

Professional Learning Communities for school innovation

Comunità di apprendimento professionale per l'innovazione scolastica

Nair Carrera Martínez, Senior Digital Business Analyst. Directorate General for Education, Youth, Sport and Culture. European Commission

Tommaso Dalla Vecchia, Development and Advocacy Manager. European Schoolnet

ABSTRACT

The growth of Professional Learning Communities (PLCs) seems to have accelerated in recent times, partially because of the opportunities offered by the online dimension, but also as a response to the emergency to which schools have adapted during the pandemic with Distance Learning. This work builds on testimonies from practitioners partaking in local and international PLCs, notably aiming at experimenting with innovative teaching and learning practices and promoting new *curricula* for digital education. Such communities are particularly interesting as they encourage the circulation of innovative practices through peer learning, mentoring, and school level capacity building. Ultimately, this article explores how PLCs can support practitioners enhancing their teaching practice, as well as designing and implementing innovation at classroom and school level.

SINTESI

La crescita delle *Professional Learning Communities* (PLC) sembra essersi velocizzata negli ultimi tempi, in parte per le opportunità offerte dalla dimensione online, ma anche come risposta all'emergenza a cui le scuole si sono adattate durante la pandemia con la Didattica a Distanza. Questo lavoro si basa sulle testimonianze di professionisti che partecipano a PLC locali e internazionali, in particolare con l'obiettivo di sperimentare pratiche di insegnamento e apprendimento innovative e promuovere nuovi curricula per l'educazione digitale. Tali comunità sono particolarmente interessanti, in quanto incoraggiano la circolazione di pratiche innovative attraverso l'apprendimento tra pari, il tutoraggio e lo sviluppo delle capacità a livello scolastico. In definitiva, questo articolo esplora in che modo le PLC possono supportare i professionisti, migliorando la loro pratica di insegnamento, oltre a progettare e implementare l'innovazione a livello di classe e scuola.

KEYWORDS: innovation, learning community, digital technology, teacher leadership, active students

PAROLE CHIAVE: innovazione, comunità di apprendimento, tecnologia digitale, leadership degli insegnanti, studenti attivi

Introduction

School innovation has been often the object of pedagogical research and educational policymaking, which aimed at investigating and deepening its understanding, and eventually at accelerating its uptake. Research and policy reforms certainly provided both the evidence base and the executive framework for innovative teaching and learning practices to be implemented in schools, but whether such findings and policies have translated into evenly distributed and widespread advancements in schools across Europe is debatable. While numerous lighthouse institutes and pioneer public authorities have tried to structurally transform their pedagogical and educational practices by implementing full-fledged strategies for innovation, a larger number of schools and institutions remained skeptical about implementing similar practices or lacked the capacity and resources to do so.

What it seems instead to have recently expanded as a phenomenon, and that may have a substantial impact in supporting school innovation, is the establishment and growth, among primary and secondary school teachers, of formal and informal Professional Learning Communities. Indeed, these communities seem to support not only the continuous professional development of teachers, but also the circulation of innovative practices through peer learning and mentoring and school level capacity building resources.

With this article, the authors will explore this phenomenon and, through first-hand experiences from PLCs initiators and contributors, they will deep dive into some of the fastest growing communities in Europe.

The work sheds light on the different experiences and testimonies shared by practitioners partaking in formal and informal international professional development networks and within which peer learning and mentoring practices were explored, and which contribute to designing classroom and school level development strategies.

1. What is a Professional Learning Community?

A PLC can be described as a group of practitioners within an educational context who meet regularly to cooperate, work together, share, exchange and interact, either in online, onsite or in a hybrid environment.

The aim of Professional Learning Communities is often to address common challenges of the school and achieve common goals by knowledge sharing, enhancing practitioners' teaching practice and supporting the design and implementation of innovation at school level. Ultimately, the core motivation of practitioners taking part in Professional Learning Communities is to improve the engagement, attainment, and inclusion of students in the learning process.

According to Shirley Hord, an expert on school leadership, Professional Learning Communities include supportive and shared leadership, shared values and

vision, collective learning and application of learning, supportive conditions, and shared practice (Hord, 2004).

