

Speak as you teach
The narration of teaching experiences in eTwinning as a form of documentation

by *Laura Parigi*, *Rudi Bartolini*, *Francesca De Santis* and *Alessandra Anichini**

7.1
Introduction

7.1.1. THE IMPLAUSIBILITY OF THE TRUTH

The documentation is the root of the search for INDIRE, institute born almost a century ago[1]. Whether it is to preserve the historical memory of the school or to improve the quality of the educational experience of students, the object of the survey is the «practical knowledge of teachers» (Elbaz, 2018), that knowledge of experience to which John Dewey already recognized the status of reality data[2], essential for a scientific pedagogy and for the training of teachers. Our work is to make visible the small and large inventions that arise to organise educational spaces and time, the representation of knowledge, the observation of learning processes: gestures and thoughts that translate pedagogical ideas into concrete actions and that are often shared only in restricted professional communities. In this work, documentation is both source and content:

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1. INDIRE was founded in 1925 in Florence as a National Educational Exhibition on the Products of the New Schools, which realised Giuseppe Lombardo Radice's idea of education as an active experience. In 1929, in order to provide a permanent home for the exhibition, the National Educational Museum was established. In 1941 it became the National Educational Centre (CDN), in 1953 the National Educational Centre for Studies and Documentation (CDNSD) and in 1974 the Pedagogical Documentation Library (BDP). During the 1980s, the Library was the protagonist of a pioneering use of digital technologies that revolutionised the very idea of educational documentation, making it an innovative engine for the dissemination of knowledge.

2. «The ultimate reality of the science of education is not found in books, nor in experimental laboratories, nor in the school classrooms where it is taught, but in the minds of individuals engaged in the direction of educational activities [...] without the active presence in the attitudes and habits of observation, judgment and design of those who are engaged in educational activity, scientific results may be obtained, but in this case we will not be faced with educational science, but with psychology, sociology, statistics and so on» (Dewey, 1951, p. 17).

source, because the restitution of a school experience is nourished by testimonies and materials (plans, photographs, student papers, assessment tools), and content, because the practice must be rendered in an accessible and readable form in order to be useful to teachers (Torello, 2011).

Over the years, the techniques and ways in which INDIRE has documented schooling have changed, starting with the gold archive of best practices published in 1999 to the production of the "Quaderni delle Piccole Scuole"[3], which for the past few years have been recounting the experience of teaching in multi-classrooms and schools in the country's inland areas (Parigi *et al.*, 2020). The paths leading to the realisation of INDIRE documentation vary according to the purposes and actors involved. For example, the guidelines of the Avanguardie Educative[4] ideas stem from research-training activities (Margiotta, 2015) conducted with small groups of teachers. In other circumstances, the investigation of practices stems from the analysis of large quantities of documents: this is the case with training projects or system actions that INDIRE often carries out on behalf of the Ministry of Education. In these actions, documentation plays a key role in training, which has been inspired by the community of practice model since the early 1920s (Faggioli, 2005). In order to work, this training model requires that the teaching experience be shared, both in the form of direct testimony and through the sharing of "material memories" that are its trace (texts, field notes, planning and observation sheets, or self-assessment sheets): memories that are necessary for the reconstruction of meaning, by those who have lived them, and for the understanding of those who look at them from the outside.

In this context, there was a need to develop tools that would stimulate in teachers the reflective thinking that usually emerges in direct contact with researchers. This gave rise to many formats, i.e. planning and observation sheets, semi-structured logbooks, models for returning teaching experiences. But the use of these tools has not produced the desired effects: instead of guiding attention and reasoning on some specific aspects, the formats have often been the subject of a didactic compilation, typical of formal and bureaucratic tasks, and the documentation has been poor, opaque, dense with generalizations and clichés, in which class life and the work of the teacher remain inaccessible.

> The design idea, renewing the didactic approach, aims to prevent the risk of interrupting the flow of educational and affective communication, complying with the orientation-training function, which is typical of the school [...]. To tend towards these indispensable goals, the

3. "Quaderni delle Piccole Scuole (Small Schools Notebooks)" is an INDIRE publishing initiative created to document the didactic and educational experimentation activities of schools in inland areas of the country. They are divided into Stories, Tools and Studies and refer to Mario Lodi's "Work Library" experience.

4. Avanguardie Educative (Educational Vanguards) is an INDIRE project that documents some ideas of didactic innovation emerging from schools and school networks throughout the country (https://www.indire.it/progetto/avanguardie-educative/).

methodological-teaching approach can only be based on the criterion of flexibility that allows to engage and involve the different types of students and to overcome any barriers that could hinder the educational dialogue thus favouring inclusion and integration[5].

The quoted text is an example of this style of documentation. Certainly, without the direct mediation of the researcher, the structuring of some of the instruments we imposed did not benefit spontaneity, just as INDIRE's strongly institutional role weighed on the linguistic register adopted. What is striking, however, is the vagueness of the statements, the absence of references to people, events, cases, problems and actions, in contrast to the many testimonies of the tutors who instead recounted how, in the working groups, practices were shared in more direct and concrete language. It is impossible not to see here an analogy with the comparison between two accounts of the same fact with which Italo Calvino opens his article on antilanguage, published in the "Corriere della Sera" in 1965:

Early this morning I was going to the cellar to light the stove and I found all those flasks of wine behind the coal crate. I took one to drink at dinner. I knew nothing about the bottle shop upstairs being broken into. The brigadier quickly taps his faithful transcript on the keys: «The undersigned, having gone in the early morning hours to the premises of the basement to carry out the start-up of the heating system, declares that he accidentally came across a quantity of wine products, located behind the container used to contain the fuel, and that he removed one of the said items with the intention of consuming it during the afternoon meal, not being aware of the break-in of the establishment above».

Following our formats, teachers also seemed to be caught by that "semantic terror" towards the simplest words and seemed to take refuge in a bureaucratic language made of long, implicit sentences, nominalizations, subordinates[6]. The phenomenon was so widespread that it prompted us to abandon formats in favour of freer reporting, even in massive training contexts, as was the case with the Didatec project. But simply deconstructing the format was not enough to bring out the educational experience clearly: we realised that it was not enough to ask the teachers to narrate in order to obtain a vivid and realistic documentation. In this experiment, a representation of teaching as a procedure to be applied was confirmed, based on an idea of *technical rationality*[7]:

5. From documentation collected as part of the PON Didatec training project, carried out by INDIRE in 2008 and 2009.

6. From the entry *Il burocratese*, by M. Cortellazzo for Treccani, https://www.treccani.it/magazine/lingua_italiana/speciali/burocratese/cortelazzo.html.

7. «Until the 1970s, professionalism was inspired by technical rationality and saw the teacher as a subject acting according to decontextualised and externally defined rules. A number of critiques, which emerged in the 1970s and 1980s, led to a paradigm shift and proposed a bounded rationality, which is presented as an attitude of intelligibility of reality, combined with flexibility in the situation. The paradigm of the reflective professional, starting from Schön (1983), places the knowledge of the practitioner at the centre of the research, who, in dialogue with the context and the problem with which he/she engages, enriches his/her own experience» (Magnoler, 2017, p. 120).

many accounts lacked an actual "incident", i.e. a problem to which the practice represents the answer, the unforeseen events, the educational and learning objective, not to mention the representation of the students, almost never present with their voice and as individuals in the teaching narrative, or in the reflection on the outcomes, scarcely present and even more rarely critical. Perhaps even more jarringly than the formats, these unfettered narratives of practice were characterised by an "implausibility effect", as if teaching and the educational relationship were taking place in a sterile environment, unperturbed by events.

7.1.2. NARRATIVE AS A FORM OF EXPERIENCE RESEARCH

We wondered why these accounts seemed less "true", for example, than fictional narratives about teaching, what the specific deficits were, the shortcomings of the story and writing. In order to understand it, we thought to study teaching in its literary representations, and in particular in the novels, diaries and autobiographies of teachers who have also been writers, such as Domenico Starnone, Frank McCourt, Daniel Pennac, to mention only a few of the most famous among the names included in a corpus of some fifty works. In the reading, we looked for common features of the representation of teaching (actions, imagery, thoughts) and the differences from the bureaucratic writings of teachers. The presence of students as characters, who intervene, speak, act with their physical and personality traits. What is most represented is the unexpected, the accident, the something that goes wrong and that forces the teacher to review his/her plans. In some cases, this unforeseen situation is the basis of the teaching style of the teacher, which makes it a lever to "recalibrate", to adapt the strategy and the objective.

Contrary to what happens in formal reports, teachers and writers are not afraid to represent the sense of inadequacy and also failure, valuable material for reflective practice. For example, Frank McCourt, in *Teacher Man*, tells several times about how failure, bad results, uncertainty become the source of didactic inventions, as happens when he notices the writing skills of his students because his gaze falls on a stack of clearly false justifications:

> Isn't it strange, I told myself, that the boys are so resistant to any type of written assignment, both at home and in class? They moan and say they're busy and it's hard to put a page together on any topic. But if they have to write their justification they become very good. Why? (McCourt, 2006, p. 110)

From this discovery comes a writing assignment, different from the usual ones:

> Keep in mind that this is the first class in the world to study the art of justification, the first class ever that will be practiced in the field [...]. Pretend to have a fifteen-year-old son or daughter who needs a justification because she is behind in English. Bring it on [...]. Nobody looked around. No one began to play with the pen. No one scribbled. They were all anxious, excited

at inventing a justification for their fifteen-year-old son or daughter. It was an act of love and loyalty and who knows, maybe one day that material would have helped them. They baked a rhapsody of excuses ranging from an epidemic of diarrhoea in the family to the truck that had broken through a house to a serious episode of food poisoning attributed to the Institute's canteen (*ibid.*, p. 113).

Teacher-writer texts have provided us with a first repertoire of teaching narratives to offer as a stimulus to teachers. In fact, we were convinced that to overcome the problem of anti-language and opacity of practices, a "narrative breakthrough" was necessary, replacing the formats with some examples and reflections on writing. Our goal was not to force teachers to improvise literature, but to make them understand that the simple form of the story, the organization over time of the development of a practice, could be, under certain conditions, a very effective and fruitful method of collecting data on the educational experience. Instead of perfecting new documentation formats, we thought it would be more useful to share with teachers some "tools of the trade" of research, such as the methods and techniques of the *narrative inquiry* (Clandinin, 2019), in order to orient and give rigour to the narratives. Narrative research draws on internal and external memories (notes, logbooks, photographs and videos) to carry out a temporal reconstruction of the educational experience, and can only be so when the narrative reaches a good level of explicitness and a reflective, understanding effort is present.

7.1.3. COFFEE STORIES: ORAL AND DIGITAL NARRATIVES

It has often happened to meet some authors of the documents that seemed too vague and bureaucratic and to listen to those same teachers return their experiences with very direct and simple concrete words, perhaps in informal contexts, during the coffee break of some in-person seminar: a fact that has reminded us of the value of the oral story of the experience.

On this side there are interesting experiments of digital storytelling, a storytelling technique that is inspired by the value of narration as a paradigm of analysis of reality: these are short stories made by combining texts, images, videos, often accompanied by music or a commentary. The presence is the expressive function of the voice in these videos, an important reference to oral narratives, which however here take an invariable form, unlike in traditional oral narratives, which are always subject to interpretation and re-elaboration.

Digital narratives feature some key elements.

First, we talk about *digital storytelling* when the writer treats a topic related to his/her own experience, as a fragment of an autobiography; these are topics that can be more or less limited, but still refer to the experience of a narrating ego. *Digital storytelling* can also turn into the most suitable strategy to express ethnographic research that welcomes marginal voices (migrants, exiles, and anyone who has experienced dramatic

situations), giving them the opportunity to narrate part of their lives in a brief and intense form, or to gather memory in terms of excavation and identity appropriation.

The second feature on which we insist is brevity. According to Lambert (2010), author of the handbook that has set the standard and has been adapted by other authors, *digital stories* possess this key feature. They are always concise: generally, a digital story lasts between two and six minutes. This means for the author a refined work of editing and the identification of a very specific focus. The synthesis requires significant design work, which goes through different versions of the text. The ultimate goal is to be able to synthesize a story into a single *nugget*, a central idea, a single message. Briefness becomes synonymous with expressiveness and communicative effectiveness.

Third point: the dominant logic is not vision, as the final results might suggest. What seems to matter is the "oral story", the "tone of voice" that is always the starting point for the realization of the final product. It therefore begins with the writing of a text and its diction, and then proceeds to the definition of a script, a script that will put together voice and images, transition effects and above all rhythm. In fact, the rhythm of the narration is indicated as a key element of the text, a rhythm that gives a style to words, to the succession of images.

Jason Ohler (2007) emphasizes the importance of writing a subject, written entirely in words, before resorting to the technical and technological tools that allow the script and editing, but can distract, in a first phase, the creative process. Any story will then begin with a brief written note, the "subject" as it happens for cinema. The use of available materials is always part of the logic of a handcrafted piece of writing, made up of a few things, with a view to the art of reclaiming poor materials: footage, photographs, handmade illustrations and other images, all stitched together by means of transition effects and possibly accompanied by the recording of a narrator's voice or music[8].

Some key elements determine, therefore, the quality of a digital story: the choice of the significant topic narrated from the author's point of view; the choice always linked to themes with a high emotional content: the tone of voice counts, also understood as acting ability, capable of arousing in the listener the emotions that the author intends to express; significant elements will be economy, i.e. the ability to reduce the content expressed to the essential, eliminating redundancies and frills, and the pace linked to the sequence of images and sounds that will give the text that narrative flow that is effective for communication purposes.

After the first beginnings related to the world of art and therapy, *digital storytelling* soon finds application in the educational and professional fields, as well as in journalism. Over the years, the uses related to the experimentation of new forms of

8. Finally, the final rendering depends on the authoring software one intends to use, from a very simple PowerPoint to the most popular Movie Maker or Adobe Spak or PhotoMovie for Mac, Animoto and others, and of course the editor that YouTube makes available today. Each program, in fact, will indelibly and recognizably mark the final product, imposing its own communication styles and methods.

digital writing and training paths within companies have multiplied (Petrucco, De Rossi, 2014). In the meantime, the initial, more or less canonised format is enriched with new forms, opening up to the most diverse experiments and proposals. In the educational field, digital storytelling is used both within the classes, as an operational proposal for students to be involved in text production paths, and on the teaching side. In training, in particular, digital storytelling is used as a technique for reconstructing experience, that is, as a process that helps identify significant elements and develop a perspective, leading to the synthesis of other forms of documentation such as logbooks, the collection of photographic images.

