# *Avanguardie educative*, a collaborative network for Italian teachers' professional development

Andrea Nardi<sup>1</sup>, Francesca Pestellini

*National Institute For Documentation, Innovation And Educational Research (INDIRE), Florence, (Italy)* 

(submitted: 18/11/2024; accepted: 8/4/2025; published: 12/5/2025)

#### Abstract

The COVID-19 pandemic posed significant challenges to education, particularly in countries like Italy with limited prior experience in distance learning. To support the educational community during this crisis, a series of 41 webinars was organized, addressing key themes of educational innovation. Rooted in mentoring, knowledge exchange, and reflective practice, this initiative was part of the broader efforts of *Avanguardie Educative*, a network encompassing nearly 1,600 schools, to adapt to the shift toward remote teaching. Participants completed satisfaction surveys after each webinar and a follow-up questionnaire at the series' conclusion, enabling an analysis of emerging needs in professional development and training. Findings highlighted high levels of satisfaction with the program and confirmed its effectiveness as a tool for coaching and professional growth. The initiative also demonstrated strong networking potential, emphasizing its value in fostering professional learning communities. These results encourage further exploration of how webinar-based technologies can facilitate the exchange of practices and support professional development.

KEYWORDS: Learning Networks, Professional Learning Community; Professional Development; Teacher Training, Covid-19.

DOI

https://doi.org/10.20368/1971-8829/1136186

CITE AS

Nardi, A., & Pestellini, F. (2025). Avanguardie educative, a collaborative network for Italian teachers' professional development. *Journal of e-Learning of Knowledge Society*, *21*(1), 108-117. https://doi.org/10.20368/1971-8829/1136186

# 1. Introduction

The academic years 2019/20 and 2020/21 posed unprecedented challenges for Italian schools due to the health emergency, which disrupted traditional practices and required rapid adaptation. The suspension of in-person teaching and the shift to distance learning highlighted both significant difficulties and opportunities for rethinking and innovating pedagogical and organizational approaches (Carretero Gomez et al., 2021; INDIRE, 2021; SIRD, 2020). The pandemic revealed a critical need for professional support, as most Italian teachers were unprepared for remote teaching and struggled to adapt their methods to the digital environment (Nigris et al., 2020; Ranieri et al., 2020). Studies on the Italian educational system have highlighted not only a structural lack of preparedness but also a widespread deficiency in digital skills among both students and teachers (INDIRE, 2021; Lucisano, 2020). In response to these challenges, there emerged a grassroots demand for "just-in-time professional development" (Neumann & Smith, 2020, p. 527), often supported by digital technologies and diverse distance learning tools. Among these, webinar-based training played a particularly prominent role.

Although webinars, particularly as Massive Open Online Courses (MOOCs), have become increasingly prevalent in higher education, their adoption within school contexts remains limited. While distance learning technologies have been extensively researched in academic and professional settings, the use of webinars for teacher professional development is still underexplored (Toquero & Talidong, 2020), although existing studies indicate that teachers generally have positive perceptions of learning experiences mediated by these tools (Khanna & Thakarar, 2021). In their study, Shal et al. (2024) found strong positive opinions about webinars as a means of teacher professional development. During COVID-19 teachers attended several professional

<sup>&</sup>lt;sup>1</sup> corresponding author - email: a.nardi@indire.it -Via Buonarroti, 10, 50122, Florence (IT)

development webinars that enabled them to resolve some misconceptions about online teaching and learning, enhanced their critical reflection on their online teaching practices and formed some new practices (Al-Naabi, 2023).

During the pandemic, webinars fostered collaboration and solidarity within the school professional community. These interactions often took the form of peer tutoring and mutual support, characteristic of communities of practice. Scholars have emphasized the importance of these professional learning communities as key drivers of professional growth (Hord & Summers, 2008; Sjoer & Meirink, 2016). In

Indire leveraged its expertise in supporting educational innovation by designing activities and services, such as the initiative discussed in this study, which emphasized the value of networking as a mentoring system (Mangione et al., 2020).

The first part of this paper provides a theoretical framework to the case study described. The second part describes the research context. The third part examines the methodological approach of the study. In the fourth and fifth parts the results of a survey are presented and discussed. In the conclusions, the authors express some considerations on possible developments of the network experience set out in the following paragraphs.