1.1. The beginnings of Professional Learning Communities

Hord's review of the literature (1997) explored the concept of Professional Learning Communities and their outcomes for staff and students. However, the importance of taking part in Professional Learning Communities was already highlighted during the eighties, when Rosenholtz (1989) suggested that teachers who felt supported in their classroom practice were more effective and committed than those who could not rely on the support of teacher networks and cooperation among colleagues. Rosenholtz also found that teachers who were aware of their own sense of efficacy were more open to adopt new classroom behaviors, and more likely to stay in the profession.

A few years later, McLaughlin and Talbert (1993) confirmed Rosenholtz's findings, suggesting that when teachers had opportunities to collaborate with each other, they were able and more prone to share their experience-based knowledge.

In 1996, Darling-Hammond (1996) cited shared decision-making as a factor in *curriculum* reform and referred to the transformation of teaching roles in some schools. In those schools, teachers worked together in planning instruction, observing each other's classrooms, and sharing feedback.

These and other attributes characterize Professional Learning Communities and help to identify important shifts at school level in the past years, being the main one the shift from an individual approach to a community one.

While in literature PLCs are described as communities organized within a school or an institute, the authors argue that an interesting development that has been consolidated in the last decade, is represented by networks and groups of practitioners that interact and exchange across schools, both nationally and internationally. Such networks have been leveraging the opportunities offered by technologies in a more interconnected world for bringing closer together practitioners from different countries and professional backgrounds. Certainly, the objectives and practices of such broader and less structured groups of professionals differ to an extent to more traditional school-based ones. However, the authors consider that the main features, benefits and critical issues can be compared.

1.2. Objectives of the research

This article main aim is to deep dive into how Professional Learning Communities can support practitioners enhancing their teaching practice and can support the design and implementation of innovation at school level. It explores if and how during the pandemic Professional Learning Communities supported teachers and learners adapt more effectively and rapidly to emergency remote education, and how different modalities of shared leadership have successfully been

implemented in schools, especially in relation to the active engagement and involvement of students in relation to digital education.

Through consulting several practitioners and experts, the authors investigate whether the learning communities played a role during the pandemic, if different modalities of shared leadership were successfully implemented in schools and if so, how.

Such consultation finally aims to identify the main characteristics that can make a PLC successful in engaging, retaining, and animating its members.

2. Methodology

To write this article, the authors have followed a qualitative methodology focused mainly but not exclusively on the collection of testimonies and experiences from teachers, educators and experts who have contributed to the creation or the animation of the communities addressed. Additionally, several documents and studies have been considered to better understand the opportunities and challenges related to Professional Learning Communities.

The research has followed these phases:

- *Literature consultation*

In the first phase of the research, a wide consultation of the literature was carried out, focusing on documents and studies¹ to better understand the opportunities and challenges related to Professional Learning Communities.

- *Design of the guiding questions*

Based on the literature available, the authors wondered if and how taking part in Professional Learning Communities can benefit their members and created a set of questions² to be distributed among experts in the field to run the relevant consultations. The instrument used to conduct this research is therefore an original questionnaire created for this purpose, consisting of eight guiding questions to be shared with experts at European level.

- *Selection of experts and communities to be explored*

A crucial step of this approach was the selection of both the communities to consider and the expert to interview. The experts taking part in this consultation were selected following different criteria, such as their knowledge on the topic (either as a member of a community or as a leader of the same), their specific expertise, primary-secondary school balance, cultural diversity, and geographical coverage. Each expert was selected to provide an insight into one or more of the communities selected to represent a diverse array of international and local PLCs,

¹ Refer to bibliography.

² Refer to Annex I: Guiding questions for the interviews.

leveraging different main methodologies and approaches. As a result, seven experts from four countries³ were selected to be part of the consultation.

The experts who have been consulted to carry out this study have given their consent to include their information in this article and expressed their willingness to be cited by their name:

- Altieri, Stefania. Primary teacher at Istituto Comprensivo Valle del Conca (Rimini) and teacher trainer, Italy. Moderator of Coding@schools eTwinning group and leading teacher of EU Code Week community.
- Blanco, Isabel. Headmaster and teacher at CEIP Plurilingüe de Maceda (Ourense), Spain. Member of the network of the Spanish Scientix Ambassadors and EU Code Week leading teacher.
- Laghigna, Anna. In-house pedagogical consultant at European Schoolnet / Secondary teacher EFL / Teacher trainer, Italy. Member and pedagogical consultant of MenSI community.
- Masero Suárez, Francisco Javier. Teacher and FCL (Future Classroom Lab) Coordinator at Consejería de Educación y Empleo. Junta de Extremadura, Spain. Member of Future Classroom Lab community and EU Code Week leading teacher.
- McConville, Rose. Deputy Principal at Coláiste Bríde Enniscorthy Co. Wexford, Ireland. Member of the Teaching & Learning Focus Group.
- Mag. Morgenbesser, Hermann. Coordinator of the Future Classroom Lab in Vienna, Austria.
- Montero, Rafael. Upper Secondary teacher at Corazón de María School, Gijón (Asturias), Spain. Moderator of STEM eTwinning group.