In our case, we hypothesized that the use of the voice could constitute a "displacement" necessary to make teachers abandon the writing habits associated with the documentation. The brevity and the need to build a visual part, on the other hand, seemed useful to us for the reflective function of the documentation.

7.2
Training in storytelling

7.2.1. THE CONSTRUCTION OF NARRATIVES

The research track on narratives has made it even clearer that it is not enough to prepare a format to obtain good documentation: it is necessary to cultivate the ability to «return on experiences, argue them, explain them, document them, give meaning to one's choices, present evidence and results» (Cerini *et al.*, 2011, p. 5). We then asked ourselves what training could develop this capacity. The opportunity to experiment in the field came thanks to the request of colleagues from the Italian eTwinning National Support Organisation (NSO), the European network of distance learning projects, who asked us to make a contribution to help teachers better document "electronic twinning". The invitation was to conduct an online training, with some videoconference meetings and a documentation project that the teachers would have to carry out.

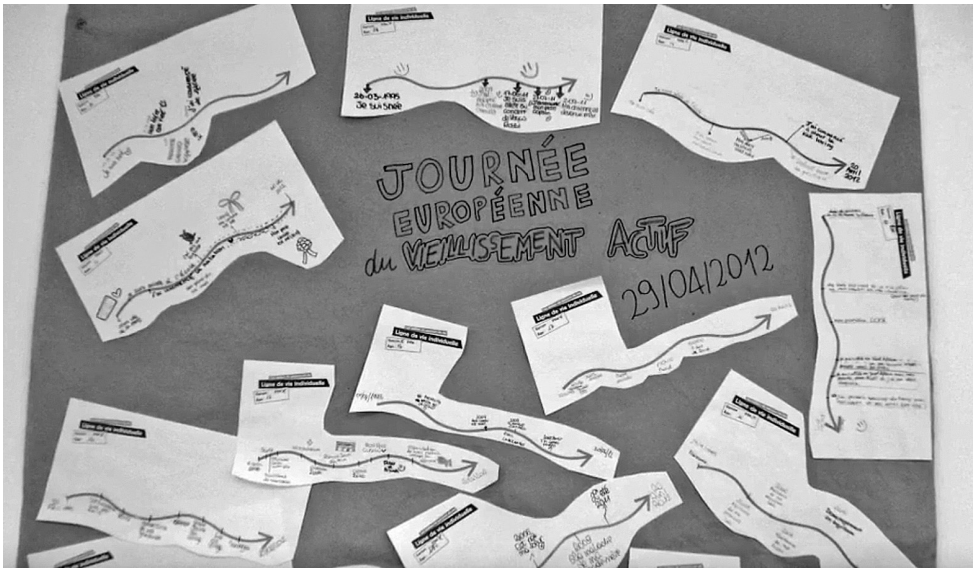
We thought of experimenting in this context with some working hypotheses on narrative documentation, starting from the problem of opacities and antilanguage. In the first meetings we presented examples of documentation and narratives of class life taken from novels, diaries and autobiographies of teacher writers and, finally, examples of *digital storytelling* made in a previous project (FIGG. 7.1, 7.2, 7.3).

For this activity, we built a path with a circle in the centre from which three roads, made of ropes, started, at the end of each of which was one of the groups. At the end of the route they placed the equipment to make "noise". We then focused on the characteristics of the language, and finally we built a small path of guiding questions and steps to be taken for the realization of the narratives. «What to document and for whom?» was the first of these questions. In this case, we suggested a common theme, synchronous communication in eTwinning projects, which had been mentioned to

FIGURE 7.1
The mummy of Grottarossa, documentation by Pina Canarezza

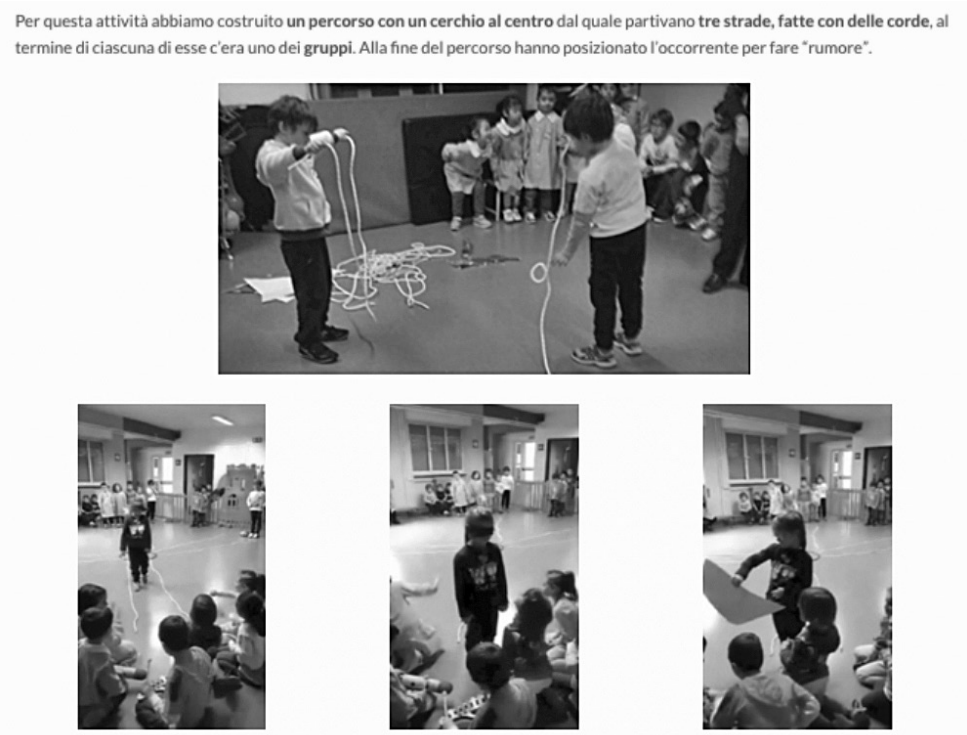
Source: http://www.scuolavalore.indire.it/nuove_risorse/la-mummietta-di-grottarossa/.

FIGURE 7.2
Storytelling by Françoise Altamura



Source: https://spark.adobe.com/video/SJzm_znD.

FIGURE 7.3
The reconstruction of action sequences in the narration of experience



us as a particularly difficult step of eTwinning. We invited the students to focus the re-reading of the experience around this aspect. We discussed with the students a map of knowledge that characterizes videoconference communication: technical and practical skills and knowledge, but also knowledge related to the planning of events and the educational purpose of online meetings. This map served as a stimulus to organise the story as a teacher's self-assessment.

We invited the participants to consider the community colleagues as the recipients of the narrative. Many eTwinning ambassadors have known each other for a long time and periodically meet in seminars organised by INDIRE: We thought that imagining a familiar recipient would help a freer narrative. Finally, we asked them to think of the story as a "gift" to be given to the community: the epilogue of the *digital storytelling* could in fact be a "lesson learnt" from the experience, to be shared with colleagues. For example, a teacher made a short video about an activity in French, and shared the mistakes she had made in organizing a video conference with grandparents.

We asked them to retrieve all the documentation collected in the Twin-Spaces, the

online collaboration space of the eTwinning platform, and to look for other sources to feed the memory: design documents, notes, student works. We explained that these materials would serve to build the visual part of the narrative, recommending them to use authentic material above all.

The choice of the time covered by the narrative is the third step that we have suggested to the teachers. It was not necessary for them to tell the whole project, a practice that often forces them to adapt to a typical structure, divided into phases (design, implementation in class, reflection on the results): in this case the participants were free to dwell on a moment, on a passage.

7.2.2. THE VIDEO STORY: FORMAT AND PRODUCTION PROCESS

The activity requested as the final product of the training course involved the creation of a short video of five/seven minutes that, in accordance with the typical elements of *storytelling* (Lambert, 2010), told the teacher's professional development story in a brief and personal way. The video had to be characterized by two fundamental aspects: the oral account of the experience and the use of authentic documentation for the visual part.

The oral narrative, realised in the first person and recorded by the teacher, constituted the indispensable basis of the video: the function of the narrative in fact was not only to clearly set out the events that had taken place, but also to narrate the teacher's point of view, his/her intentions, goals and what s/he had learned from the experience. The narrative had, therefore, to leave a trace of the author's subjectivity, without neutralising itself in impersonal forms, creating a linear connection between the professional role and the human being who performs that practice, and laying bare the criticalities and difficulties the subject faces in the difficult process of aligning the two dimensions.

The visual part of the video was to be realised using authentic documentation of the experience: photos and videos of the classroom activity, scanned notes, teaching plans and schedules, teaching resources created by the teacher, materials and artefacts produced by the students, etc.

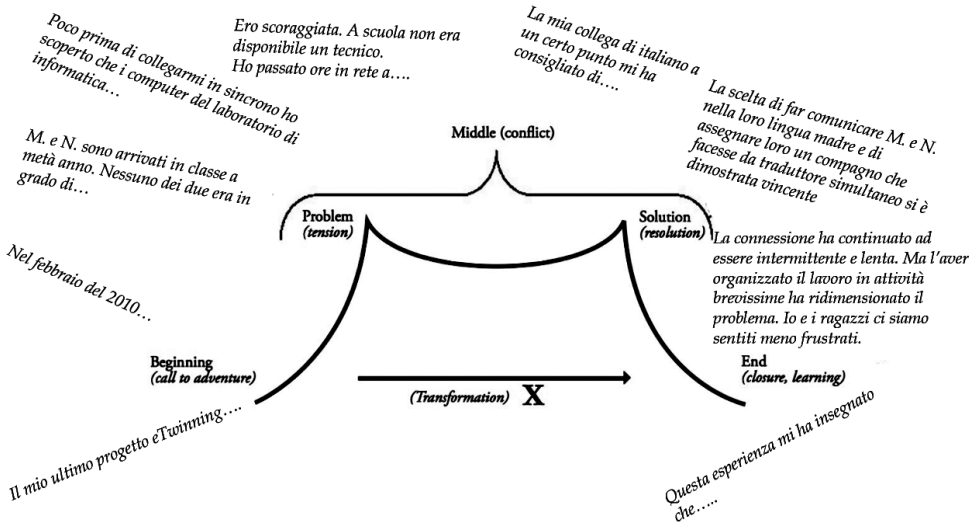
Once the documentation methods had been defined and shared, the teachers were supported by the research team in the writing and subsequent production of the video, following some precise work steps.

In the first phase, teachers were advised to write the autobiographical story in free form, choosing the episodes to narrate and the reflections to share with colleagues and the community, engaging in a personal re-reading of the experience. The idea was to write an informal, free-register narrative that would form the basis of the script for the oral narration of the multimedia documentation.

In this phase, the study and analysis of the project documentation were fundamental to recall what happened and to stimulate ideas and reflections.

Three possible narrative patterns have been proposed for the realisation of the

FIGURE 7.4
An example of mapping the experience using Visual Portrait



story, to be followed according to the objectives of the authors, all characterised by the classic structure in three acts:

– Pattern 1 – Chronological narrative: in this pattern the "time" element dominates, in the first act the topic is introduced, in the second the chronological sequence of events that reconstruct the experience is told, and in the third it ends with one's own personal reflections.

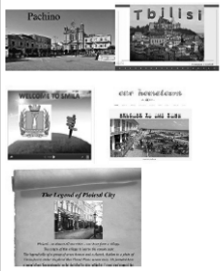
– Pattern 2 – From the problem to the solution: here we start from the story of a problematic situation and proceed with the narration by telling the process of finding solutions until the problem is solved. The path can also include the story of a failure.

– Pattern 3 – From the detail to the general: in this pattern we start with a focus on a detail, a detail that becomes emblematic of an event, and from it we articulate the description of a situation and then close with the resumption of the initial idea. As an aid to the writing process, it was also suggested to try to create a time-diagram mapping of the key and emotionally most important moments of the narrative, using an interesting tool such as the *Visual Portrait of a Story* (Dillingham, 2001; Ohler, 2008) (FIG. 7.4).

The next phase involved the creation of a storyboard, i.e. the design plan that guides the decision-making process on the choice and combination of the various elements that make up the story, where the authors have explained, also from a technical point of view, everything that constitutes the content of the script and its communication methods (Lambert, 2010, p. 70) (FIG. 7.5).

After the storyboard was realised, each participant shared their ideas with a con-

FIGURE 7.5
Part of a storyboard created during the training course

		Testo parlato (audio)	Immagine fissa/Video	Testo Scritto	Effetti/transizioni	Suono
a. Incipit Presentazione di una situazione problematica	**a. 1**	Che cosa c'è da veder nella tua città? Che cosa conosci della tua città? Quando faccio queste domande ai miei studenti, in genere, mi rispondono che non c'è niente da vedere, niente da visitare. Da queste risposte capisco che i miei studenti conoscono la città in cui vivono in modo superficiale, ignorando la sua storia, le sue tradizioni, i suoi prodotti tipici, le sue bellezze artistiche/ paesaggistiche	Immagini delle città dei paesi partner 	"Gli studenti conoscono la città in cui vivono in modo superficiale"	Un susseguirsi di immagini e video con sottofondo musicale. La mia voce racconterà la storia	Sottofondo musicale (Brano musicale gratuito selezionato da libreria audio di YouTube)
	a. 2	Mi chiamo Alessandro Ruffino e insegno Accoglienza Turistica all'Istituto Alberghiero di Pachino, una provincia di Siracusa. I miei studenti hanno un'età tra i 14 e 19 anni e sono ragazzi con	Immagini di me stesso, a scuola, dei miei alunni 			Sottofondo musicale (Brano musicale gratuito selezionato da libreria audio di YouTube)

tact person from the INDIRE group, who acted as a critical friend in order to suggest possible improvements before the storyboard moved on to the actual multimedia realisation.

In the last phase of the process, the students then recorded the audio and edited the video using the software or online tools they preferred, and with which they were more familiar (from author software such as Movie Maker and PhotoMovie, to easy-to-use online tools such as Animoto or Adobe Spark Video).

7.3 The analysis of narratives

7.3.1. THE THEMES, THE LANGUAGE, THE STYLE OF THE STORIES

At the end of the training course, the students were asked, on a voluntary basis, to carry out a cross-reading of their papers through an analysis sheet in the form of a multiple-choice questionnaire, a questionnaire that would have made it clear how the reflections carried out and the indications provided had been transposed and put into practice.