# 2. The Network as a Training Tool

The research carried out by Indire has long been oriented toward the concept of the network, as both a guiding principle for its institutional actions and a fundamental element of its research activities in Education. Recognizing the value of practice networks as a lever for change and an essential tool for the development of teacher professionalism (European Commission, 2018), Indire has established two large school networks: Avanguardie educative and Piccole Scuole. These networks find their distinguishing features in the exchange of best practices, reflective knowledge transfer among peers, and mutual support and guidance (Nardi et al., 2022), also in "nonstandard" educational contexts (Mangione et al., 2023). Networks support informal learning and allow for the exploration of new self-guided learning modes for the involved parties (Nigris et al., 2020). Collaboration among schools can help overcome educator isolation by providing opportunities for sharing, professional development, and enrichment (Kools & Stoll, 2016). These networks typically engage educators, teachers, school leaders, along with others actors who, outside their regular practice community, employ collaborative learning to improve their teaching practices and student learning processes (Poortman et al., 2022). They are designed to bring

their systematic review on technologies for supporting knowledge sharing within learning communities, Zamiri and Esmaeili state that the provision of training sessions, seminars, webinars and videoconferences are integral components of learning and community development methods. They provide a structured and interactive environment for knowledge sharing, skill development and continuous improvement (Zamiri & Esmaeili, 2024). During the pandemic, these remote learning communities (Safi et al., 2020) led to increased cooperation among educators, encouraging peer tutoring and diverse self-directed training initiatives (Pagani & Passalacqua, 2020).

together individuals who share and critically examine their teaching practices continuously, reflectively, and collaboratively (Stoll et al., 2006), identify common actions and shared goals, develop collective plans and strategies, becoming "active agents of their own growth" (Schleicher, 2012, p. 73).

The two school networks promoted by Indire are configured as Professional Learning Communities (Vescio et al., 2008) and Professional Learning Networks (Trust et al., 2016), hubs, aggregation points that connect different practice communities to achieve overall improvement in the education system through processes of scaling up and systematizing best practices, routines, habits, and evidence of effectiveness. At the core of the networking concept there is always the concept of mutuality, mutual aid, and reciprocity (European Commission, 2018), as network cohesion and functioning largely depend on all actors recognizing the value derived from their participation.

Studies exploring the effectiveness of Professional Learning Communities (PLC) organized around work practices, knowledge sharing, common meanings, and languages (Sjoer & Meirink, 2016), have confirmed that belonging to the community (Hord & Summers, 2008) is a crucial factor in the development of teacher skills and professionalism (Singh & Loh 2024; Vangrieken et al., 2017). The implementation of these professional communities is considered one of the most powerful organizational strategies for achieving significant educational improvements, enhancing self-efficacy, satisfaction, and collaboration among teachers, which can then positively impact student learning outcomes (Darling-Hammond et al., 2017; Khasawneh et al., 2023).

However, the aim of these networks is not just to achieve better student performance but also to serve as places for reflection and research on educational issues, such as the role of teachers, school well-being, educational equity, and more. Here different actors collaborate in a critical examination and revision of the curriculum goals (Brown, 2020).

Professional communities are spaces for activating a reflective stance and thinking (Schön, 1993), allowing

their members to gradually emancipate themselves from top-down processes, become capable of analyzing and evaluating their own practices, and develop autonomous hypotheses for problem-solving and change. In this regard, professional learning communities act as "forces that promote teacher innovation" (Liu et al., 2022, p. 3), supporting reflective processes that encourage teachers to question their established routines, behaviors, and thoughts (Rubenstein et al., 2018). Shared responsibility for the school mission encourages the emergence of new ideas and approaches to improve organizational and instructional effectiveness, activating intrinsic motivations in teachers (Paletta, 2020) and promoting the consolidation of new practices, routines, and solutions without the need for material rewards (Lu & Campbell, 2021). Professional learning communities were found to be particularly functional in enabling timely adaptation to contextual changes during the lockdown (Paletta et al., 2022).

Indire has adopted the "Research-Practice Partnerships" framework as its guiding conceptual model for establishing its networks. The underlying idea is that the wisdom of practitioners, comprising their expertise, innovations, and professional culture (Mazzoni & Ubbiali, 2015) is a fundamental resource for realizing educational innovation. Innovation is understood as a set of intentional and systematic changes undertaken to better and more sustainably achieve the goals of an educational system or to identify new ones (De Landsheere, 1979). At the core of this vision is also the belief that School as Learning Organizations have structures that enable staff to grow as professionals, operating as communities based on a shared vision and the collective capacity of the staff to pursue continuous improvement (Senge, 1990).

The educational value of the Network is expressed in *Avanguardie educative* not only through the actual training and co-training activities promoted by its participants but also through collaborative research processes (Desgagné, 1997), where AE members (Alquati, 1993) are actively involved in the investigation processes. Collaboration helps to avoid the risk of "innovation without change" (Elliott, in Magnoler, 2012, p. 110).