The communities that have been observed and described are notably aiming at experimenting with and implementing innovative teaching and learning practices, especially for what concerns the use of digital technology in the classroom, as well as the adoption of *curricula* for digital education.

More concretely, the following Professional Learning Communities were considered for this study: eTwinning (the eTwinning featured groups Coding@schools and STEM); the Austrian community of the Future Classroom Lab network (FCL); the EU Code Week community, the Scientix community and the MenSI project; and interschool communities such as the focus groups Teaching and Learning and the Teaching and Learning 21 group (TL21) (part of a wider national initiative overseen by the National University of Maynooth, Ireland).

- *Consultation, collection and analysis of the testimonies*

Original consultations in the form of interviews have been carried out to different education practitioners partaking in international learning communities.

³ Austria, Ireland, Italy, and Spain.

The contribution presents the experts' perception of these learning communities within schools (concretely focusing on the benefits of participating in a PLC) as well as the different roles they have across the schools or organizations.

The experts have been asked about their role in the professional learning community, the benefits they get out of it, and their motivation for leading or being part of such a community. Particular attention has been devoted to how the learning communities they are part of can help to enhance teaching practice and support the implementation of innovation at the classroom or school level. To this end, the different activities organized within the communities have been explored with the aim of identifying the most successful ones. In parallel, the study also explored if and how approaches such as peer learning, mentoring, peer exchange, etc. have been applied and/or encouraged within the different learning communities.

The point of views of the consulted experts and practitioners has been finally analyzed and proposed to the readers in a comparative way.

3. Description of the communities considered

Several European Professional Learning Communities have been considered within this article to offer a broad overview of the different modalities and types of communities currently active in supporting the development of teachers practice, as well as in the design of innovation in schools. Relevance has been given to communities, either informally or formally established, that combine different modalities of collaboration, face to face, online and hybrid, that engage and that are active both locally and internationally.

The selected communities are the eTwinning featured groups, the Future Classroom Lab network of Ambassadors and Learning Labs, the EU Code Week community of Leading Teachers, the Scientix community, the Mentoring for School Improvement project network of mentor and mentee schools, the interschool focus groups Teaching and Learning and the Teaching and Learning 21 group (TL21) (part of a wider national initiative overseen by the National University of Maynooth).

The table below shows a comparison of the Professional Learning Communities observed in this study, as well as their main elements in terms of geographical scope, modality and thematic scope.

PLC	Geographical scope	Formal / informal	Thematic scope
eTwinning Featured groups	European	Formal	STEM education, coding, Foreign Language teaching,
Future Classroom Lab (FCL) Network and Community	European - Local	Formal - informal	EdTech, school and classroom innovation
EU Code Week Community of Leading Teachers	International	Formally established at EU level, but encourages the setup of informal communities at local level	Computer Science, coding teaching and learning
Mentoring for School Improvement project (MenSI)	Local - European	Formally established within the scope of an EU funded project	Technology enhanced teaching and learning
Scientix Community	International	Formal	Science education
Teaching and Learning focus group	Local- Teaching staff of the school	Informal	Innovative teaching practices and innovation in the classroom
Teaching and Learning 21 group (TL21)	National	Formal	Innovative practice and Professional Learning Communities in post-primary schools

TABLE 1 – SUMMARY OF THE MAIN ELEMENTS OF THE PROFESSIONAL LEARNING COMMUNITIES OBSERVED FOR THIS STUDY

3.1. The eTwinning Community and its featured groups

eTwinning is the community for schools in Europe. Launched in 2005 as the main action of the European Commission's eLearning Program, eTwinning is co-funded by the Erasmus+, the European program for Education, Training, Youth and Sport, since 2014. eTwinning offers a platform for teachers and school staff across Europe to communicate, collaborate and develop projects together. eTwinning enables teachers to run collaborative projects, engage in professional development activities (both online and on site) to network with peers and to share pedagogical practices.