The analysis sheet was structured in five sections aimed at investigating the different conceptual nuclei underlying the proposed guidelines:

1. the characteristics of the story: one wants to understand how the oral narrative was developed and whether it succeeded in bringing out the theme of the story clearly;
2. the language of the story: the focus is on the linguistic style and the register of the oral story, trying to understand if there is a recourse to bureaucratic, institutional or specialist languages;
3. the elements of the professional development story: the focus is on the presence of those elements considered essential or otherwise important for developing an effective story, such as the student's voice, the unexpected, the teacher's reflections, etc.;
4. the visual story focuses on the communicative effectiveness of the audio-visual/multimedia development of the story;
5. the lesson learnt is whether what the teacher has learnt from his or her experience is effectively shared, through storytelling, with the relevant community.

26 sheets were collected, representing 30% of the teachers involved.

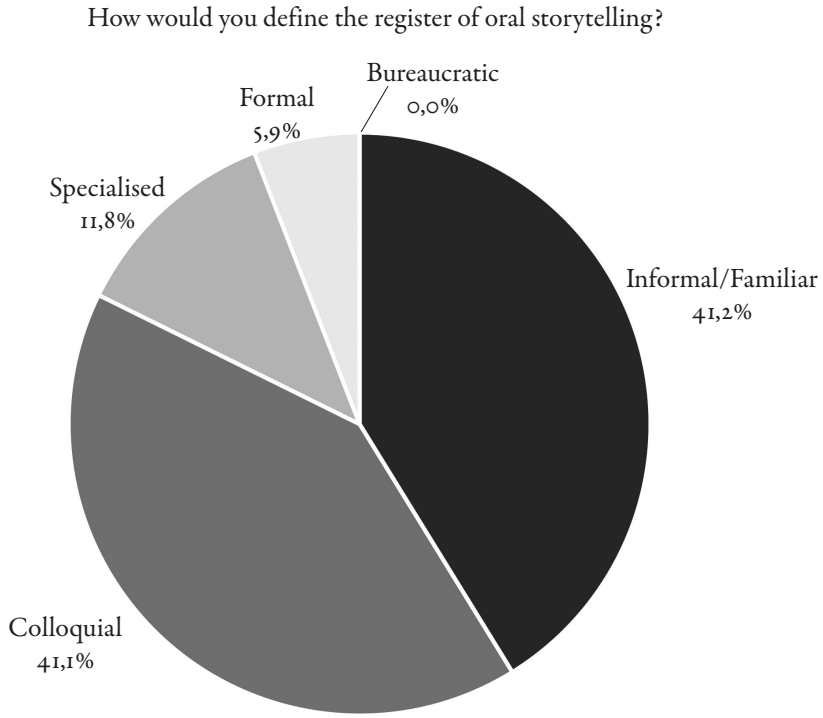
The teachers' stories mainly concern "electronic twinning projects" (61.5%) and "educational paths" (23.1%), that is, events of a certain length; only a minority of teachers have tried to narrate events more limited in time, such as "key moments of an educational activity" (7.7%) or generic "activities" (7.7%). 61.5 per cent of the trainees stated that the topics addressed in the narratives emerged "very clearly", 34.6 per cent of them answered "fairly clearly" and only 3.8 per cent "not very clearly". The narratives are mostly realised using the first person singular (46.2%) or plural (42.3%), in the latter case with obvious references to eTwinning project partners or pupils; only in 11.5% of the works is the impersonal form used. The oral narrative is present throughout the narration in 80.8% of cases, in 11.5% only partially, and is absent in 7.7%.

The answers provided in this first section seem to highlight how the students have well understood the indications on the narrative style to be adopted in their teaching stories and this has allowed the topics covered to emerge clearly. On the other hand, there is still a difficulty in focusing on particular aspects of the experience (an emotional experience, a professional skill, an aspect of the pupils' behaviour, curricular learning): the narratives tend to propose, for the most part, experiences that are protracted in time (it is also true that the eTwinning experiences teachers are involved in have this characteristic).

The purpose of this section was to gather information on the style and linguistic register used in the works and to check their distance from what we have called antilanguage, which is used all too often in the official documents that teachers are called upon to produce.

The trainees managed to avoid using a rhetorical style that recalls the vocabulary and values of pedagogical-institutional orientations and educational innovation (it does not recur in any answer). Many of them (29.4%) managed to use a reflective style, where the narrator alternates the description of the action with thoughts and judgments, and 17.6% resorted to an emotional style centred on personal experiences. Both are useful to move away from antilanguage. A significant proportion of the trainees used a persuasive style, emphasising above all the positive aspects of the experience

FIGURE 7.6
The linguistic registers used by the trainees in their works



(29.4%), oriented, rather than towards problematisation and reflection, towards promoting what had been done.

FIG. 7.6 shows that the informal register is dominant (colloquial 41.1% and informal/familiar 41.2%), which testifies to a good reception of the style of narrative documentation. Furthermore, the questions on "specialised lexicons" (of school bureaucracy, institutional and educational policy, pedagogy and didactics) tell us that these are hardly or not at all present in the vast majority of the works. Storytelling therefore seems to work against antilanguage, but writing in some cases is still aimed at a self-promotion that can be an obstacle to the development of a deeper reflexivity.

7.3.2. THE REPRESENTATION OF TEACHING

A central element in teaching stories is the starting problem, it can be qualified as a conflict element that helps understand the meaning of the experience and is closely linked to the subject matter. To the question «Was the starting problem of the story

clearly stated?», more than 70 per cent of the trainees gave a positive answer (50 per cent very, 23.1 per cent fairly), 23.1 per cent found it unclearly stated and only 3.8 per cent absolutely unclearly.

Regarding the presence of students in the story, another element often neglected in the official documentation of teachers, this is judged very marked in 38.5% of cases, quite marked also in 38.5% and little marked in 23.1%. Although in the vast majority of works the presence of students is evident, they are almost always treated as a "class group" (84.6%) and rarely as individuals (7.7%), at most they are described by types/categories (7.7%). This is confirmed by the almost absence of their voice in the teachers' narratives: their dialogues are absent in 50% of cases, little present in 23.1%, quite present in 23.1% and very present only in 3.8%. We could call it a "silent majority". The description of their behaviour and attitudes, on the other hand, is more prevalent: very in 19.2% of cases, fairly in 38.5%, a little in 38.5% and not at all in 3.8%.

The contents of the teaching find ample space in the stories of the teachers in 73.1% of the cases (very much 30.8% and quite a lot 42.3%). As were the reflections of the teachers, which were very present in 38.5% of the cases, fairly present in 42.3% and not very in 19.2%. On the other hand, there is a clear difficulty in bringing out the element of the unexpected and the moments of crisis, which play, as we have seen, a fundamental role in every teaching history: in 38.5% of cases they are little present and in 19.2% they are even absent, quite present in 30.8% and very much in 11.5%. Certainly this part of the questionnaire highlighted two critical issues: the first concerns the way in which students are treated in the stories, often in a depersonalised manner, with their words hardly ever reported; the second concerns the difficulty in bringing out moments of crisis and unexpected events. The latter could be related to the predominantly persuasive communicative style of narratives, which tends to emphasise more the positive elements, neglecting the difficulties, which, however, should be precisely the elements on which to focus.

7.3.3. THE VISUAL STORY AND THE LESSON LEARNT

In this section of the questionnaire the teachers were asked to express an opinion on the effectiveness of the visual/multimedia story with regard to its ability to make the narrated experience and its value understood, to bring out its emotional aspects, to provide useful instructions for the recipients, to be a resource for reflection. Concerning the understanding of the experience, the visual narrative favours it a lot in 50% of the cases and quite a lot in 42.3%, so there is a very positive overall response.

The visual story manages to highlight the emotional aspects of the experience for over 80% of teachers: very effectively in 46.2% of cases, quite effectively in 34.6%. According to the teachers, visual stories are used much more to demonstrate that the narrated experience is a good practice (92.3% of respondents agree a lot or enough on this point) and to promote reflection (69.2% of respondents agree a lot or enough on this point), rather than to provide indications and instructions on the experience

to the recipients (57.7% agree a lot or enough, but the remaining 42.3% agree little or not at all).

The visual narrative thus seems to contribute effectively to the understanding of the experience, succeeding in emphasising the moments pertaining to the emotional sphere and bringing out the teachers' reflections. A persuasive communication style focused on promoting one's own experience remains.

Finding out whether the stories succeeded in conveying what one has learnt and wants to share with the recipients is the objective of this last part of the questionnaire. The teachers claim that the majority of the works succeeded very clearly (53.8%), 26.9% succeeded fairly clearly and only 19.2% succeeded unclearly.

In addition to the clarity with which the "lesson learnt" is communicated, teachers also express positive judgements on the comprehensiveness of the papers (76.9%), the involvement they manage to generate (84.6%), the replicability and transferability of the experience (77%), and the ability to stimulate new ideas and practices (76.9%).

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8

Exploring online professional communities through Learning Analytics for teacher education

by *Maria Ranieri* and *Elena Gabbi*[*]

8.1 Introduction

As explained in CHAP. 1, eTwinning is a large online community of teachers of all levels, engaged in joint didactic innovation projects and exchange of experiences. Research on virtual communities of professionals has long questioned the formative values of online communities for professional development and the different configurations they can take on online. In Italy, authors such as Calvani (2005), Trentin (2004), Biolghini and Cengarle (2000), Pozzi and Persico (2011) and, more recently, Ranieri, Manca and Fini (2013) and Rivoltella and Rossi (2019) have deepened the study of the andragogical potential of the network, progressively shifting attention from the formal contexts of online learning to the informal dimensions of social networking environments. This chapter aims to highlight the main research directions in this area, mainly referring to communities and professional online networks, to then focus on new emerging approaches to the study of network communities based on the analysis of the huge amount of data produced by the tracing of digital platforms. The now internationally known expression for this field of research is *Learning Analytics* (LA), which can be defined, in a first approximation, as the set of techniques for "measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs" (Fulantelli, Taibi, 2014, p. 158). This approach integrates techniques for tracking user behaviour in digital environments with data generated by user interaction on online platforms to create customised learning situations. While interest in this area of research has so far focused mainly on experiences in formal settings (Haythornthwaite, 2019) with secondary school students (Gunawardena, 2017) and university students (Larrabee Sønderlund, Hughes, Smith,

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2019), there is growing attention to other fields such as professional development and teacher education (Alhadad, Thompson, 2017; Bai, 2011; Gabbi, 2021). Therefore, through the reflection here presented, we intend to explore the added value that LA can offer for the study of professional communities, in general, and more specifically the eTwinner community.

8.2
Networks and communities for professional growth: peculiarities and differentiating elements

When it comes to community and professional development from a lifelong learning perspective, the concept of community of practice is an essential reference. As is well known, this expression dates back to Lave and Wenger (1991), who outlined its semantic content within their studies on traditional apprenticeship. Subsequently, the construct was also used in other training contexts (Fabbri, 2007), including that of teacher training (Mak, Pun, 2015).

What is a community of practice, how can we define it? A community of practice consists of a group of individuals who share an interest, a passion, or even a problem, and who develop new knowledge and understanding of their experience through gradual and progressive interaction with each other. The formative model underlying communities of practice is, in fact, the legitimised peripheral participation of the novice in the discourses of the community, around the practices that characterise it, and the relationships established between people, activities, the environment and even other communities. Learning, in other words, takes place through participation in community conversations, configuring itself as a participatory social process.

Communities of practice are not all the same: they can be variable in size, short or long-lived, homogeneous or heterogeneous, spontaneous or intentional, unrecognised or institutionalised. According to Wenger (1998), there are in particular three distinctive characteristics that differentiate them: 1. an identity that is defined on the basis of a shared interest (*identity*); 2. the sense of belonging to a community whose members support each other (*community*); 3. the sharing not only of interests but also of practices. The knowledge that is generated or exchanged in these communities is often tacit in nature, as it is not codified, relying on shaping experience, redundancy and metaphor, and being in contact with those who know.

The aspects highlighted above are useful for understanding what factors influence the building up of professional groups and what participation dynamics are at work in community formation. That said, several authors have pointed out that the construct of communities of practice cannot be applied to virtual contexts *tout court*, since the latter are based on codified forms of communication that hardly support the transfer of tacit knowledge (Calvani, 2005).

Similar criticisms have led some scholars to distinguish between communities and networks (Ranieri, Manca, 2013): here we focus in particular on the contributions of Brown and Duguid, Haythornthwaite and Dron and Anderson. In their work on the subject, Brown and Duguid (2000) distinguished between *communities of practice and networks of practice*: while the former denote groups of interdependent practitioners sharing their practices, the latter designate the set of all practitioners sharing a specific practice. Although the boundaries between these entities are fluid, the affiliation modalities that characterize them are different: in the communities the participants exert a greater control on those who are admitted and on the conditions of eligibility compared to the networks, where these aspects are much less controlled.

Instead, the Canadian scholar Haythornthwaite (2011; 2019) speaks of *crowd*, rather than networks, to distinguish the socio-relational aggregates that are activated in *networked learning* processes from virtual communities *stricto sensu*. Crowds are light collaborative structures, which do not require knowledge of those with whom one collaborates, and involve minimal learning commitments. On the contrary, real collaborative productions involve "heavy" forms of cooperation that require knowing others and paying attention both to the objective of the project and to the opinions and contributions of others.

Similarly, Dron and Anderson (2007) have identified three possible entities that characterize online training contexts, namely the group, the network and the collective. While groups are characterised by adherence to a specific common goal and the sharing of defined rules of engagement, networks are based on milder ties, albeit generated by a common interest, while collectives indicate extemporaneous sharing more prone to serendipity and learning by discovery.

To summarize, despite the diversity of accents, these authors agree on the identification of a "soft" construct (network, crowd, collective) able to describe the aggregative structures that take shape online within more or less formal settings, allowing us to identify – at least in part – for the eTwinning community a model of interpretation of the socio-relational dynamics that inhabit it: "soft" collaborations, even random sharing of resources, exchanges and conversations focused on professional practices.

8.3
Digital networking for teachers' professional development: benefits and critical issues

There are many benefits, documented in literature, of online professional communities and networks for teachers (Fox, Bird, 2017; Greenhow *et al*., 2018; McConnell *et al*., 2013; Ranieri, 2019; Ranieri, Manca, Fini, 2012). A first advantage concerns the exchange of information resources and the sharing of research work on scientific materials and sources useful for solving problems related to profession-

al practice. This type of exchange not only broadens the repertoire of knowledge available, but also allows one to stay up-to-date with professional knowledge. A second benefit derives from the comparison with different points of view regarding the interpretation of one's professional experiences: for example, the possibility of sharing a video documenting the activity carried out in the classroom and receiving an opinion from an external person enriches the analysis and understanding of aspects that escape the attention of those immersed in the daily life of the experience. From this point of view, participation in professional networks encourages reflexivity and professional awareness. A further opportunity comes from the fact that exchanges between colleagues also favour the sharing of ideas on strategies and functional teaching activities with respect to certain objectives: in other words, not only resources are shared but also problems and solutions, especially through the exchange of good practices. Therefore, effective support networks emerge where the exchange among participants translates into help, mentoring advice, and encouragement in coaching. Telling and describing solutions that work can inspire practice, also facilitating innovation processes and experimentation with new approaches. It is also emphasized that meeting and exchanging with colleagues from other schools helps maintain the focus on professional aspects, preventing teachers from slipping into discussions related to specific aspects of their school context, not necessarily of a professional nature.