In the concept of the School as a Learning Organization, the way a school collectively builds and enhances its knowledge is key to change and success (Giles & Hargreaves, 2006). In this perspective, engaging with other members of the educational community allows schools to assess the relevance, feasibility, and sustainability of their change trajectories, making necessary adjustments as needed. On the other hand, the comparison with school practitioners is essential for educational research, in order to intercept emerging trends, common challenges, and the innovations employed to address them.

# 3. Research context

The Avanguardie Educative Network, established in 2014 as a collaborative initiative between Indire and 22 founding schools that endorsed its Manifesto, now comprises nearly 1,600 schools of all levels across the national territory. The network was created to promote and support innovation processes within the education system. Long before the pandemic events required a forced rethinking of the school model, Avanguardie educative promoted digital integration, in order to hybridize the traditional transmissive lesson. The network has always been inspired by the encounter between the innovative drive coming from school institutions (bottom-up) and formalization processes and systematization of educational research (topdown). As underlined at the European level (OECD, 2013), the transformation of the school system implies the transition from a top-down approach to a more contextualized approach, based on the analysis of innovative experiences of schools.

It is a participatory and collaborative approach, in which all actors play a role towards change and innovation by generating sub-networks of schools that in their innovative performance are linked to the main network (the AE Network). The movement fosters didactic and organizational innovation through a Gallery of Innovative Ideas, as well as training and dissemination initiatives, which encourage continuous methodological reflection on the broader school system. By harnessing the "disruptive" and "generative" power of these innovative ideas, the traditional school model - primarily reliant on the method expository teaching undergoes transformation. This process catalyzes changes in teaching routines, cultivates a culture of innovation, and introduces new frameworks that reconfigure socio-educational relationships. It also redefines the paradigm of the educating community, positioning the student as an active agent in their own educational journey.

The project functions as an evolving research laboratory, with approximately 200 new schools joining the Avanguardie Educative Movement each year, adopting at least one innovation idea. Notably, over 40% of participating schools have implemented at least three such ideas. The primary objective of the AE Movement is to advance knowledge and foster shared experiences among member schools, promoting "systemization" across three levels: the micro level (individual professional practices), the meso level (class councils and departmental practices), and the macro level (the entire school, including its substructures and relationships with the local community and stakeholders). Over its 10 years of activity, the AE Network has fostered extensive collaboration, significantly contributing to redefining the role of the 21st-century school as a flexible learning environment.

Avanguardie Educative is both a community of practice and research, and an opportunity for professional development in service. The transferability of organizational and methodologicaldidactic best practices, ensured through continuous observation, monitoring, and evaluation bv researchers, is envisioned as a key strategy to address the "paradigm of complexity" (UNESCO, 2021). This approach enables schools to continuously evolve and adapt, thereby providing new and meaningful educational opportunities. Among its major objectives, the AE educational community of practices aims to bring to the center and problematize learning by experience, teaching as research in action, and the relationship between practice and theory, in terms of support for critical and profound thinking.

### 4. The webinar cycle and the survey

Teacher training during the pandemic not only revealed new needs but also opened new possibilities. Digital training provided immediate tools for remote teaching, and the shift to online education allowed access to a broader range of training opportunities than the traditionally localized in-person models (INDIRE, 2021). In December 2020, Indire released initial findings from a survey of Italian teachers, conducted between June 2020 and 2021, focusing on teaching practices during the lockdown. The results indicated that the instructors transposed their in-person lectures to the online modality without adapting their teaching methods to meet the specific needs of distance learning (INDIRE, 2021).

In response to these findings, and with the aim of enhancing training beyond the emergency phase, the free-access webinar series Formarsi e confrontarsi con le Avanguardie educative was launched in September 2020. This series, designed for a broad audience, sought to engage school leaders, teachers, and external stakeholders, while fostering reflection on key cross-disciplinary topics such as formative assessment, inclusion, Media Education, guidance, the transformation of soft skills. learning environments, and AE methodologies. The webinars, organized by Indire researchers and featuring contributions from scholars, industry experts, school principals, and teachers as trainers, provided a platform for showcasing innovative practices from AE schools. Special focus was placed on teaching methods during the Covid-19 pandemic, with in-depth analyses aimed at assessing the sustainability of innovation in the context of distance learning. To facilitate the exchange of impactful innovations and foster discussions on broader systemic issues, some events were held in collaboration with other regional

or national educational innovation networks. Between September 2020 and March 2022, 41 webinars were conducted, with an average of 157 participants per session. These webinars addressed key themes related to school innovation, each indexed under one or more specific topics: 1. Rethinking the curriculum and training offer; 2. Educational planning, innovative educational strategies and methodologies; 3. Redesign of educational spaces and learning environments; 4. Design and management of distance learning; 5. Design and management of integrated digital teaching; 6. Pathways for soft skills and orientation; 7. Media education, digital skills and digital educational content; 8. Equity, diversity, inclusion and didactic differentiation; 9. Competence-based teaching; 10. Rethinking assessment methods.