Since its launch in 2005 and until 13 February 2022⁴, eTwinning involved over 1,028,000 registered teachers from 229,000 schools, thus becoming the biggest teachers' network in the world with over 135,000 projects benefiting millions of pupils of all ages.

The eTwinning featured groups are closed platforms where eTwinners come together to discuss, exchange, share practices on a specific topic or theme and find support for professional development. eTwinning groups are organized by the eTwinning Central Support Service and run by eTwinners who have completed the eTwinning Moderators Course. Each group sets up different activities and tasks for teachers to discuss and work together around several topics (STEAM, coding, language teaching, etc.).

3.2. Future Classroom Lab (FCL) community

The Future Classroom Lab (FCL) is an inspirational learning environment in Brussels created in 2012 because of the European project ITEC⁵, run by European Schoolnet⁶. The FCL is a laboratory that encourages visitors to rethink the role of pedagogy, technology, and design in their classrooms throughout six learning zones (Create, Develop, Exchange, Interact, Investigate, Present). In the learning zones, visitors can explore the essential elements in delivering 21st century learning: students' and teachers' skills and roles, learning styles, learning environment design, current and emerging EdTech solutions, and societal trends affecting education.

The FCL community is formed by policymakers, industry partners, teachers and other education stakeholders who regularly come together either online or in face-to-face training, workshops, and strategic seminars to discuss and develop visions for the school of the future and strategies on how to realize these. It is coordinated at European level by European Schoolnet, while at national level, Lead FCL

⁴ Date when the authors have written this article.

⁵ Information about the ITEC project can be found here: Home - iTEC (eun.org).

⁶ European Schoolnet is the network of 33 European Ministries of Education, based in Brussels, Belgium. As a non-profit international organization, they aim to bring innovation in teaching and learning to their stakeholders: Ministries of Education, schools, teachers, researchers, and industry partners.

Ambassadors organize local activities and programs to promote the FCL's ideas and opportunities offered to practitioners and schools.

3.3. The EU Code Week community

The EU Code Week is a grassroots initiative run by volunteers and supported by the European Commission, that aims to bring coding and digital literacy to everybody in an engaging way. Code Week was initially set up with the objective of helping people understand how digital technologies affect society, show young people and adults how to create with coding and digital technology, helping to increase motivation and develop key competences such as creativity, collaboration, or critical thinking. The initiative also pursues the objective to demystify programming and make people aware that everybody can learn to code, despite their previous knowledge or experience.

The initiative has been supported since 2018 by the European Commission, which initiated the creation of a community of practitioners formed by around 500 Leading Teachers. The Leading Teachers are volunteer professionals passionate about coding who bring forward the messages of the campaign, and exchange among themselves innovative practices for teaching and learning with programming. The EU Code Week community also includes Code Week ambassadors and representatives of the Ministries of Education in Europe who promote the initiative in their countries.

The EU Code Week has progressively grown and reached over 15.5 million people around the globe in the last five years.

3.4. The Scientix network

Scientix is the community for science education in Europe. It aims to support and promote a Europe-wide collaboration among STEM teachers, education researchers, policymakers, and other educational stakeholders. The goal of the program is to inspire students to pursue careers in the field of Science, Technology, Engineering and Mathematics (STEM). Scientix was born at the initiative of the European Commission, and European Schoolnet has coordinated the project since its first launch in 2009.

The first phase of the project (2009–2012) was to build an online portal to collect and introduce European STEM education projects and their results. The goal of the second phase (2013–2015) was to expand this community to the national level and contribute to the development of national strategies for wider uptake of inquiry-based and other innovative approaches to science and math education. This was achieved through the network of National Contact Points (NCPs).

These activities continued in the third stage of Scientix (2016–2019), which was also funded by the Horizon 2020 program of the European Union for research and innovation.

3.5. The Mentoring for School Improvement (MenSI) project network of mentor and mentee schools

MenSI is a Coordination and Support Action funded by the European Commission Horizon 2020 program that aims to investigate how different approaches to mentoring can support the mainstreaming of innovative digital teaching practices in primary and secondary schools. Mentoring at the whole school level – i.e., an advanced school in the use of technology for educational purposes guiding and supporting less experienced schools – although little widespread can offer great potential for school improvement.