Along with the benefits, the studies mentioned above also report a series of critical issues that can be framed into three main dimensions: technical, informative, professional. On a technical level, not all teachers possess the digital skills needed to participate profitably in virtual communities. Moreover, even though due to the Covid-19 health emergency teachers were all confronted with the use of technology for teaching, thus acquiring new skills, surveys conducted in the aftermath of the first lockdown in Europe attest that digital competence levels among teachers remain low overall, suggesting the need for appropriate training interventions (Carretero Gomez *et al*., 2021). Further critical issues are related to the risks deriving from the disclosure of information and personal data of students: discussions in online environments, as well as the sharing of professional experiences, can relate to people and situations that, if not treated with caution, are publicly exposed. On the contrary, respect for privacy must be guaranteed with regard to the dissemination of images and information relating to colleagues and students. Further dangers relate to the circulation of inaccurate content. As professional online groups emerge as being learning spaces characterised by weak ties and less control (Haythornthwaite, 2011), the risk of disseminating inappropriate information and content increases. Both the dissemination of sensitive data and the easy sharing of content that is not fully verified damage teaching professionalism and weaken its credibility. For this reason, promoting the digital skills of teachers means not only enabling them to use technologies in practice, but also to adopt conscious and deontologically appropriate behaviours.

8.4
Learning Analytics: theoretical and methodological framework

We have said that the eTwinning community is a professional network supported by a digital platform that hosts a vast amount of interactions, thus generating an impressive amount of data. The latter can be the object of specific study for a greater and better understanding of the dynamics of knowledge development and professional growth of eTwinners. The reference to the tradition of the LA, in this chapter, aims to envisage potential lines of research in this direction, while taking into account both the results of research in the field of *networked learning communities* and the application of analytical techniques to digital data from online platforms. This is a line of inquiry that is progressively affecting the educational field, which is also a key context in which such techniques can gain credibility and expand (Williamson, 2017). LA is positioned at the intersection of different research disciplines: in close relationship with the educational sciences to describe the constructs related to learning, with *data sciences*, for the interaction with the IT infrastructure and the implementation of *data mining* tools, and statistics, for the processing and interpretation of data (Fulantelli, Taibi, 2014). Using LA aims to increase understanding of learning processes and the conditions under which learning occurs in online and blended environments. The discipline has developed as a result of the increasing amount of data available and the design of automated tools capable of overcoming the limitations of traditional processing, which is not applicable due to the breadth and variety of information available and the level of granularity of the analysis (Siemens, 2013). Exploring the objects of educational research with new tools can in fact favour the development of new questions and perspectives that integrate with the previous methods of data collection and analysis, according to an approach defined as data-driven or bottom-up through the use of existing data (Romero, Ventura, 2020). Hoppe (2017) outlined three computational approaches of LA underlying the numerous analyses that can be used and integrated with each other, to outline the different orientations and facilitate non-expert stakeholders in identifying the potentials but also the deficits of the techniques used. *Content-oriented analyses* include methods aimed at extracting information from students' products (e.g. assignments, forum interventions). In the second group relating to *process-oriented analyses*, there are analyses of information on activities, such as access to resources and actions traceable within online systems. The third approach includes *network analysis* methods, including both communicative exchanges between multiple social subjects and interactions starting from an artifact, as in the case of collaborative creations between multiple individuals.

Chatti *et al*. (2012) defined a reference model to systematise the objectives pursued through the application of LA, distinguishing six purposes. The *monitoring* and *analysis* objective is very common and is achieved by tracking student activities to generate reports from digital platforms and thus support the decision-making of teachers or institutions. It also has the function of analysing the paths and strategies of use of the

designed system through the identification of patterns of user behaviour, particularly within online paths characterised by a high number of participants, such as MOOCs, and possible relationships between consultation of resources, mode and frequency of internal communication and learning profiles. On the other hand, we refer to tutoring and mentoring for the support that the results of the analyses can provide in order to elaborate strategies for guidance and direction, with a focus respectively on the current teaching process or in the context of a broader project. Another objective is related to evaluation and feedback, in particular to improve the effectiveness of the teaching solution in the context examined and to provide elements relevant to the self-evaluation of students and teachers. In order to predict and intervene, LA tools can be developed to anticipate future performance and behaviour based on past activities and meet specific intervention needs, for example by identifying students at risk of dropout who need additional support. It is also possible to use LA for customisation and recommendation, using the available information to develop flexible systems and accommodate the interests and needs of the learner, focusing on self-determination and autonomy with respect to one's own learning path in a knowledge-pull perspective, as opposed to a knowledge-push perspective, in which the sequence of learning actions is predetermined by instructors. Finally, LA can pursue the objective of supporting reflection and favouring metacognition processes, developing data visualisation systems that inform students and teachers about the composition and overall trend in the courses, so as to place the individual results with respect to those of the entire reference population, or to a segment thereof. Comparing, for example, the results of different classes or years can be useful for a teacher to obtain insights into his/her professional practice, in particular concerning the teaching strategies or assessment tools used. To facilitate the use and usability of the data for the final beneficiaries, interfaces and graphical representations, summarising and presenting the information, have been developed in the specific field of Visual LA (Ritsos, Roberts, 2014).

The dimension of reflexivity can be regarded as transversal to the epistemological approach of LA, since its definition already refers to the intention to present and return to the subjects the results of the analyses of their data. This intention characterises the pedagogical nature of the LA intervention, aimed at realising a developmental benefit for the actors involved according to the different objectives it may pursue, as opposed to the application or implementation of automated tools in other disciplines, such as business intelligence where some of these tools originated (Ferguson, Buckingham Shum, 2012). In particular, Clow (2012) defined the LA process as a loop, a cycle in which the works must generate "actionable data", results able to support the decision-making processes to produce appropriate interventions with a final return in favour of the beneficiaries of the action analysed in terms of intervention or feedback. In addition to the circularity of the process, the importance of considering learning as a social phenomenon and adapting the tools to the scenarios and educational objectives of the digital environments in which they are implemented should also be emphasised. « *User-centred* is not the same as *Learner-centred*: what I want is not necessarily what

I need, because my grasp of the material, and of myself as a learner, is incomplete» (Ferguson, Buckingham Shum, 2012, p. 9). In this sense, the application perspective of the LA becomes therefore aimed at producing meaningful information for training, in particular also noting those forms of collaboration and distributed competences that characterise the processes of social construction of knowledge typical of computer-supported collaborative learning.

8.5
The added value of LA for the study of teacher communities

Although teachers are recognised as important stakeholders of LA interventions (Chatti *et al*., 2012), the role they can play in their training is still little explored. The application of LA to the professional development of teachers is in fact still in its infancy (Sergi, Sampson, 2017). However, in the literature one mainly notes external supervision of the training dimensions of professional development pathways (Bai, 2011; Cambridge, Perez-Lopez, 2012), as well as co-design and feedback projects related to LA tools (Alhadad, Thompson, 2017) and measurements of the impact of the implementation of tools for teacher decision-making and self-assessment (Chen, 2020). Data collection in digital learning environments can affect both students and their teachers, but the latter, in particular can play a key role in a context of growing concern about the datafication of education. On the one hand, teachers must be enabled to understand the implications and scope of the advent of algorithms and data mining solutions and, contextually, the pedagogical and epistemological assumptions that are implicitly implemented through the analyses conducted (Williamson, 2017). On the other hand, as a consequence of such re-professionalisation (Wyatt-Smith, Lingard, Heck, 2019), they can participate in the validation of the tools and learning models investigated and contribute to the critical and sustainable development of the discipline. Teacher communities have the potential to become a place of LA experimentation, without this implying direct involvement of students. The value of these environments in terms of lifelong learning lies precisely in the common interest towards professional practices and exposure to innovative perspectives, but also in the availability of tools for interaction and exchange that allow us to first develop a sensitivity and then a reflection towards teaching practices. In addition, the LA can represent tools for decoding these communities, to identify and describe the elements that characterise the training experience, summarising the numerous methods of participation and using large-scale monitoring tools.

Considering the longevity and complexity of the eTwinning community, numerous research projects have focused on the factors that have contributed to its development since its inception, also from a macro, broad and general perspective on its characteristics (Vuorikari *et al*., 2015). In fact, some pioneering studies on eTwinning have been conducted through LA techniques and tools. Pham *et al*. (2012) applied

social network analysis for the analysis of the structure and dynamics of social networks, examining the blogging activity of eTwinners in over 20,000 Teacher Bulletins, online diaries used to document projects. In the analysis of this network, the nodes are represented by the teachers and the link between the nodes is formed if one teacher has commented on at least one blog post of another. The result showed how the community structure was fragmented. In fact, it was configured with a core group of frequent relationships in which the most active teachers also had connections with other nodes, connected in smaller communities, which were, however, disconnected from each other. It should be noted that the period of reference of the study coincides with the beginnings of the platform, a period in which the community of practice was evolving and shaping its structure.

In order to intercept the multiple variables tracked and the variety of types of participation, Vuorikari and Scimeca proposed the eTwinning Analytics Framework to «operationalise the *construct* of teachers' co-operation in eTwinning to allow it to be monitored and measured» (Vuorikari, Scimeca, 2013, p. 29). The eTwinning Analytics components are categorisations of data collected by the platform in order to identify quantitative measures of what cooperation means for teachers, and the intensity of such cooperation (TAB. 8.1). The study shows how eTwinning has the potential to engage its users over a long period of time (more than 5 years) and how the community proves to be active even through the building of weak links: in fact, one third of teachers, as of 2013, although not participating in projects, were still involved in social networking activities. Such weak links, not yet socially relevant but potentially activatable, are typical of social networks and are important for the circulation and generation of new ideas in a network (Haythornthwaite, 2011). A further result of the study highlights the necessary investment of time that teachers should make to get the most benefits from community participation. In fact, eTwinners who have been present for more than three years are more involved in cooperation through projects than newcomers.

In the same years, given the growing expansion of the eTwinning action and the participation of an increasing number of teachers and schools, the development of automated big data synthesis systems has allowed the creation of two models of tools to be implemented in the platform. The first EVA prototype (*eTwinning Network Visualization and Analysis*) was created by Breuer *et al.* (2009) to explore the structure of the network in terms of *school networks*, *teacher networks*, *project networks* and *country networks*. The first two areas showed poor connections, while at national level the cohesion of the network was evident. Also of interest is the finding that half of the projects shared the founding teacher with at least one other project, and thus some teachers were more proactive and driving than other community members.

Subsequently, as a self-monitoring tool for teachers' lifelong learning, Song *et al.* (2011) developed the CAFE prototype (*Competence Analyst for eTwinning*) using an implicit assessment method, without the direct involvement and with automated extraction of tracking data, to analyse the professional and social skills of the then

TABLE 8.1
Elements of the eTwinning Analytics framework

Components of eTwinning Analytics	System Actions
General	Logging in to the platform Sending Messages
Social networking activities	Blog posts, comments and support actions Adding contacts Participating in Teachers' Rooms
Coordination and exchange activities	Participation in groups Comments on kits, project diaries, applications to Quality Labels
Professional collaboration	Participation in Learning Events Collaborations in projects on TwinSpace Writing the project diary

Source: adaptation from Vuorikari and Scimeca (2013).

160,000 eTwinners. Numerous variables were extracted from the database (e.g. measure of centrality derived from social network analysis, number of published posts), summarised into a few factors that were subsequently normalised for comparison. The evaluation of the prototype then directly involved a small group of experienced teachers through a series of workshops, aimed at soliciting a meta-competence dimension through self-monitoring with the proposed tool. The two prototypes, EVA and CAFE, despite the promising prospects illustrated, however, do not seem to have passed the initial phase of development, not being implemented in a stable plan in the IT infrastructure.

As illustrated here, the experiments through eTwinning described the eTwinning community in its early days from a global perspective. Further research could investigate the transformations that have taken place in the meantime and focus on the specific characteristics of the national communities.

8.6
Conclusions

Virtual communities for teacher training are increasingly widespread and their value within the training and professional path has been investigated in terms of resource exchanges, circulation of ideas and comparison of critical issues common to the teaching profession (Fox, Bird, 2017; Greenhow *et al*., 2018; McConnell *et al*., 2013; Ranieri, 2019; Ranieri, Manca, Fini, 2012). Examining the socio-relational dynamics of these communities also implies the possibility of taking into account numerous signals and modes of participation, thus understanding the role of different forms of aggregation,

from informal and transient to structured and consolidated (Brown, Duguid, 2000; Dron, Anderson, 2007; Haythornthwaite, 2011; Wenger, 1998). eTwinning represents a network of teachers for teachers, whose current structure has also been shaped by the numerous instances from the bottom of eTwinners, who have grasped its even greater potential compared to the initial intentions of the promoters. However, the experience in eTwinning is particularly fragmented and complex to describe and, consequently, the participation in this community manifests itself through a great variety of data released in the use of the digital platform. For this reason, techniques for processing and synthesising multivariate measures such as LA can be appropriate tools to capture the dynamics that characterise different forms of online aggregation and, from this perspective, the study of the eTwinning community through such techniques appears promising. Although the level of national management and interaction is relevant in the action, and this is reflected in both policy and social network cohesion (Breuer *et al*., 2009), there is a lack of studies on the Italian community from a macro perspective (Vuorikari *et al*., 2015) which can complement and support the information from the administrators' periodic monitoring. In addition, the research published to date focuses mainly on elements such as duration or permanence in the community, leaving aside the study of participation modalities. LA has already been used as an observation tool for large online communities of teachers (Bai, 2011; Cambridge, Perez-Lopez, 2012), examined as informal training devices for professional development and lifelong learning. Research on these issues is currently under way and a summary of the results is described in CHAP. 9. The study is exploratory in nature regarding the application of a LA technique for extracting information and returning it in the form of insight to the Italian eTwinning community.