# 5. Methodology

#### 5.1 Research objectives and questions

The study presented here aims to explore the usefulness of the webinar series *Formarsi e confrontarsi con le Avanguardie educative* and to intercept the emerging training needs of Italian teachers and Head of Schools during the pandemic, with a particular focus on innovative educational practices.

The study is based on the following research questions:

RQ1. What was the degree of satisfaction with the training received?

RQ2. What training needs emerged during the webinar cycle?

RQ3. What was the degree of satisfaction with the overall training offer?

RQ4. What was the participants' feedback regarding their professional development?

# 5.2 Research objectives and questions

To address the research questions, two questionnaires were developed: a satisfaction questionnaire and a follow-up questionnaire. Initially drafted by one researcher, both questionnaires were reviewed and validated by a group of three additional researchers. The satisfaction questionnaire combined closed and while open-ended questions, the follow-up questionnaire consisted solely of closed-ended questions. The satisfaction questionnaire included a section on socio-demographic data and closed-ended questions to assess participants' perceived usefulness of the training, both for individual sessions and the entire webinar series. The open-ended questions explored participants' training needs and requests for further in-depth study on specific topics during the pandemic. It was administered via Google Forms between September 2020 and March 2022. The follow-up questionnaire, which also collected sociodemographic data (gender, age, professional role), included closed-ended questions to evaluate the perceived value of the training for professional development and its potential impact on professional networking. It was administered in May 2022 via Microsoft Forms. Both questionnaires were voluntary and anonymous. Descriptive statistical analysis was applied to the closed-ended questions, while openended responses were analyzed through textual analysis and categorization. These responses were then used to contextualize and clarify the themes identified in the closed-ended questions, supporting the interpretation of the quantitative data.

#### 5.3 Participants

The questionnaires were administered to а convenience sample of participants who voluntarily opted to engage in the research. As such, the sample is neither probabilistic nor representative of the broader population of Italian educators, although it is considered significant due to the high response rate and geographic diversity of the respondents. Of the 6,476 participants in the satisfaction questionnaire, 3,185 (nearly half) responded. The majority of respondents were teachers, with smaller proportions of school leaders, educators, university students, and others. Most respondents worked in Secondary Schools, followed by Primary Schools, with smaller numbers from First Grade Secondary Schools and Preschools. Additionally, 1,450 participants reported being members of the AE Network, while 1,735 had not joined at the time of completing the questionnaire. The initiative reached all regions of Italy. The followquestionnaire received 1,068 responses, up predominantly from teachers, with a small proportion of school leaders, students, and other professionals.

#### 6. Results

# *RQ1.* What was the degree of satisfaction with the training received?

The participants' response to the satisfaction questionnaire (no. 3185 responses) was very positive with respect to the training usefulness of the individual webinars they had attended. To the question "Please rate the quality of the meeting in relation to your expectations", the 46.9% of the respondents rated it as "Excellent", 47.6% as "Good", and only 5.9% as "Sufficient" or "Poor". To the question "Express a judgement on the webinar series' usefulness with respect to your professional interests" 49.2% answered "Excellent" and 46% "Good".

*RQ2.* What training needs emerged during the webinar cycle?

With regard to the thematic in-depth studies requested by the participants during the webinar series, the data collected through the satisfaction questionnaires, subsequently analysed and categorised, highlight a need for further exploration of practical aspects in the implementation of innovative methodologies from Distance learning and Integrated digital learning perspectives, focusing in particular on the first level of education (primary and lower secondary schools) and on inclusion. A first categorisation of the answers made it possible to identify "Distance learning and Integrated digital learning" (92%) as the most requested topic for further investigation, followed by "Assessment methods" (73.8%); other topics indicated by the participants were "Inclusion" (20%), "Media education" (10.7%), "ICT" (15.3%); Childhood" (12.3%), "Pathways for soft skills and orientation" (9.2%) and "Innovative teaching practices" (12.3%), while the 43% of the respondents did not specify any topic. A further grouping of the requested topics has been made in view of drafting the follow-up questionnaire. The response of the participants who completed the follow-up questionnaire (no. 1068) to the question "Which of the following topics do you think were most useful?" (Figure 1) was the following: the 7.2% of the participants chose "Rethinking the curriculum and the educational offer": the 22.8% answered "Didactic planning, innovative strategies and methodologies "; the 13.3% of the respondents indicated "Redesigning educational spaces and learning environments" the 7.1% answered "Design and management of distance learning"; 9.2% opted for "Design and management of integrated digital education"; 5% expressed preference for "Pathways for soft skills and orientation"; 9.2% of the participants answered "Media education, digital skills and digital learning contents"; 6.8% indicated "Equity, diversity, inclusion and didactic differentiation"; 9.9% responded "Competency-based teaching/learning "; and finally a 9.5% of the respondents considered "Rethinking testing and assessment methods" as the most significant topic.