The six project partner countries (Belgium, Czech Republic, Croatia, Hungary, Italy, Portugal) have created a network of four school clusters – each comprising one mentor school and four mentee schools for a total of 24 mentor schools and 96 mentee schools. The national networks are supported by a national coordinator at country level, whereas European Schoolnet, the network of 33 Ministries of Education in Europe, in partnership with other research institutions and universities, coordinates the project at European level.

3.6. The Teaching and Learning – TL21 Programme

The *TL21 Programme* is a workshop based Continuing Professional Development program for teachers and school leaders that promotes and enhances innovative practice and Professional Learning Communities in post-primary schools in Ireland. The program has been running since 2003 and aims to strengthen teachers' capacities as co-operative and self-critical authors of their own work and to enable students to take an active and responsible part in their own learning.

The program is a partnership between the Maynooth University Department of Education, and nine Education Support Centers. In the 2019–2021 cycle, 70+ schools and 400+ teachers and senior school leaders were actively involved.

4. Results: testimonies and experiences from practitioners

4.1. Benefits and motivating factors of Professional Learning Communities

When asked about the main motivations for taking part in a professional learning community, as well as its expected benefits, the consulted experts agreed on four main aspects which are also considered driving factors to participate in such a community.

- *Professional improvement by sharing and disseminating knowledge and best practices and engaging in teacher reflection*

Participating in Professional Learning Communities allows teachers to share best practices and resources, and acquire knowledge that helps to develop new skills, which in turn allows them to assist others in their learning journey.

Shifting from traditional pedagogical approaches to more innovative, student-centered ones (e.g., using technology-enhanced teaching and learning, flipped classroom, project-based learning, etc.) is easier when done in groups rather than alone. As Anna Laghigna comments, «when teachers discover that they can be a resource for each other, that's when change really happens!».

These learning communities also enhance teacher reflection on instructional practices and innovative methodologies tested in the classroom, and they enable new opportunities to unlock. As mentioned by Rose McConville: «having professional dialogue can open doors and create new opportunities to learn that might have been missed in a non-collaborative space».

- *Connect to others, feel part of a community of like-minded professionals, and overcome a sense of isolation*

The need to establish meaningful connections, be in touch with and get support from teachers with different backgrounds, but with a similar mindset or interests, as well as the possibility to overcome the sense of isolation which sometimes affects teachers, are recurrent motivating factors to join and participate in a learning community. Isabel Blanco shares that «getting support and advice from other colleagues is very important when dealing with school day-to-day problems. [...] Realizing that you are not the only one in the same situation helps you feel better».

- *Access to professional development, teacher training courses and opportunities to experiment with new devices and applications*

The offer of professional development opportunities in the education sector, whether online, face to face, open to all or restricted, has been rapidly increasing, especially with the expansion of digital training, and to navigate among them and find the most relevant ones is becoming more and more challenging. Professional Learning Communities often offer a selection and curation of the available opportunities to their members, helping teachers save time and leverage resources that are relevant to them.

Teachers from rural areas can find an even greater motivation to join a learning community, as it allows them to have access to a variety of resources and professional development opportunities that they would otherwise not have access to.

Some experts consulted also mentioned that the cooperation with industrial partners allowed them to experiment with and test Educational Technology (EdTech) solutions within their community, thus motivating them to continue their engagement and eagerness to learn together.

- *Further, motivate students and empower them to lead their own learning and development path*

Finally, the experts consulted agree on the importance of taking part in a learning community for the effect it indirectly has on their students. They claim students to be more motivated and empowered to take more ownership of their learning and development process because of the activities undertaken in learning communities.

As Rafael Montero describes, «I believe there is a lot to learn from working with people from other countries, as it enriches my pedagogy and therefore has a significant impact on my students».

4.2. Underlying principles and approaches in Professional Learning Communities

One of the most recurring approaches observed in the Professional Learning Communities consulted is peer exchange, in which professionals dedicate their time to find, select, curate, and share opportunities that they find interesting to their peers. Regardless of the size, geographical scope, or level of the PLC, digesting the complexity of the educational offer being available to teachers and schools, and making sure the high-quality opportunities are seized, is regarded by all the respondents as highly beneficial and needed. The training programs, educational resources, guidelines, or EdTech solutions that are featured within a PLC, are considered to an extent endorsed by peers and hence more reliable and trustworthy. For example, as Stefania Altieri and Rafael Montero mention, within the eTwinning featured groups one of the most praised activities is the bulletin, which selects and curates, among the many opportunities available to teachers, the most relevant and suitable ones for the members of those specific groups.