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9

Implication of Learning Analytics for teacher professional improvement

by *Elena Gabbi**

9.1 Introduction

In a constantly changing environment in which the digital level is now inextricably tied to both work practice and individual behavioural habits, the introduction of new computational methodologies is gradually influencing the educational area. Educational academics are interested in the application of "big data" methodologies in the form of Learning Analytics (LA), a new discipline at the intersection of education, computing, and data sciences research. LA has a variety of data collecting and analysis tools that can be used to detect and investigate engagement, performance, and task progress (Hoppe, 2017).

The study described in the following paragraphs aimed to evaluate a participatory approach applying LA to the eTwinning professional community in order to investigate its potential for improving teachers' professional activities. Briefly, eTwinning can be seen as a technology-enhanced community of practice (Lave, Wenger, 1991) for teachers to collaborate and share a common repertoire of experiences, methodologies and tools across different subject areas. Through observation, exchange and collaboration between members, informal learning processes are encouraged and can contribute to the professional improvement of participating teachers. Informal professional networks for teachers can also foster connections between different contexts and enable the generation of ideas, according to participants' involvement (Macià, García, 2016). Some LA pioneering studies have been previously conducted on the level of network cohesion and permanence in the early days of eTwinning, however, there is currently a lack of studies on the specific participatory modalities of the Italian community. The rationale for the study here presented and the theoretical framework that guided the definition of the research strategy are described in CHAP. 8.

The participatory approach to big data analysis is discussed first in this chapter, followed by a full description of the research methodology, a case study based on a

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mixed-methods approach, including the tools and methods used for data analysis. The major findings are then summarised: the statistics on the community's online activities are shown, and the main topics addressed in the group conversation with experienced users are outlined. Finally, an overview of the final reflections is provided to support decision-making processes about the planning of activities for the development of the professional community of eTwinning Italy.

9.2 Exploring online professional communities: from big data monitoring to a participatory approach

According to the TALIS 2018 report, one of the policy recommendations to promote quality teaching is the establishment of professional learning communities that could facilitate the dissemination and fostering the use of innovative practices (OECD, 2019). Teachers have the chance to learn from and exchange knowledge with colleagues outside the classroom through online networks and digital communities (Ranieri, Manca, Fini, 2012). Hence, an online community such as eTwinning could significantly impact the needs for lifelong learning as self-direct learners (Knowles, 1975). Collaboration in eTwinning can impact teachers' professional development, particularly their training on specific topics, as well as the creation of pedagogical-didactical methods and the expansion of schools' network potential (cfr. CHAP. 4). Moreover, the different levels of access and the tools available to the community make the eTwinning experience composite and complex to explore. Indeed, collaborative digital platforms are infrastructures that are designed and built using the available resources, indications, and tools to mediate interactions and relationships among the subjects that inhabit them (Bucher, Helmond, 2017). Learning ecosystems are constructed in a technological architecture geared to assist information and knowledge management in heterogeneous contexts and with differentiated functional components, reflecting an evolution of traditional information systems (Gros, García-Peñalvo, 2016). The technological approach of such platforms is thus not an end in itself, but serves the purpose of supporting the pedagogical processes to be developed, while minimising and concealing the complexity of the underlying IT architecture. As a result, some interactions with the platform, as operationalised by the data monitored by the web server, could be considered as clues of higher-order thinking processes and deeper social dynamics (Van den Beemt, Buijs, Van der Aalst, 2018). To explain the trends and interactions of an online community, however, simply tracking resource use – albeit at an unprecedented level – would not be exhaustive of the involvement processes that occur inside it. It is appropriate to supplement the results of systematic supervision with the learners' perspective, encouraging a reflexive practise on the data that integrates opinions and experiences with a comparison of the real forms of membership.

Following this objective, after an initial period focusing mostly on tool develop-

ment, the LA discipline launched a phase of increased stakeholder involvement (Buckingham Shum, Ferguson, Martinez-Maldonado, 2019). In this regard, Peña-Ayala, Cárdenas-Robledo, Sossa (2017) define LA as a research line that seeks to study, understand, describe, explain, and predict the learning phenomenon that occurs in web-based education settings using computer-based data and knowledge-based systems to improve the efficacy of teaching-learning experiences and increase learners' achievements and gratification. The authors assume two dimensions of the study object of LA as a learning phenomenon: the *behavioural* dimension, which involves the process of producing a change that can be observed and evaluated from the outside, and the *experimental* dimension, which involves the learners' perception and representation. Through tracking systems, it is now possible to process those *exhaust data* that arise from the ICT system and are a by-product of that system to describe the behaviours of the participating subjects (Cambridge, Perez-Lopez, 2012). However, in the broad range of possible operations to obtain and process data, the challenge of the discipline is to move *from clicks to constructs* to capture the most valuable elements of the teaching-learning experience (Knight, Buckingham Shum, Littleton, 2014). Furthermore, the responsible use of LA is linked to the production of *actionable data* (Clow, 2012), collected and used to modulate and design interventions that will produce benefits for the data owners. To implement this purpose, the following section describes the research methodology adopted.

9.3 Research methodology

The study's purpose is to apply a participatory approach to data-driven research *in*, *with* and *for* the Italian eTwinning community, to explore and interpret teachers' participation through data-mediated reflective practices (Schön, 1987). To investigate the relationship between the use of eTwinning resources and teacher professional improvement, the study looked at participating behaviour in retrospect to find insights and patterns across the Italian community, applying a data-driven approach. Indeed, to detect implicit processes in computer-supported collaborative learning contexts, the occurrences of tracked activities are used by LA to identify patterns and frequencies of participation actions in virtual environments (Hoppe, 2017). In addition to analysing activities to identify possible relationships between access to resources, mode and frequency of communication, observed behaviours were compared with the experiences of advanced users in order to implement direct involvement of beneficiaries through interpretation of analysis results. This perspective is consistent with the recent evolution of the LA scientific community, which offers a human-centered approach that promotes the participation of stakeholders in the application of computational techniques in educational contexts (Buckingham Shum, Ferguson, Martinez-Maldonado, 2019).

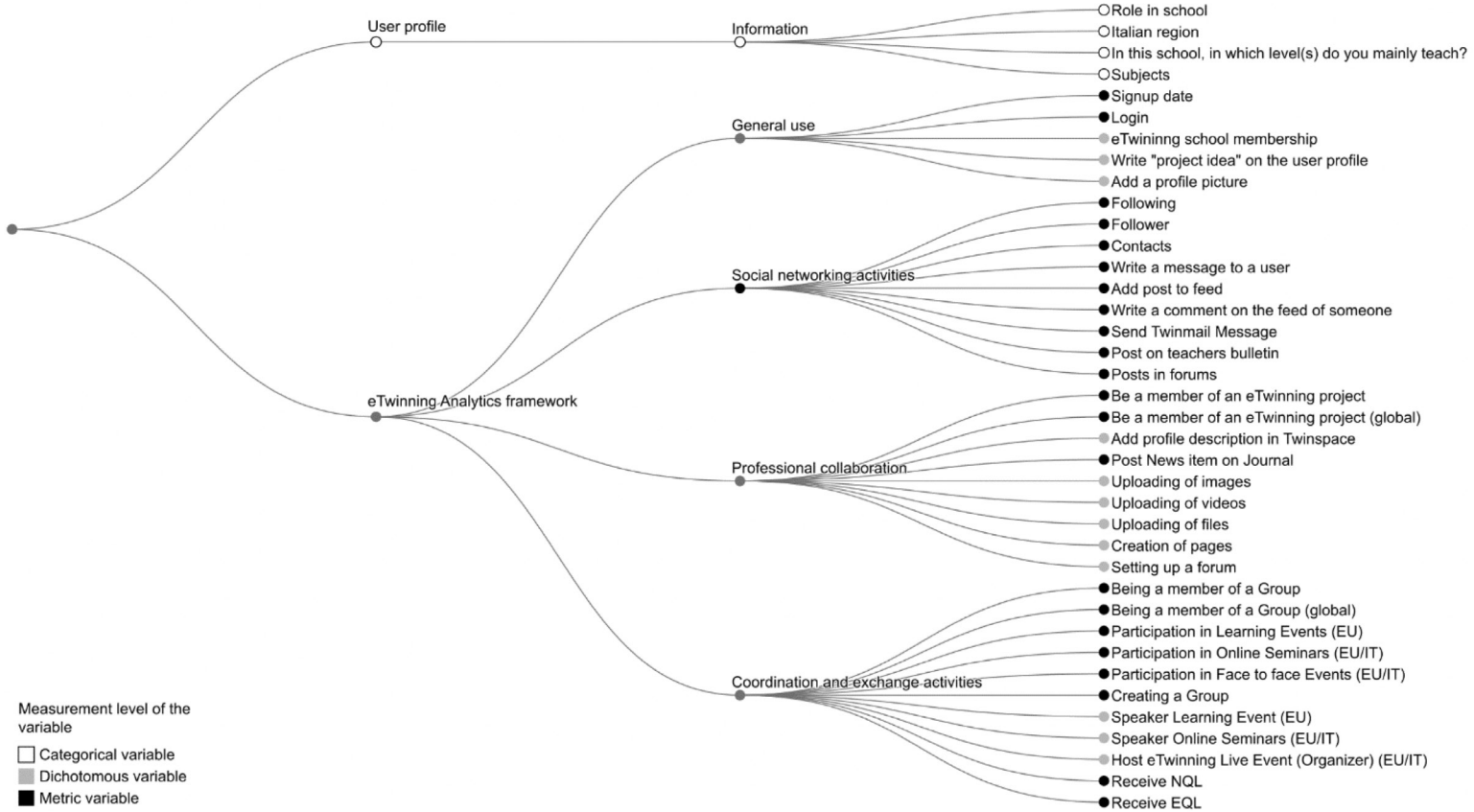
The research described is part of a larger case study (Yin, 2018) with a mixed methods strategy – already known and employed in the context of LA (Chatti *et al.*, 2012) – to obtain a multi-layered reading of information on the dynamics of participation in the professional community of teachers. First, quantitative data analysis was conducted through the application of descriptive statistics to explore the information tracked on the platform. On the continuous variables, descriptive statistical analyses were conducted and for the categorical and dichotomous variables frequencies were calculated. Secondly, the analysis results were discussed in a focus group with 15 Italian eTwinning Ambassadors, identified with the support of the Italian eTwinning National Support Organisation (NSO). Before the focus group, conducted by the author in November 2021, participants were sent a summary of the results to familiarise themselves with the information and to reflect on the proposed topics. A content analysis was conducted on the discussion transcript. In this chapter, we highlight the most relevant findings that may be useful in promoting community development.

9.4 Results of the analysis of Italian community activities

The list of variables has been approved by the Italian eTwinning NSO, the CSS and the EACEA. The acquisition of the information related to the Italian eTwinning community is compliant with the policy on data processing as foreseen by European regulations in terms of use for research purposes. The actions on the platform were collected adapting and updating the eTwinning Analytics Framework (Vuorikari, Scimeca, 2013). The variables extracted from the platform database were then grouped into four dimensions of community participation: general use, social networking activities, professional collaboration and coordination and exchange actions (FIG. 9.1). The dataset consists of a selection of 38 variables related to tracking activities and user profile information for the entire Italian eTwinning community in the reference period (01/09/2019-29/02/2020). The time frame was chosen to monitor pre-Covid activity trends, thus not distorted by the health emergency. Personal information such as age, gender and years of teaching were excluded from extraction to preserve user privacy.

The Italian community – numbering 80,308 members as of 29/02/2020 – includes users registered in the past such as profiles declared dormient after one year of inactivity and those deactivated and anonymised after three years of inactivity. Therefore, to distinguish those who are still interested and involved in activities from those who have completed them in the past, two sections of the sample were defined. If at least one tracked action was carried out during the reference period, the user was classified as *active* (n = 20,541). The remaining cases were defined as *inactive* (n = 59,767), although they are included in the general description for data belonging to other global actions and characteristics. The large difference between the two sections can be traced in the literature on online communities to the well-known phenomenon

FIGURE 9.1
List of extracted variables and their characteristics



of the participation funnel (Clow, 2013), a dismissive behaviour characteristic of open and informal learning modes.

The results of the analyses of the *User profile* variables confirm that the Italian eTwinning community is populated mainly by teachers, who represent 95.1% of the Italian sample. Other roles are marginally present, including school principals who are 2.7% out of the total. The school order in which teaching takes place is optional profile data, available in only 34.7% of the sample. ISCED level 3 (12.6%), which corresponds to high schools, is the most frequent, followed by secondary school (9.2%) and primary school (8.0%), respectively. As for the discipline taught, the *multiple* category, which includes cases where more than one option was selected, counts a third of the choices available (30.5%), followed by foreign languages (27.2%) and primary school subjects (8.3%). The geographic distribution shows that some Regions have a higher absolute number of enrolments, correlated with population density (e.g. Lombardy with 8,628 users, Campania with 8,682). However, in other Regions recent activity is proportionally higher than the total number of eTwinners in the territory. The presence of active users ranges from 21.1% in Val d'Aosta to 44.5% in Marche.

9.4.1. ANALYTICAL DIMENSIONS OF ETWINNING PARTICIPATION

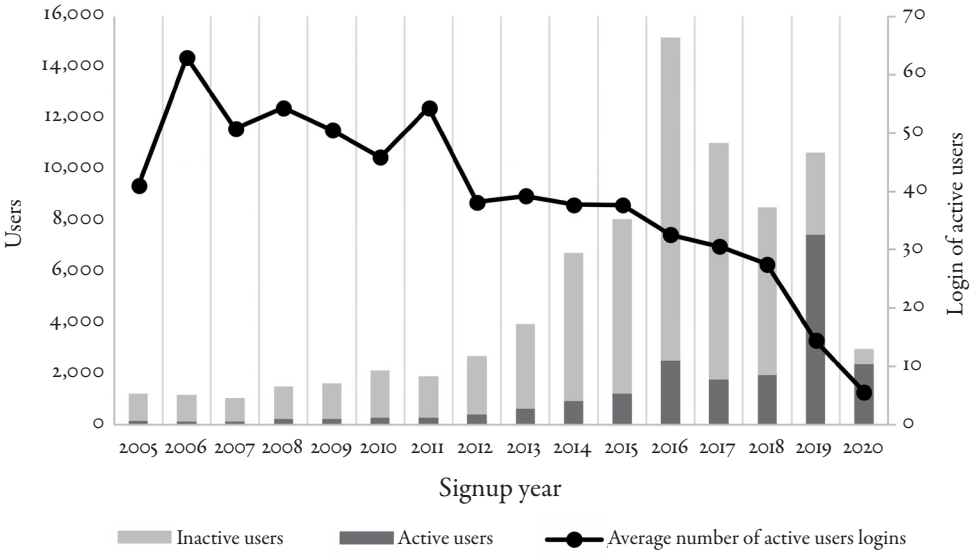
The *General use* activities concern the level of engagement within the community from login information[1] and self-representation preferences. Generally, over the reporting period, an average of 6.21 logins is observed (*S.D.* = 39.56), which noticeably increases considering just active users ($M = 24.3$; *S.D.* = 75.36). However, the variability of the measure shows that the differences among participants remain very high. Indeed, 51.6% performed up to 4 registered logins while 11.3% performed more than 50. Moreover, the Signup date was used to explore the number of users enrolled who are still active in the period under consideration (FIG. 9.2). The proportion of still active users predictably increases with the most recent enrollment. For comparison, the average number of active users' logins, estimated for each year of registration, is shown by the line. The platform has seen a lot of logins from users who have been participating for a very long time. However, the average number of logins drops with new users, which is concerning for freshly joined and less experienced teachers.