**Figure 1** - Most useful topics according to the participants' responses.

# *RQ3.* What was the degree of satisfaction with the overall training offer?

Responses (n. 1068) to the question "How do you judge the usefulness of the proposed initiative with respect to the following aspects" (Figure 2) are overall very positive. In relation to the webinar series' usefulness in terms of "Training opportunities in the use of new teaching methods" 30.2% of the participants answered "Excellent", 21.8% "Fair" and 40.5% "Good" and 7.2%. On the other hand, in relation to the initiative's usefulness as an "Opportunity to fill the gaps in technological skills", 20.4% of the respondents considered it "Excellent" and 41.9% "Good". The participants were then asked to express their opinion about the webinar series' usefulness "to integrate tools and teaching methods for distance learning" and for this item too the response was overall very positive with 21.4% of the participants answering "Excellent", and 41.9% "Good". The next item was aimed at probing the usefulness of the proposed webinars as a "Training opportunity on the use of new assessment methods "and the feedback was again more than positive with 20.8% of the participants considering it as an "Excellent" opportunity", 27.6% as "Fair" and 37.2% as "Good". The usefulness of the initiative as an "Opportunity to deepen relations between schools, their territory and the world of work" was then investigated, and the assessment on this item was slightly different from the previous ones, with the 18.5% answering "Excellent", 23.6% "Fair", 37.7% "Sufficient" "Good". 17% and the 3.1% "Insufficient". Finally, the participants were asked about the webinars' training usefulness as a means for "Updating with respect to new ways of managing the classroom and educational relations online and remotely" and 24.4% answered "Excellent", 24.3% "Fair", 37.7% "Good", 11.5% "Sufficient", while only 14 participants (1.3%) considered the initiative "Insufficient". The initiative's outcomes were also assessed from the participants' emotional and relational perspectives.



**Figure 2** - Usefulness of the initiative with respect to various factors.

Participants were asked, "Which aspects of the proposed initiative do you consider most important?" (Figure 3): the 22.9% of the respondents answered

"The exchange of good practices among peers", the 28.8% identified "Coaching and professional development supported by a research community" as the most important element, the 17.3% answered "The support in facing the challenges posed by distance learning"; the 14.9%, on the other hand, opted for "Feeling like a member of a community and diminishing the sense of distance and isolation", while the 9% indicated "Sharing issues triggered by the pandemic".



Figure 3 - The initiative's most important achievements from a relational point of view.

# *RQ4. What was the participants' feedback regarding their professional development?*

The feedback from participants who filled in the follow-up questionnaire (no. 1068) to the question "To what extent do you think the proposed content contributed to your professional development?" was very comforting. Most of the respondents thought that the proposed training contents contributed "A lot" (31%) and "Quite a lot" (64%), while 6% answered "A little" and only 2 participants (0.1%) thought that the webinars did not contribute to their professional development. The participants were then asked: "Did the initiative prompt new collaborations with your peers, with schools, organisations or associations that have expanded beyond your participation in the webinar series?" and the results (Figure 4) were encouraging, since 49% stated that they had established informal/individual collaborations with other participants in the initiative, and 9.9% answered that some agreements between schools were concluded, in the form of collaboration agreements, memoranda of understanding or twinning, networks.



**Figure 4-** Networking among participants following the webinar series.

# 7. Discussion

The Covid-19 pandemic led to significant changes in the management of educational practices. At the organizational level, two main scenarios emerged: in some cases, services were formally suspended, while in others, they were adapted to provide remote support. Where educational services continued, they were redefined and reshaped, often with the aid of digital technologies, to maintain and strengthen the educational relationship between educators, teachers, and their students, helping to alleviate feelings of isolation and abandonment (Kools & Stoll, 2016).