Peer learning is equally regarded as foundational in all PLCs, as members find it meaningful to learn from other professionals as well as to offer their knowledge and experience. As Isabel Blanco points out, «professionals that are part of a PLC usually show a great enthusiasm for innovative techniques and new learning methodologies. They try to implement them in their lessons and share their advances with the rest». Within all the communities consulted, many activities fostering peer learning were mentioned, from online TeachMeets, online events allowing members of a community to present their practices and projects, to informal mutual support subgroups, where teachers or principals provide or ask for support and guidance on specific practices or matters they encounter. Webinars and face to face training are also popular activities supporting peer learning, and they allow the members to access high quality and relevant Continuous Professional Development (CPD) opportunities, as they often select experts from within or beyond the community.

Within the most active or structured communities, co-construction processes are often activated, as the members not only share knowledge among themselves, but they also engage in jointly adapting existing learning resources, developing original learning scenarios, or building new project ideas. According to Francisco Javier Masero, «The PLCs help to team up when starting a project and allow teachers to focus the efforts on a common goal, which eventually allows the activities carried out to be much more productive and successful, thanks to the work organized by many people».

In relation to the professional development of the members of a PLC, the most effective, yet demanding, approach is mentoring, both at individual and at whole school level. Mentoring activities are organized for educators, as well as principals

and other school staff, and can have a more or less formal structure in accordance with the specific community governance and leadership. Concerning eTwinning and its featured groups, Stefani Altieri notes that «mentoring is very important [...] because teachers often need support during all the phases of their teaching process especially if they are beginners». It is interesting to mention that mentoring is not only considered effective in training and supporting less advanced teachers, but as Rose McConville mentions, also in encouraging original ideas to be proposed and shared: «within departments, teachers mentor colleagues who may be newly qualified. This provides fantastic support to each other, where new ideas can be shared from the newly qualified teachers».

An interesting dimension of this consultation is represented by the pioneering of whole school mentoring, described within the Mentoring for School Improvement EC-funded project. Anna Laghigna, who supports the project as pedagogical consultant, mentions that the key concept that lies at the core of MenSI is that mentor schools act as “critical friends” to inspire and support the mentee schools through the following actions:

- whole-school mentoring & school peer-to-peer learning;
- supporting capacity-building in mentee schools by offering professional development opportunities for mentee school teachers;
- facilitating professional dialogue to overcome isolation or overall organizational improvement;
- creating spaces – both physical and virtual – for the dissemination of best practices and to encourage collaboration among teachers;
- providing feedback and advice for school improvement based on peer reviews, school visitations and evidence-based reports (SELFIE)⁷.

As Anna Laghigna further comments, «Peer-to-peer networking and mentoring at whole school level – i.e., an advanced school in the use of technology for educational purposes guiding and supporting less experienced schools – although little widespread can offer great potential for school improvement».

Finally, PLCs also serve as ideal environments for the testing, validation, and eventual adoption at a larger scale, of experimental or innovative teaching practices and EdTech solutions. For some respondents, the PLC, whether at department, school, or local level, was the right context in which to test innovative teaching solutions before implementing them at scale, developing the relevant scenarios, as well as activating a cycle of iterative feedback. Rose McConville shares her experience: «our Teaching and Learning Focus group and our group of Teaching and Learning 21 (TL21) [...] both work on introducing or developing classroom practices and activities to enhance teaching and learning. Practices, such as formative feedback and retrieval practice, are widely endorsed within the school community, reaction and comment is then sought from staff and students. As a

⁷ SELFIE (Self-reflection on Effective Learning by Fostering the use of Innovative Educational technologies) is a free tool that anonymously gathers the views of students, teachers and school leaders on how technology is used in their school and designed to help schools embed digital technologies into teaching, learning and assessment.

result, some of these practices become embedded and adopted in our daily teaching lives. For example, when we focused on the development of Learning Intentions and Success Criteria as part of our School Self-Evaluation process, teachers provided each other with the opportunity to observe classroom activities that incorporated these activities».