Additional data concerns the digital identity of eTwinners, information and presentation tools such as the use of their profile picture (14.4%), project idea (12.2%) and belonging to an eTwinning School (2.4%). These functions are considerably more used among active users.

The second group of activities is related to *social networking and communication*.

1. Login data were extracted from the Information website or from eTwinning Live, but they do not include logins made directly from Twinspace, Groups or Learning Lab.

FIGURE 9.2
Experience with eTwinning and Login activities



The extent and density of the community are described through some dimensions of networking and communication on the platform (TAB. 9.1). The network tools are used by a portion of the community, predominantly with a low number of contacts. It is observed that the preferred network tool is the number of contacts (M = 4.9, $S.D.$ = 36.2) and that the average number of Follower (M = 1.4, $S.D.$ = 10.6) is higher than the Following (M = 1.2, $S.D.$ = 10.6) since the network is open to international members. However, these results are influenced by the large number of users who do not use eTwinning's native social networking tools. The Italian community is thus characterized by a good popularity in the international scenario but tends to be less involved in network building. Sending messages to other teachers is an action that is monitored in the eTwinning Live section as looking for and managing contacts in the professional network, which is the first step toward more structured forms of collaboration through Twinspace or in groups. Live's messaging function was used by 22% of active users with an average of 1.6 messages sent per person ($S.D.$ = 7.5). Tools for establishing professional contacts within the community were also assessed while monitoring the platform. It has been noted that only a tiny percentage of users use internal communication tools such as posts in Twinspace forums, teacher bulletins, Twin mail messages, Live feed posts, and related comments. The usage statistics for the various tools are relatively similar: the majority of users use them moderately (between one and five posts, messages, or comments during the six months assessed), while a small minority are quite active. Synthetically, Live messaging (M = 1.62, $S.D.$ =

TABLE 9.1
Use of eTwinning networking and communication tools

Social networking and communication activities	Total Italian users (n = 80,308)		Active users in the reference period (n = 20,541)	
	M	*S.D.*	*M*	*S.D.*
Following	1.18	9.58	3.80	18.38
Follower	1.40	10.60	4.60	20.48
Contacts	4.94	36.21	16.47	69.76
Live mails sent	0.41	3.88	1.62	7.54
Posts added to feed	0.06	0.85	0.25	1.67
Comments added to feeds	0.04	1.34	0.14	2.65
Twinmails sent	0.07	1.02	0.27	2.01
Twinspace bulletin posts	0.10	1.75	0.39	3.45
Twinspace forum messages	0.08	1.19	0.30	2.33

7.54) is the tool that active users use the most, while the profile feed (M = 0.25, *S.D.* = 1.67) is used by more active eTwinners (8.1%), but those who use the teachers' bulletin board (M = 0.39, *S.D.* = 3.45) do so more intensively.

Through work focused on *professional collaborative activities*, the eTwinning initiative specifically intends to build abilities connected to participation and exchange. In the present study, the process of building online cooperative culture in the digital environment is analysed through the shared practices of participation and activities in projects with students, declined into two definitions: the amount of projects users have joined both during the reporting period and overall since registering with the portal. Globally, 27% of Italian community members have joined at least one project, and 28% of them (6,083) have extended participation in one or more projects during the six months under consideration. TAB. 9.2 shows the frequency of overall project membership and compares it to the frequency of joining a group. Interestingly, some eTwinners joined one (2.7%) or multiple (2.9%) projects and groups at once, indicating that the activity of the two components is positively associated, in addition to the high percentage of non-users (58.9%).

In terms of instructional design and experimenting with the collaborative, multicultural, and digital educational practices which characterise the system, the conduction of projects becomes the main focus of eTwinning activity after joining. Both activities related to the setting up of the environment and related to the decisions that underlie the instructional design of the structure of the projects have been traced in the platform as potential actions that eTwinners could actively engage in the construction and management of Twinspace. In terms of the shared setting up of the project's online environments by active users during the reporting period, the most common action is the profile description (16.1%), which is linked to the construction of the

TABLE 9.2
Distribution of project and group membership

		Group memberships				
		No. groups	1 group	2 groups	More than 2 groups	Total column
Project membership	No. projects	47,303 (58.9%)	7,648 (9.5%)	1,969 (2.5%)	1,365 (1.7%)	58,285
	1 project	8,540 (10.6%)	2,130 (2.7%)	900 (1.1%)	896 (1.1%)	12,466
	2 projects	1,972 (2.5%)	788 (1.0%)	369 (0.5%)	588 (0.7%)	3,717
	More than 2 projects	1,669 (2.1%)	1,010 (1.3%)	792 (1.0%)	2,369 (2.9%)	5,840
	Total Row	59,484	11,576	4,030	5,218	80,308

teacher's digital identity, followed by the adding of images (15.2%) for students to view or download. The function of creating pages (10.2%), as flexible tools for organising and describing activities, appears to be widely used in the construction of the training setting consistent with the project's development, whereas the role of creators of forums (2.0%) appears to be limited to a few users.

Besides experimenting with teaching approaches in projects, eTwinners could learn new skills by participating in the community's *professional exchange* initiatives. Participation in online and in-person training sessions, as well as the awarding of National and European Quality Labels, constitute the formal dimension. During the period, the attendance rate among active users is 2.0% for European Learning Events, 1.0% for webinars (both Italian and European), and 4.3% for in-person training (both Italian and European). Before the Covid-19 caused health crises, in-person training was thus the most extensively used modality, however, also online programmes received attention. In addition, National (NQL) and European (EQL) Quality Labels are two successive stages of an internal reinforcement system intended at increasing the visibility and exchange of good teaching methods in accomplished learning initiatives. As of 02/29/2020, 2.8% (2,228) of Italian eTwinners had received at least one NQL and 1.9% (1,522) had received at least one EQL. On the other hand, the informal nature of exchange practises, is represented by spontaneous engagement in eTwinning groups, as previously addressed in comparison with projects. 26% of Italian eTwinners belong to at least one group, while 23% of active users joined at least one new group during the reporting period. Lastly, other actions documented on the platform relate to the function of promoting and coordinating the Italian community, intending to mentor less experienced colleagues. In fact, data were collected on proactive behaviours such as speaking at training sessions and their arrangement for the formal dimension and group formation for the informal component. During the evaluation period 128 italian eTwinners served as hosts for a Live event and 123 established at least one peer group over the 6-month reporting period.

9.5 Interpretation and discussion of the statistical findings

To implement the qualitative data collection, the focus group technique was used with 15 eTwinning ambassadors. The group was heterogeneous in terms of geographical distribution, professional role and school order. The summary of the group discussion, developed in the following paragraphs, is guided by the two themes that animated the exchange: 1. the comparison between subjective experience and the results of the statistical analysis; 2. possible areas of intervention to support relevant participation.

9.5.1. DATA-MEDIATED REPRESENTATION OF COMMUNITY PARTICIPATION

The first area of content analysis concerns the interpretation of the LA findings on community participation. As stated in the introduction, the main goal of LA is to produce useful and relevant information to benefit the teaching and learning processes (Peña-Ayala, Cárdenas-Robledo, Sossa, 2017). In-depth analyses of the community may indeed uncover little-known or underestimated aspects. For some respondents, however, information on usage discrepancy, while consistent with the literature of large online learning communities (Clow, 2013), may discourage or disincentivize future eTwinners. Instead, for more active members, such as eTwinning ambassadors, the awareness produced by reading the data may become preparatory to future actions to solicit participation locally. Subjective perceptions of isolation in the educational context can also be reinterpreted in light of the overall ratio of active to inactive as a motivation for reflection and action at the school level. The participants agreed that the unprecedented perspective of the analyses on the Italian community was of interest to them. Although for some the inactive component of the community appeared to be a known phenomenon, for others the size of the difference is a relevant fact that changes their perception of the community. In fact, on the one hand, it is confirmed how the entry of new members is facilitated by the role of promotion played by the ambassadors that arouse an initial motivation to join eTwinning: teachers signup because they are attracted and interested, during or immediately after the training activities. On the other hand, a discrepancy emerges from reading the results of the analysis of the general use of the available tools, which was realized to a lesser extent than expected.

Some respondents focused on the use of the platform's tools for communication and social networking activities. The gap between subjective perceptions and actual use of Twinspace forums, teacher bulletin, Twinmail mail, as well as posts and comments in Live feeds, which is limited to a small percentage of users, was pointed out. Some respondents suggested competition from other common digital tools and policy limitations as reasons for lower usage. It is noted that interaction and collaboration practices are not limited to the platform's tools alone, however, this implies that such information becomes inaccessible for monitoring activities and that internal data tracking could not accurately represent user behaviour. However, the function of

the eTwinning environment remains crucial for participants, specifically for sharing best practices and experiences with students through the display of project outputs in Twinspace.

Concerning collaborative activities and project organisation, the discussion's focus shifted from the use of resources to the methodology adopted. The usage of forums for partner search, if insufficient, could be interpreted as a tendency to replicate the same experienced partnerships, albeit with the criticality of not soliciting additional connections. Technical and policy limitations also resurface in the description of activities with students, albeit with an awareness of the upcoming technological evolution of the platform currently underway. Moreover, it is well known how usage constraints are largely due to the data protection procedures of the young students who participate. Finally, it is interesting the link that the ambassadors highlight between participation in the platform's activities and the application of the project-based learning methodology that eTwinning promotes. The commitment and skills required of teachers could discourage involvement, as could resistance to more innovative forms of teaching. Initial training therefore could also include teaching skills elements, since the impasse of using the platform is associated with unfamiliarity with project design and management.

Finally, data on exchange activities were discussed in the context of presence in national and European groups and training events. Although it is noted that some meetings are restricted to a few potential participants, some ambassadors point out how the opportunities could be more fully exploited by Italian teachers. Joining an eTwinning group, on the other hand, could be considered a facilitation of informal learning processes: unlike events that offer certificates of participation, group membership is spontaneous, without explicit incentives, and thus an obvious and promising signal.

9.5.2. RECOMMENDATIONS TO ENCOURAGE RELEVANT PARTICIPATION IN THE COMMUNITY

In the focus group discussion, the ambassadors highlighted some potential obstacles to explain the different levels of participation of the Italian eTwinners community. Firstly, linguistic competence inhibits many teachers. Aspects related to the technological domain can also affect participation due to reduced school equipment and insufficient infrastructure in some regional areas and to the digital skills – real or perceived – of the teachers themselves. Finally, innovative teaching practices, such as the project-based approach, may also be a novelty for many teachers. In this regard, some participants noted discrepancies nationwide in student-centred teaching practices, as opposed to the more traditional approach. The percentage of active users would thus reflect differences in the attitudes of Italian teaching staff toward educational innovations in general. Moreover, not all those joining eTwinning are willing to invest time, effort and professional resources as members of an exchange and collaboration network.

Finally, several suggestions have been made to enhance the situation surrounding the Italian community and foster its expansion. The system is seen as being proactive in providing feedback and motivating active participation; it is seen as a rewarding system that values dedication and accomplishments. However, some ambassadors agreed that additional training should be provided after the initial contact to enable active involvement and step in when the first barriers appear. Although it doesn't currently seem to be done, such follow-up action is thought to be essential in light of the analysis data to stop early dropout caused by a lack of information following enrolment. Furthermore, it should be mentioned that in the experiences of Italian teachers, the term "project" can have a negative connotation: it may be seen as a side activity to disciplinary teaching rather than an integrated action. Given the above-mentioned barrier of resistance to innovative teaching methods, it might be amended in favour of a specific definition of the planned work phases and objectives to reach. Lastly, the lack of financial benefits that involvement in eTwinning activities provides in other countries was brought up while discussing the types of incentives to be taken into account, such as digital badges, trained credits, or recognition based on hours of employment.

9.6 Conclusions

The four dimension of eTwinning participation were thoroughly evaluated in the first phase of the LA application, highlighting some key points. The average number of logins demonstrates high system engagement, but it is generally noted that a smaller percentage of users are considerably more active than the rest of the community. According to research on teacher communities, a small portion of the community has a significant influence on total activity (Macià, García, 2016). Averaging five contacts per Italian eTwinner, the network of communicative interactions mostly relies on Live messages, which were used by more than one-fifth of active users during the reference period. One-fourth of the community participates in collaborative experiences through membership in Twinspace initiatives, and the dimension of professional interaction is specifically characterised by group membership and to a lesser extent through the formal learning possibilities provided. Involvement in teacher groups and collaboration in twinning projects are characteristics that are closely associated, highlighting the connection between innovative teaching practice and seeking opportunities for peer exchange (Ranieri, Manca, Fini, 2012). Lastly, active users with the most experience have the highest access to the platform. In summarizing, the participation of the Italian eTwinners community seems to be connoted by different levels of intensity of integrated use of the same resources.

The qualitative phase of the study focuses on the interpretation and discussion of LA application outcomes with some knowledgeable users. Overall, it was determined that the analysis intervention was meaningful to future community improvement.

It becomes clear how the previous idea of community involvement didn't match the interpretation provided by the data, especially in respect to the ratio of active users to all Italian eTwinners. In light of the new information, other platform features, such as the utilisation of communication tools, were also reexamined. Participants made assumptions about potential challenges and the appropriate course of action, particularly about follow-up after enrolment.

An important aspect in communities of practice, including online professional networks, is known as *peripheral participation*, which reflects the behaviour of those components who benefit from the content and shared environment but rarely proactively manifest themselves, waiting for more experience (Lave, Wenger, 1991). This entails a time, motivation, and commitment investment (Macià, García, 2016) in the evolution of a profile from a passive component to an expert user who guides and orients his peers. Indeed, the current findings on diverse degrees of participation in eTwinning are consistent with studies of large online communities that emphasise the coexistence of expert and inexperienced subjects, through which a major formative value for both is generated. The use of LA on the Italian group activities made this occurrence visible, providing an opportunity for the teaching community to reflect.