"Professional learning communities" (Vescio et al., 2008) facilitated connections among teachers, offering support during a time of professional uncertainty and enabling peer-to-peer exchanges and the sharing of "resilience" best practices. The shift to online teaching prompted educators to develop new learning needs, leading to the organization of various initiatives aimed at equipping them with the tools necessary for effective distance learning. Voluntary participation in these initiatives can be seen as a self-directed learning strategy, helping to bridge the skills gap within the educational community. This study examined the emerging training needs that motivated a group of participants to engage in an online initiative aimed at enhancing educational professionalism. The analysis of learning needs was followed by an evaluation of the initiative's usefulness in supporting coaching and professional development.

The study confirms the importance of professional learning communities in addressing the unprecedented conditions brought about by the lockdown (Paletta et al., 2022; Safi et al., 2020). The findings indicate a high level of satisfaction with the training offered, while also highlighting several thematic areas that warrant further exploration. Contrary to expectations, the need for support in adapting to new distance learning methods was less prioritized compared to other topics discussed during the sessions, such as instructional planning, redesigning learning environments, and integrated digital pedagogy. The data reveal, firstly, a notable level of professional maturity achieved by the respondents over the two years of the pandemic, with many now oriented towards integrated teaching methods that go beyond mere distance learning. Interesting enough, the most highly regarded topic among participants was the indepth exploration of innovative teaching methodologies. Notably, over half of the participants had not yet joined the AE network at the time of the webinars, which underscores the positive feedback not only for the training initiative itself but also for the broader goals of Avanguardie Educative, which has consistently emphasized the importance of methodological innovation in the school model. Consistent with previous studies on the topic,

participants have demonstrated positive perceptions of learning facilitated by webinars (Khanna & Thakarar, 2021; Shal et al., 2024). They also regarded the initiative as a valuable tool for ongoing professional development, supporting the acquisition of skills relevant to their educational practice even beyond the (Al-Naabi, 2023).Respondents health crisis specifically highlight support, professional development, and the sharing of best practices among peers as the most valuable aspects of the webinar cycle. The value of training for professional development (Hord & Summers, 2008) is further supported by the networking and knowledge sharing opportunities it has facilitated (Zamiri & Esmaeili, 2024). A significant proportion of participants reported having established both formal and informal collaborations after attendance. In this regard, the peer-tutoring model used for the online training seems to be a promising approach to continue beyond emergency contexts.

# 8. Limitations of the study

This study presents a number of limitations, starting with the sample, which is not representative, while its size may still be deemed significant compared to similar studies. Additionally, the sample was predominantly composed of females, a factor we could not modify, as the Italian teaching population consists primarily of women. Finally, although the study's purpose was not to find correlational data or causal relationships but rather to explore participants' perceived usefulness and satisfaction, it would have been interesting to investigate differences within the sample and how these differences might have influenced the results. Since the initiative is still ongoing, we plan to conduct this type of analysis at the end of the new webinar cycle.

# 9. Conclusion

Online training represents a privileged field of experimentation that Indire has explored since its inception and which has become a cornerstone of its institutional mission. The Institute has capitalized on the experience gained over the years and supported schools in the transition to distance learning through diversified actions of massive online education. As shown by the survey analysed in this paper, in addition to the need for ongoing support for professional development, the will is revealed, already put into action in many schools, to use networking and peer collaboration as a tool for training accompaniment and effective educational planning. Oriented towards massive open education (Pilli & Admiraal 2016), the initiative *Formarsi e confrontarsi con le Avanguardie*  educative facilitated the sharing of professional development experiences that involve participants in the implementation of new teaching opportunities as well as of innovative solutions enabled by technology. With the guidance of Indire researchers and experts, teachers and school leaders of Italian schools shared their good practices, derived from concrete contexts and uses, offering their colleagues' practicable solutions that could be adapted to everyone's specific needs thus ensuring the continuity of activities despite the schools' closure (Mangione et al., 2020). This initiative supported schools first in the 'forced' shift to remote teaching, then in the process to digital transition, and now assists them in designing the initiatives outlined in the Next Generation EU and the National Recovery and Resilience Plan.

Avanguardie Educative as an educational network based on the exchange of practices has supported the Italian school towards a 'new normality' (Nardi et al., 2024) and continues to this day to support schools in the current context of transformation, helping them to adequately address the new challenges, such as spatial disparities, digitization, access to resources, design of learning environments, inclusive methodologies, skills development, and more.