Along the same principles and approach, Hermann Morgenbesser notes how in Vienna, the Future Classroom Lab he coordinates, offers schools and teachers the opportunity to experiment and familiarize themselves with devices and practices the government encourages them to use for teaching and learning: «The Future Learning Lab of the association understands school digitization as a holistic process that goes beyond technical devices [and entails] further development of the school environment, support of teachers/students through suitable learning scenarios (coding, making, tinkering, AI-supported language-processing technologies) for better preparing students for the worlds of tomorrow and the working environment».

The Laboratory also supports teachers and schools by providing lesson plans, materials, learning scenarios, and offers a cluster structure for networking in communities of practice: mobile makerspace, maker cafés, Open Friday, and free learning materials.

4.3. Professional Learning Communities to find guidance and support during the pandemic

When asked about if and how their Professional Learning Communities were means of support during the pandemic, the contributors highlighted that being part of a learning community has helped them significantly to cope with the challenges posed by this difficult time.

In Spain, as mentioned by Isabel Blanco: «PLCs were a great support and motivation: when you were exhausted and felt disheartened, colleagues in the community were always there to help and support you and offer solutions to your problems». As described by Francisco Javier Masero, «this was achieved for instance by the organization of micro-trainings to help teachers with low digital competence to master online tools and be able to provide remote teaching». Besides, when distance learning was imposed, attending the different webinars and online meetings organized as part of the community was, in the words of Rafael Montero, «quite useful and handy during the lockdown».

When distance learning became a necessity, all teachers and students were called to adapt to it quickly and effectively. In Italy, Stefania Altieri mentioned they had many courses about different platforms that could support remote teaching, where she was helped by mentors and other skilled teachers. As she pointed out, «during the pandemic, we had to be able to help and reach as many students as possible. This included learning new ways of teaching and implementing innovative approaches to keep students active and motivated».

In Ireland, students had a strong voice during the time of the pandemic. Since many of them had a good understanding of the types of digital issues that their classmates were struggling with, they were able to come up with innovative ideas to support each other. For example, they created student friendly TikToks on the most common tech issues, they provided online assistance to the younger year groups and provided feedback to teachers and management about the areas where students were struggling the most. As described by Rose McConville, «their voice encouraged and enabled us to critique our school policies to consider how we could adapt them for a remote learning environment». Student feedback also helped teachers to «understand the difficulties that students were facing at this time, loneliness, disengagement, lack of access to technology and fear of falling behind in subjects, as well as the need for screen breaks and time away from a computer». This ensured that such breaks were subsequently incorporated into the daily school timetable during lockdown.

These are only a few examples of how learning communities, especially when informed by a strong leadership and the full commitment of their members, have been key to adapt to emergency remote teaching and learning. Learning communities have ultimately helped to make the transition to remote teaching and learning smoother, ensuring that both teachers and students were prepared and up to the challenge.

5. Discussion and lessons learned

The consultation ended with a question looking at what, according to the respondents, would make a PLC successful in engaging, retaining, and animating its members, and the most common elements listed details the picture of what is considered the essence of a community of peers, where ideas are shared openly, decisions are taken democratically, and contacts are encouraged on a continuous basis, as suggested by Isabel Blanco and Francisco Javier Masero.

Any PLC should have clear aims, as its members need to share its core objectives and goals. Often PLCs members consider each other ‘like-minded professionals’, with whom they feel comfortable to share a professional development path, and to whom they can relate. This relates to both informal and formal communities, although differences in formats and outcomes apply. As noted by Anna Laghigna, «PLCs often take place through school networks relating to specific projects [...] but there can be large differences in outcomes, depending on factors such as whether participation is voluntary or compulsory, instigated externally or internally, or recognized and supported by education institutions». It is therefore important to carefully consider the format and governance of a PLC and be aware that based on whether it applies a bottom up or a top-down approach, different motivating factors come into play, and may need to be supported by external incentives and rewards. When the objectives are structural and are expected to be achieved in a given timeframe, the active engagement of all stakeholders and the provision of «compulsory training and certified mentoring on 21st Century skills,

technology and pedagogy (learning scenarios)» should be sought, as commented by Hermann Morgenbesser.