Indeed, the participatory approach to LA has allowed us to experiment with a multidimensional mode of analysis to explore participation in online communities, helping to highlight the implications of this practice for teachers on three dimensions: research, professional development, and community moderation. From a methodological standpoint, addressing bottom-up instances can help to define the investigated constructs in terms of variables linked to teaching and learning processes (Clow, 2012), as well as tie them to the goals and aims of the beneficiaries and the research context. To teachers' professional improvement, the mixed methods strategy emphasises the necessity to connect behavioural and experiential elements (Peña-Ayala, Cárdenas-Robledo, Sossa, 2017). Furthermore, by triangulating different information sources, it can help to reduce the risks of collecting biased information (Chatti *et al.*, 2012), thereby improving the accuracy and sensitivity of data-driven studies. Secondly, as reflective practitioners (Schön, 1987), the generation of ideas and perspectives envisaged by the data reading facilitates teachers' systematization of prior experience in light of the new information. This process was conducted within an open group exchange, in which discussion allowed for mutual enrichment and supervision of the implications suggested by individual reading. Participants could also benefit from involvement in the research study to gain the knowledge and skills needed to infer meaning from the analysis of the results and to be able to play a critical role as stakeholders in future development actions. Concerning the third dimension, the implications for community moderation concern the identification of lines of development beginning with a snapshot of the existing, mediated by a perspective that juxtaposes systematic monitoring of the entire portion of the community with instances from expert members, that have been considered crucial to the development of eTwinning since its very beginning. Indeed, the research findings were designed to aid decision-making

processes regarding the planning of activities for the development of the professional community of eTwinning Italy.

In conclusion, as a digital, open and flexible system, eTwinning evades a simple definition of its educational value in relation to the modes of participation that its members adopt. However, the current study emphasises how the many tools constitute an experience to be realized in an integrated and complementary manner. This implies that teacher professional improvement could be associated with a progressive and harmonious utilisation of the possible collaborative activities. It confirms eTwinning's distinctiveness as a network of teachers for teachers, whose relevance rises in parallel with the quality of actions, communication, and partnership working among members.

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10

School internationalisation as an opportunity for transformation: the innovation profile of eTwinning Schools

by *Samuele Calzone*, *Nicola Malloggi*, *Elettra Morini*, *Enikö Tolvay*, *Maria Teresa Sagri* and *Mario Venturella**

10.1 Introduction

The emergency in education generated by the Covid-19 pandemic seems to have accelerated certain processes of transformation in schools; in recent months, the scientific community, educators and in general all stakeholders involved in education have discussed how methodological, digital and organisational innovation can trigger permanent change in schools capable of rethinking education in the 21st century[1]. The interventions and actions experienced during this crisis seem to promote a more concrete idea of innovation, linked to an explicit need and freed from that chasing after novelty that often neglects a historical and critical awareness of past experiences (Calvani, 2009): «In general, each new generation of educators is subjected to a pressure that, under the banner of continuous innovation, re-proposes a cycle of expectations systematically destined to remain disappointed» (Moricca, 2016, p. 184).

The current emergency is considered by many as a good opportunity to promote a change in schools and to make innovation permanent: this goal is reinforced by the recent "Good School" law (Italian Law No. 107 of 13 July 2015) which, in addition to the strengthening of skills, encourages orientation, experimentation and transformation of teaching spaces and times in order to reduce the gap between school and the world of work. In the *Final report for the future of school*[2], proposed by the Commission led by the current Minister of Education Patrizio Bianchi, the theme

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1. *Rethinking Education in the 21st Century*: *Meetings to Reflect, Propose, Act* is the title of a series of meetings dedicated to reflecting on the educational challenges for the 21st century, promoted by Education Minister Lucia Azzolina. The first meeting was held online on Friday 18 December 2020.

2. The document was published in July 2020 and can be consulted at the following address: https://

of school innovation is linked to the need to ensure sustainable growth, promoting the ability to «understand and face continuous changes» and the ability to «build communities capable of dealing with uncertainty»[3]. School is therefore the place where we can generate innovation and combat exclusion, through the development of «life skills» and «key competences for lifelong learning»[4]. A renewed school is also the Community's strategic goal to relaunch the knowledge-based economy and overcome the current crisis. For a long time, the European Union has been promoting the opening of national school systems to internationalisation, in order to support schools in redefining their identity according to a European dimension that facilitates social integration, lifelong learning (including in non-formal contexts), and respect for diversity.

Higher education internationalisation programmes are generally characterised by two elements:

> One is *internationalisation abroad*, understood as all forms of education across borders: mobility of people, projects, programmes and providers. The other is *internationalisation at home*, which is more curriculum-orientated and focuses on activities that develop international or global understanding and intercultural skills (De Wit, Howard, Egron-Polak, 2015, p. 49).

With respect to the first element, Intercultura Foundation's "National Observatory on the Internationalisation of Schools and Student Mobility" recently pointed out that, for some time now, a path of openness has been underway in Italian schools, which, in 2019, for example, saw more than 10,000 students attend a school year abroad (+38% compared to 2016 and more than 191% compared to 2009)[5] and an increase in twinning with foreign schools. The relationship with the "other", promoted by community initiatives, is an opportunity to become aware of the reality of globalisation and to ground active citizenship in the principles of knowledge, equity and inclusion (*ibid*., p. 23). Such initiatives provide an opportunity to explore the concept of global citizenship:

> Killick states that much of the literature on global citizenship concerns the skills that a person should demonstrate, the knowledge that he/she should have, the skills that he/she should possess and the ethics that he/she should embrace and, in many cases, the actions that he/she should carry out, rather than understanding global citizenship as a way of being-in-the-world, which requires above all a certain sensitivity in understanding how we are among the people

www.miur.gov.it/documents/20182/0/RAPPORTO+FINALE+13+LUGLIO+2020.pdf/c8c85269-3d1f-9599-141c-298aa0e38338?version=1.0&t=1613234480541.

3. *Ibid*., p. 3.

4. These skills, reviewed in May 2018 by the European Union, remain the point of reference for the first and second cycles of education.

5. See the report at the following link: https://www.scuoleinternazionali.org/_files/uploads/rapporto_2019.pdf.

we live with on the planet, the sense of self-in-the-world, and a series of skills that therefore allow us to act-in-the-world (*ibid*., p. 53)[6].

Regarding the second element, «internationalisation in one's own country», this paper offers a perspective of analysis inspired by the application of Open Innovation to the educational domain. Originating in a business context from an insight of economist Henry Chesbrough (2003), for whom companies, in order to renew themselves, must also make use of resources from outside (universities, start-ups, etc.), Open Innovation represents a strategic approach that is also useful in the world of education. It is about overcoming the paradigm of closed innovation, according to which every school, every teacher, is a closed reality that does not engage with the local community and does not open to new experiences, whether national or communitarian. Some surveys on the training needs of teaching staff, in fact, focused for example on digital skills, reinforce this difficulty by highlighting the need to improve "collaboration between teachers"[7].

The opportunities offered by Open Innovation in the school, discussed in this contribution, are the following:

1. collaboration among teachers, to share knowledge, ideas, competences tools ("projects are carried out together");
2. relationship between school activities and extracurricular activities, to include local, national or community projects that enable innovative interventions ("school beyond school").

With respect to the former, one of the largest European communities[8] of teachers involved in collaborative projects between schools, eTwinning, has been active since 2005, with the aim to improve the educational offer of European school systems through internationalisation and innovation of teaching and learning models. The success of this community, which is an example of internationalization in each country in which it is formed, defined as the set of tools and activities for the development of the international competences of all students (Beelen, Leask, 2011), stems from the recognition that the schools involved in a European dimension have more tools (and strategies) to support the processes of change: eTwinning promotes the *opening to a new teaching* centred on sharing and collaboration between schools.

The second opportunity offered by an *open innovation* is related to participation in the National Operational Program NOP For the School 2014-20[9]. This is a set of

6. Furthermore, global citizenship can be defined as «an attitude or predisposition towards others and the world, supported by a moral and transformative cosmopolitanism and liberal values (openness, tolerance, respect and responsibility for one's self, for others and for the planet)» (Lilley, 2014, p. 231).

7. See the Teacher Training Needs Report, produced within the PON Per la Scuola 2014-20 (NOP For the School 2014-20), currently being published. The respondents to the survey are 1,385.

8. At the European level, eTwinning involves more than 900,000 teachers, of which more than 90,000 in Italy.

9. For more information, see the link to the document: https://www.miur.gov.it/documents/

interventions[10], aimed at all schools in the national territory, which aims to improve national school systems: through actions to strengthen the skills of students and teachers, to be carried out during extracurricular hours, and with initiatives to strengthen technological equipment, the NOP[11] allows «opening the school to the territory», supporting the experimentation of innovative activities in school. Some calls for proposals, which constitute the modalities of participation in the NOP INITIATIVES, focus on citizenship competencies: Call for proposals No. 3504/2017 (European Citizenship) and Call for proposals No. 3340/2017 (Global Citizenship Competences), to contribute to an openness to the Community dimension of education and to the creation of a shared feeling of European citizenship in the new generations.

In the following paragraphs, an analysis is proposed that, starting from the opportunities offered by Open Innovation, relates the topic of innovation to the internationalisation of schools. The frame of reference is given by the activities of the schools in the eTwinning community that are explored and re-read in the light of a map of national experimentation and training initiatives undertaken by these same schools together with INDIRE. The overall perspective is reconstructed through the information system called online Database Schools of INDIRE (DBSI), the database that through a *data integration* process allows to reconstruct the planning behaviours of the schools participating in INDIRE's research initiatives, integrated with the data on participation in NOP 2014-20 (GPU platform). The aim of this work is to observe eTwinning Schools from two perspectives: on the one hand, in relation to participation in the innovation experiences promoted by the INDIRE institute (research), on the other hand with respect to the implementation of training interventions on European citizenship skills, promoted within the NOP For the School. The analysis represents the starting point to consider the eTwinning Schools within a broader process of transformation of the way of doing school, where the internationalization processes represent a founding prerequisite for an evolution of the improvement processes of the training offer in an Open Innovation perspective. The European dimension of comparison and sharing activated by the eTwinning community seems, in fact, to represent a favourable cultural humus to support even national process of transformation and innovation of schools. The experiences made by schools within the eTwinning programme seem to show that opening to other educational contexts, to different cultural and social realities, contributes to "changing the school", the way of rethinking teaching, triggering changes in terms of modernisation and innovation, positively influencing the educational offer (Mangione, Cannella, Volterrani, 2021).

20182/890263/PON_14-20.pdf/b9ea8f70-0259-40e6-b086-b0ce6420daf6?pk_vid=2e801bac6401de6d1623769480004c924.

10. Training measures are financed by the European Social Fund (ESF) and infrastructure measures by the European Regional Development Fund (ERDF).

11. Alongside these initiatives, there are also school building interventions for the adaptation of buildings and the improvement of learning spaces/environments.

10.2
Schools' search for innovation

INDIRE, with its long experience of accompanying and supporting Italian schools, has developed an information system that provides an overall geo-localised representation of the schools that the Institute has been supporting for years in the transformation processes of the "way of doing school". Such a representation makes it possible to make explicit and pool information that would otherwise remain circumscribed and underlying individual research experiences, and to return an overall view that can be functional in better understanding as a whole the improvement and innovation processes promoted by the national school system.

The aim of the research is to reinterpret the significance and therefore the role that the planning of schools can have within the curriculum plans to promote improvement and innovation processes that are sustainable over time. In this sense, we can look at the planning dimension of schools to try to understand «the way in which we intend to proceed towards change» (Sachella, 2014, p. 6).

The DBSI tool is the result of a research activity that studies the planning behaviours of schools participating in the research initiatives promoted by INDIRE within the Three-Year Research Activities Plan. The initiatives (EU or national), undertaken independently or in implementation of ministerial guidelines, represent a starting point for reconstructing and studying the intervention strategies that the school plans and implements in order to improve the educational offer and support innovation processes. The research shows how training initiatives and experiments can be "incubators" of transformation processes that are then applied more systematically within the school itself (local rooting and sustainability/passage from experimentation to project) and how they can be transferable to similar contexts. The tool created, which was born from the integration of 37 databases relating to INDIRE[12] research projects with the database[13] of schools in the national territory participating in the NOP, makes it possible to classify the projects into 3 macro-areas: Research and Experimentation[14], Monitoring and Documentation[15], and Internationalisation[16], which were identified

12. The projects cover the 2015-20 period.

13. The database is integrated into the GPU platform (http://pon20142020.indire.it/portale/cose-gpu/).

14. The Research and Experimentation macro-area includes projects that involve research and experimentation activities regarding tools, resources, teaching methods and innovative organisational models, and that are promoted by research structures dealing with laboratory teaching, disciplinary innovation and system innovation.

15. The macro-area Monitoring and Documentation includes projects that provide for monitoring activities both on a contract basis and for the school's own initiatives and projects for the enhancement of both educational and organisational documentation processes and are promoted by the structures defined as "transversal".

16. The Internationalisation macro-area includes projects that offer schools the opportunity of

starting from the different ways in which INDIRE supports schools in their transformation processes.

Research, experimentation and internationalisation initiatives are factors closely related to innovation, which encourage progressive levels of change ranging from inspiration to the transformation of the system, through experimentation and sustainability of the initiatives.

With respect to the Research and Experimentation sector, three areas are identified, representing the intervention focuses:

– Area 1: project initiatives that focus on the transformation/innovation of the learning environment and teaching methodologies, also through the use of technologies: Tools and methods for laboratory teaching;
– Area 2: project initiatives that focus on the transformation/innovation of teaching methods in some disciplinary areas: Innovative disciplinary teaching;
– Area 3: project initiatives that focus on the transformation/innovation of the school system: Schools as laboratories for system innovation.

Below are some survey results of the internationalisation project behaviour of certified eTwinning Schools (cfr. *supra*, box 1.5) benchmarked against the innovation initiatives promoted by the same schools at the national level.

From the 2017-18 school year, all institutions registered on the eTwinning platform have the opportunity to obtain the eTwinning School Label, an official European recognition for the most active and virtuous schools in the community on the following topics: digital practice, the practice of eSafety, innovative and creative approaches to pedagogy, the promotion of the continuous professional development of school staff, the promotion of collaborative learning practices with staff and students. The recognition of certified eTwinning School aims to give visibility to the European activity of the school at local, regional and national level; recognise the work of the teams (teachers and school leaders) involved in eTwinning activities, define reference school models not only for other schools, but also for regional and national school authorities; innovate and internationalise teaching for more inclusive and collaborative learning, through the use of technology in a context of multicultural exchange; promote shared leadership approaches in the organisation of the school at all levels.