### References

- Al-Naabi, I. (2023). Did they transform their teaching practices? A case study on evaluating professional development webinars offered to language teachers during COVID19. International Journal of Higher Education, 12(1), 36-44.
- Alquati, R. (1993). Per fare conricerca. Velleità alternative.
- Brown, C. (2020). The Networked School Leader: How to Improve Teaching and Student Outcomes Using Learning Networks. Emerald Group Publishing.
- Carretero Gomez, S., Napierala, J., Bessios, A., Mägi, E., Pugacewicz, A., Ranieri, M., Triquet, K., Lombaerts, K., Robledo Bottcher, N., Montanari, M., & Gonzalez Vazquez, I., (2021). What did we learn from schooling practices during the COVID-19 lockdown, EUR 30559 EN, Publications Office of the European Union, Luxembourg, 2021.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Effective Teacher Professional Development. Learning Policy Institute.
- De Landsheere, G. (1979). Dictionnaire de l'évaluation de la recherche en éducation. PUF.
- Desgagné, S. (1997). Le concept de recherche collaborative: l'idée d'un rapprochement entre

chercheurs universitaires et praticiens enseignants. Revue des sciences de l'éducation, 23(2), 371-393.

- European Commission, Directorate-General for Education, Youth, Sport and Culture (2018). Study on supporting school innovation across Europe: final report. Publications Office.
- Giles, C. & Hargreaves, A. (2006). The sustainability of innovative schools as learning organizations and professional learning communities during standardized reform. Educational administration quarterly, 42(1), 124-156.
- Hord, S. M., & Summers, W. A. (2008). Leading Professional Learning Communities Voices from Research and Practice. Thousand Oaks.
- INDIRE (2021). Impatto della Pandemia sulle Pratiche Didattiche e Organizzative delle Scuole Italiane nell'Anno Scolastico 2020/21. Report preliminare-Dicembre 2021. Florence: Italy.
- Khanna A., & Thakarar G. (2021). Perception of the effectiveness of webinars on English language teachers in Western India. Psychology and Education Journal, 58(5), 1782-1788.
- Khasawneh, Y. J. A., Alsarayreh, R., Al Ajlouni, A. A., Eyadat, H. M., Ayasrah, M. N., & Khasawneh, M. A. S. (2023). An examination of teacher collaboration in professional learning communities and collaborative teaching practices. Journal of Education and e-Learning Research, 10(3), 446-452
- Kools, M., & Stoll, L. (2016). What makes a school a learning organisation? OECD Publishing.
- Liu, S., Lu, J., & Yin, H. (2022). Can professional learning communities promote teacher innovation? A multilevel moderated mediation analysis. Teaching and Teacher Education, 109.
- Lucisano P. (2020). Fare ricerca con gli insegnanti. I primi risultati dell'indagine nazionale SIRD "Per un confronto sulle modalità di didattica a distanza adottate nelle scuole italiane nel periodo di emergenza COVID-19". Lifelong, Lifewide Learning (LLL), 16(36): 3-25. https://doi.org/10.19241/lll.v16i36.551
- Lu, J., & Campbell, P. (2021). Conceptualising innovation and professional learning in the Hong Kong context. Practice: Contemporary issues in professional learning, 3(1), 67-72.
- Magnoler, P. (2012). Ricerca e formazione. La professionalizzazione degli insegnanti. Lecce: Pensa MultiMedia.
- Mangione, G. R., Mughini, E., Sagri, M. T., Rosetti, L., Storai, F., & Zuccaro, A. (2020). La rete come strategia di sistema nel supporto alla scuola italiana

in epoca di pandemia: la buona pratica coordinata da INDIRE, Lifelong Lifewide Learning, 16(36), 58-75.

- Mangione, G.R.J., De Santis, F., & Garzia, M. (2023). Tecnologie e scuola inclusiva, I Quaderni della Ricerca. Loescher.
- Mazzoni, V., & Ubbiali, M. (2015). Diventare insegnanti, tra ricerca e servizio. La pedagogia del Service Learning nella formazione dei futuri docenti. Form@re - Open Journal Per La Formazione in Rete, 15(3), 243-257.
- Nardi, A., Mughini, E., & Pestellini, F. (2022). "Formarsi e Confrontarsi con le Avanguardie educative": un'iniziativa per l'accompagnamento e lo sviluppo professionale della comunità educante durante il periodo pandemico. Media Education, 13(2), 115-129.
- Nardi, Andrea, Parigi, L., & Mangione, G.R.J. (2024). Educational Networks as a lever for change. The italian school towards a 'new normality'. In Tommaso Minerva & Annamaria De Santis (Eds.), Proceedings of the Italian Symposium on Digital Education, ISYDE2023 Reggio Emilia (Italy).