Most often, however, the values of openness, mutual sharing and support, inform the success of a PLC, even if officially established, especially in encouraging members to reconsider and enhance their practice. As Rose McConville describes: «when new ideas/initiatives are shared in an informal, voluntary capacity amongst colleagues, as opposed to a formal, prescriptive way, this creates a willingness to engage and can greatly improve the understanding of the need for transformation, thus encouraging teachers/students to successfully embrace change and to adapt to it. Providing time, offering commitment, and allowing for space to our learning communities can present a breathing space to allow teachers to grow and learn without becoming overwhelmed by the nonstop introduction of new plans/programmes and departmentally directed actions that can seem overwhelming and never ending».

Overcoming the sense of isolation that teachers willing to innovate can sometimes experience, and the overflow of information and opportunities available in the sector, represent recurring motivating factors to join and engage in PLCs. Less experienced teachers, looking for mentoring and guidance, as well as experienced educators and experts, who welcome the opportunity to share and validate their knowledge, and keep up to date with the field advancements, find an increased sense of purpose and meaningful support.

Ultimately, among the respondents' contributions, it should be highlighted the consensus around the aim of any Professional Learning Communities (i.e., the benefit for the students). Rafael Montero lists among the essential elements of any PLC, that students must be at the core, as them, as teachers, they are there for the students: «The more opportunities my students get from my interactions in the PLC the more involved I will be in it». The eagerness to serve the learners better is the underlying motivating factor for all PLCs members, but it is also described as an implicit reflective effect of the latter. As Stefania Altieri suggests, «a strong Community of teachers is a good example for students that want to learn», the benefits it has on its members, the values it helps to strengthen among them, the passion and dedication it enthuses, are ultimately transferred not only to the overall school teaching community, but more importantly to pupils and students.

Conclusions

While the focus of this article has been the specificities of the selected PLCs, and the expertise of the consulted practitioners, this work ultimately aimed to answer the following overarching question: are Professional Learning Communities supportive of school innovation, and if so, how?

Based on the results of the consultation, it could be observed that the benefits and positive effects of taking part in PLCs do support teachers, school administrators and students to promote and sustain a culture of change within a school.

The intrinsic openness of a PLC challenges the traditional way of teaching and learning, exposing all participants to each other's innovative practices. Collaboration among teachers is also warmly encouraged, making it easier for practitioners to organize or embark upon project based learning and cross curricular activities.

Within PLCs, teachers find a controlled environment where they can experiment with innovative pedagogical and educational approaches, and test new EdTech solutions, before introducing them in the classroom. An environment where they feel safe to try and eventually fail, while learning.

PLC are not only groups for peer learning, but communities that help their members overcoming the sense of isolation affecting many practitioners, especially those who try to promote change within their school. They also offer mutual support and solidarity in times of crises, as recently proven. This very characteristic, paired with the enthusiasm that often animates PLCs, are finally transferred from the teachers to the students, making the latter more eager to progressively take the leadership of their learning process, favoring a more student-centered educational approach at school level.

This article offers to the readers the insight of practitioners and experts, who partake in or manage Professional Learning Communities, locally, nationally and/or internationally. While their point of view is certainly enthusiastic on the benefits and advantages of such communities, they do not refrain from providing constructive feedback to the networks they are part of, criticizing certain limits they notice, and providing suggestions on how they could be improved.

It is the author's hope that these views can therefore be of use to professionals who are already taking part in PLCs or that are considering joining one, as well as to decision makers who would establish or encourage the organization of a PLC.

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Annex I – Guiding questions for the consultation

1. Are you leading or are you an active member of a Professional Learning Community (PLC)? Could you please name it and describe it briefly? Would you consider it being more formal or non-formal?
2. What motivates you to lead or be part of such a community? What are the main benefits you find in being part of it?
3. How does the PLC you are part of enhance teaching practice and support the design and implementation of innovation at school level?
4. Are some of these approaches applied or encouraged within your PLC (e.g., mentoring, peer learning, peer exchange, etc.)? And if so, how?
5. What are the activities, organized within your PLC, that you think are most successful? What instead are some challenges encountered by the PLC members?
6. During the pandemic, did your PLC helped you and others adapt to and cope with the challenging situation? If so, how?
7. During the pandemic, were different modalities of shared leadership successfully implemented in schools, e.g., in relation to the active engagement of students in the decision-making processes related to digital education? If so, how?
8. In general, therefore not specifically in relation to the PLC you have described until now, what do you think makes a PLC successful in engaging, retaining, and animating its members?