The certified eTwinning Schools are described below according to two observed processes: the relationship with innovation, specifically the collaboration with some research projects, and the relationship with extracurricular activities dedicated to internationalisation, in particular the interventions of the National Operational Plan NOP For the School.

opening up to an international vocation through mobility activities, twinning, collaborations with schools in other European and non-European school systems.

10.2.1. CERTIFIED ETWINNING SCHOOLS AND INDIRE'S RESEARCH AREAS

In the light of the analyses that emerged from the DBSI, the institutions that in the period 2018-21[17] have collaborated in various ways with INDIRE are 69.9%[18] of all schools in the national territory. Of these, 458 are schools that have been awarded the eTwinning School Label for the two-year period 2018-19 (Schools with Discontinuous Participation, SPD), while 116 schools have been awarded the School Label for the entire time span covered by the survey, the period 2018-21 (Schools with Continuous Participation, SPC)[19].

FIG. 10.1 shows the distribution of eTwinning Schools by territorial area: SPC schools are located in the Centre (28.4%), the South (24.1%) and the North-West (21.6%), with a slight decrease in the Islands. The same trend with slightly different percentages is also recorded for SPD schools.

Concerning the relationship between the certified eTwinning Schools and the research and experimentation areas activated by INDIRE, TAB. 10.1 shows that there is a greater propensity for research in the eTwinning Schools (SPC) that have obtained the Quality Label for the entire time period considered (two two-year periods), compared to eTwinning Schools certified for only one two-year period (SPD).

TAB. 10.1 highlights how both types of schools (both SPC and SPD) are very engaged in activities aimed at planning interventions for the innovation of the learning environment and teaching methodologies, also through the use of technologies (Area 2). This trend is followed by action-research activities that focus on the innovation of the school system, experimenting with educational practices and models aimed at rethinking the organisation of schools in an ever-changing knowledge society. There is a smaller percentage of training and experimentation interventions on the topics of innovation of disciplinary teaching.

Through the DBSI information system, it is possible to move from an overview of the project behaviour of certified eTwinning Schools to a perspective of analysis focused on individual projects. TAB. 10.2 shows the contingency tables of the certified eTwinning Schools (SPD/SPC) that also carried out activities within the Educational Vanguards community: a national research project promoted by INDIRE, pertaining to Area 3.

Educational Vanguards is an «innovation movement that brings together the most significant experiences in transforming the organisational and didactic model

17. Schools are counted once, regardless of the projects carried out and the continuity over the years.

18. These are schools that are overall involved in research-action and experimentation processes, internationalization processes as well as monitoring and documentation.

19. By SPD we mean those schools that have obtained the eTwinning Label, but do not cover the entire span examined, while by SPC we refer to schools recognised as "quality" for the entire span, which therefore seem to denote a greater attention to the care of processes that tend to root the topic of internationalisation in their territory with more continuity and consistency.

FIGURE 10.1
Geographical distribution by SPC and SPD

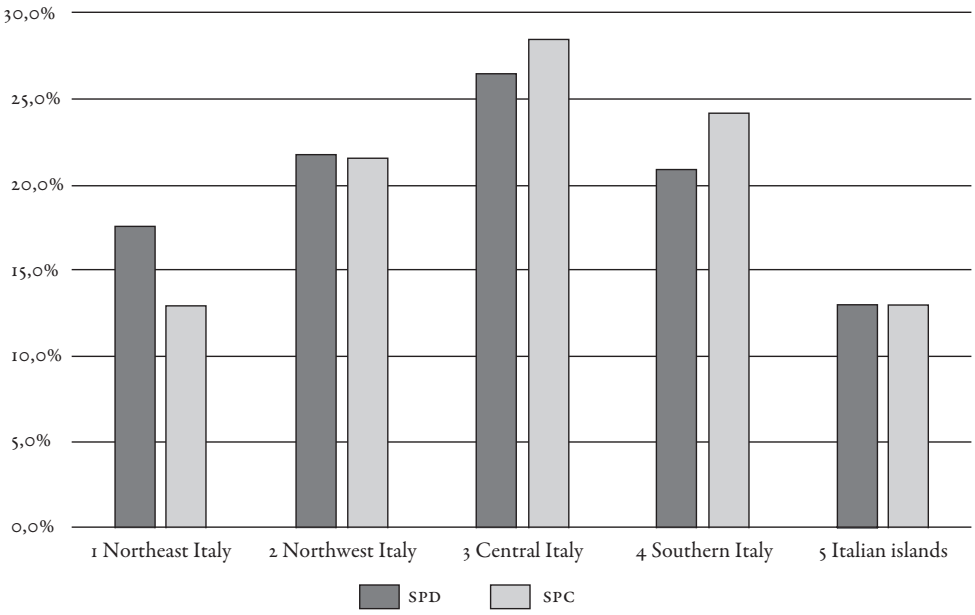

TABLE 10.1
Schools by Research and Experimentation macro-area

	Scope of intervention		
	Area 1	Area 2	Area 3
Schools SPC	3.4%	38.8%	29.3%
Schools SPD	2.0%	29.0%	22.5%

Notes: Area 1: Disciplinary and innovative didactics; Area 2: Tools and methods for laboratory didactics; Area 3: Schools as laboratories for system innovation. The percentages in this table should be understood as relating to the area of reference: for example, 3.4% of the SPCs (4 out of 116) participating in the projects in Area 1. As the table is not exhaustive (as there are other areas), the row totals need not be 100%; moreover, the schools monitored with their activities are present in several areas.

of the school»; it intends to use the «opportunities offered by ICT and digital languages to change learning environments and offer and nurture a *Gallery of Ideas for Innovation* that stems from the experience of schools, each of which represents a piece of a mosaic that aims to revolutionise the organisation of teaching, time and space in schools»[20].

20. Manifesto of Educational Vanguards (http://innovazione.indire.it/avanguardieeducative/il-manifesto).

TABLE 10.2
SPD/SCP Contingency Table: Educational Vanguards

			Educational Vanguards		Total
			No	Yes	
eTwinning	SPD	Count	369	89	458
		% in SPD	80.6%	19.4%	100.0%
	SPC	Count	88	28	116
		% in SPC	75.9%	24.1%	100.0%

TAB. 10.2 shows how both the schools that obtained a quality award during the entire time span of the survey (SPC) and those that obtained it only for the two-year period demonstrate an attention for innovation also in the national dimension (Educational Vanguards community).

The DBSC returns a representation of certified eTwinning Schools, which are also engaged at the national level in experimenting activities functional to the transformation of the teaching moment, in particular to the transformation of the learning environment and teaching methodologies also through the use of technologies; finally, there are the activities that focus on the innovation of the school system and with a focus on the innovation of disciplinary teaching methodologies.

The analysis of participation in INDIRE research projects (Area 3) where the entire school is engaged shows how the schools that are most involved in the internationalisation process are also involved in activities that promote systemic innovation. Schools characterised by a European vocation seem, in fact, to be more oriented to change, with particular attention to experimenting with new teaching models. Participation in INDIRE research projects, centred on the adoption of innovative strategies and tools, also becomes an opportunity for a collaborative approach among teachers and the sharing of expertise («projects are done together»).

10.2.2. THE NOP FOR THE SCHOOL AND THE INTERNATIONALIZATION OF THE SCHOOL

The effect of an openness to the process of internationalisation is also reflected in the relationship between school activities and extracurricular activities ("school beyond school"). Specifically, the National Operational Programme NOP For the School is examined, which offers a contribution to the implementation of the EU 2020 Strategy with the aim of «leading Europe out of the crisis, filling the gaps of the current growth model and transforming it into a smart, sustainable and inclusive economy characterised by high levels of employment, productivity and social cohesion»[21]. The

21. PON Programme For School, p. 2 (https://www.miur.gov.it/documents/20182/890263/PON_14-20.pdf/b9ea8f70-0259-40e6-b086-b0ce6420daf6?pk_vid=2e801bac6401de6d1623769480004c924).

TABLE 10.3
Participation in calls for proposals 3504 and 3340

Call for proposals 3504	Call for proposals 3340
158 out of 458 schools (34.5%)	195 out of 458 (42.6%)

TABLE 10.4
SPD/SCP contingency table: ESF call for applications 1953

			Application		Total
			No	Yes	
eTwinning	SPD	Count	141	317	458
		% in SPD	30.8%	69.2%	100.0%
	SCP	Count	35	81	116
		% in SCP	30.2%	69.8%	100.0%

TABLE 10.5
SPD/SCP contingency table: ESF call for applications 2669

			Application		Total
			No	Yes	
eTwinning	SPD	Count	158	300	458
		% in SPD	34.5%	65.4%	100.0%
	SCP	Count	42	74	116
		% in SCP	36.2%	63.8%	100.0%

NOP, in the seven-year period 2014-20, has dedicated two calls for proposals (No. 3504/2017 and No. 3340/2017) to the topic of European citizenship: the first (briefly identified with the name "European Citizenship") allows for the organisation of training modules for the knowledge of the EU, through educational courses dedicated to the construction of the European identity that that include exchange and mobility experiences abroad that reinforce the goal of school internationalization . The second (also briefly identified as "Global Citizenship Skills") provides for actions «aimed at the development of transversal, social and civic competences, which are part of the broader concept of promoting global citizenship, in order to form aware and responsible citizens in a modern, connected and interdependent society»[22]. The interventions that schools can implement cover 5 thematic areas:

– Thematic area 1: food education, food and territory;
– Thematic area 2: well-being, correct lifestyles, motor education and sports;
– Thematic area 3: environmental education;

22. Public calls for proposals for the implementation of projects to strengthen global citizenship skills, p. 1 (https://www.istruzione.it/pon/avviso_cittadinanza-globale.html).

FIGURE 10.2
Territorial distribution of the schools that participated in calls for proposals 3504 and 3340

– Thematic area 4: economic citizenship;
– Thematic area 5: citizenship, respect for diversity and active citizenship.

TAB. 10.3 shows the participation of eTwinning Schools in the two calls for proposals.

FIG. 10.2 shows the territorial distribution of schools that participated in both calls for proposals 3504 and 3340: Apulia, Campania and Sicily are the regions with the highest presence of eTwinning Schools that implemented the training actions supported by the two calls for proposals of the NOP For the School programme aimed at European citizenship competencies.

With respect to the participation in the NOP of the two types of eTwinning Schools (SPC and SPD) there are no particular differences: if we consider, for example, the calls for proposals dedicated to the strengthening of key competences and digital competences, almost 70% (call for proposals 1953)[23] (TAB. 10.4) and over 60% (call for proposals 2669)[24] (TAB. 10.5) of the SPC and SPD schools participate in the opportunities offered by the Programme.

23. https://www.istruzione.it/pon/avviso_competenze-base.html.
24. https://www.istruzione.it/pon/avviso_cittadinanza-creativita.html.

An important difference between the two typologies (almost 7%) occurs in the participation in call for proposals 10862[25] dedicated to initiatives for social inclusion: the non-regular schools (SPD) are more present, because they insist mainly in territories where the emergency of school drop-out is a particularly urgent problem.

10.3 Conclusions

Compared to the two processes observed, it is possible to reconstruct a profile of the eTwinning Schools that have obtained a Quality Label. These are mainly first-cycle institutions (67.7% of schools), located in the Centre-South (where 54.8% of schools are present), which have almost certainly participated in at least one INDIRE project (94.3%). They are schools that also participate consistently in NOP projects (98.3%) with a strong international nature (71.4% of schools participate in projects that develop European citizenship competences) and that, thanks to the contributions received over the years from the ERDF, have achieved a good technological equipment.

The study carried out by INDIRE research, aimed at the initiatives undertaken by schools, allows us to reconstruct a map of the intervention strategies of schools functional to illustrate how some activities promoted by individual schools can represent "incubators" of transformation processes that over time take root in a more systematic way within the school itself, in an open innovation perspective.

For example, the technical school "E. Majorana" of Grugliasco (Turin), with a constant commitment to the Educational Vanguards community, set up by INDIRE to support national processes aimed at rethinking the organisation of teaching, time and space of schools, in the 2016-17 school year also began experimenting with a number of initiatives in the field of laboratory teaching and the use of new teaching methods in the scientific field. In the 2017-18 school year, the same school, participating in the eTwinning programme, began to engage in exchange and training and was awarded a Quality Label for 2017-18 by promoting some distance learning projects in which activities are planned and implemented through the collaboration of teachers and pupils through the eTwinning online platform. In the 2018-19 school year, the same technical school "E. Majorana" was selected as a school structure offering innovative ideas and examples of best practices for the training of new teachers.

A second type of school to mention is the "A. Volta" Technological Institute in Perugia, which from 2018 to today, thanks to the projects promoted, has distinguished itself within the eTwinning community. During the reporting period, its teachers received 20 Quality Labels[26], an award that certifies the achievement of a precise quality

25. https://www.istruzione.it/pon/avviso_inclusione.html.

26. For more information about labels, cfr. https://school-education.ec.europa.eu/en/recognition/etwinning-national-quality-label.

standard for collaborative projects, determined by quality criteria shared by the European community. Comparing the institute's international activities with those of a national character, it emerges that the institute is particularly active in a synergetic research-action relationship with INDIRE, especially within the national Educational Vanguards community.

The map of the projects of the "A. Volta" institute is enriched by integrating it with data on participation in NOP calls for proposals, data that highlight, together with the participation in call for proposals No. 3504/2017 for the development of global citizenship skills and calls for proposals No. 1953 for the development of world citizen, also a certain tendency of the institute to concentrate the NOP plan to encourage and support "innovative and creative approaches to pedagogy" (e.g. the institute participates in calls for proposal for the creation of digital environments, innovative laboratories) and "use of technology" (e.g. the institute participates in calls for the creation and expansion of the LAN/WLA network, for the development of computational thinking and digital citizenship), or intervention topics proposed by the European eTwinning framework.

Two processes proposed by the two different case studies: one that originates within the national research-action network promoted by INDIRE, and then over time opens to an international vocation; the other that, through the activity carried out and the experience gained within the eTwinning community, develops a sensitivity and attention necessary to also invest in a systemic transformation of the entire school. Both processes lead towards the improvement of the educational offer and show how the internationalisation factor is closely connected to the theme of innovation, which involves progressive levels of change, ranging from inspiration to systemic transformation, going through experimentation and sustainability of the initiatives.

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