Neumann K. L., & Smith M. D. (2020). Facilitating just-in-time professional development for inservice teachers transitioning to distance learning. In Ferdig R. E., Baumgartner E., Hartshorne R., Kaplan-Rakowski R., Mouza C. (Eds.), Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field (pp. 527-530). Association for the Advancement of Computing in Education.

- Nigris E., Balconi B., & Passalacqua F. (2020). Descrizione e apprendimenti professionali dell'esperienza scolastica a distanza. Il punto di vista degli insegnanti. RicercaAzione, 12(2): 73-99.
- OECD (2013). Education at a Glance 2013: OECD Indicators. OECD Publishing.
- Pagani, V., & Passalacqua, F. (2020). Da un giorno all'altro abbiamo dovuto cambiare lavoro, L'esperienza della scuola a distanza dalla voce degli insegnanti. RicercAzione, 12(2), 101-116.
- Paletta, A. (2020). Dirigenza scolastica e middle management - Distribuire la leadership per migliorare l'efficacia della scuola. Bononia University Press.
- Paletta, A., Greco, S., & Martín Santolaya, E. (2022). Leadership, innovazione e cambiamento organizzativo. Promuovere comunità di apprendimento professionale. IUL Research, 3(5), 1-5.

- Pilli, O. & Admiraal, W. (2016). A Taxonomy of Massive Open Online Courses. Contemporary Educational Technology, 7(3), 223-240.
- Poortman, C., Brown, C., & Schildkamp, K. (2022). Professional learning networks: a conceptual model and research opportunities. Educational Research, 64(1), 95-112.
- Ranieri, M., Gaggioli, C., & Borges, M.K. (2020). La didattica alla prova del Covid-19 in Italia: uno studio sulla Scuola Primaria. Práxis Educativa, 15, 1-20.
- Rubenstein, L.D., Ridgley, L.M., Callan, G.L., Karami, S., & Ehlinger, J. (2018). How teachers perceive factors that influence creativity development: Applying a social cognitive theory perspective. Teaching and Teacher Education, 70, 100e110.
- Safi, F., Wenzel, T., & Spalding, A. L. (2020). Remote Learning Community: Supporting Teacher Educators During Unprecedented Times. Journal of Technology and Teacher Education, 28(2): 211-222.
- Shal, T., Ghamrawi, N., & Ghamrawi, N. A. (2024). Webinars for teacher professional development: Perceptions of members of a virtual professional community of practice. Open Learning: The Journal of Open, Distance and e-Learning, 1-17.
- Schleicher, A. (2012). Preparing Teachers and Developing School Leaders for the 21st Century: Lessons from around the World. OECD Publishing.
- Senge, P. (1990). The fifth discipline. The Art & Practice of Learning Organization. Doupleday Currence.
- Schön, D. (1993). Il professionista riflessivo. Per una nuova epistemologia della pratica professionale. Dedalo.
- Singh, N., & Loh, S. C. (2024). Professional learning communities and trust in colleagues as determinants of collective teacher efficacy in Malaysian primary schools: An SEM analysis. Education 3-13, 13(2), 1-19.
- SIRD (2020). Ricerca nazionale SIRD. Per un confronto sulle modalità di didattica a distanza adottate nelle scuole italiane nel periodo di emergenza COVID-19. Italy.
- Sjoer, E., & Meirink, J. (2016). Understanding the complexity of teacher interaction in a teacher professional learning community. European Journal of Teacher Education, 39(1), 110-125.
- Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning

communities: A review of the literature. Journal of Educational Change, 7(4), 221-258.

- Toquero, C. M., & Talidong, K. J. (2020). Webinar technology: Developing teacher training programs for emergency remote teaching amid COVID-19. Interdisciplinary Journal of Virtual Learning in Medical Sciences, 11(3), 200-203.
- Trust, T., Krutka, D.G., & Carpenter, J.P. (2016). "Together we are better": Professional Learning networks for teachers. Computers & Education, 102(1), 15-34.
- UNESCO (2021). Reimagining our futures together: A new social contract for education. UNESCO.

Vangrieken, K., Meredith, C., Packer, T., & Kyndt, E. (2017). Teacher communities as a context for professional development: A systematic review. Teaching and Teacher Education: An International Journal of Research and Studies, 61(1), 47-59.

Vescio, V., Ross, D. & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. Teaching and Teacher Education, 24(1), 80-91.

Zamiri, M., & Esmaeili, A. (2024). Methods and Technologies for Supporting Knowledge Sharing within Learning Communities: A Systematic Literature Review. Administrative Sciences, 14(1), 17.