NETWORK TRAINING FOR TEACHING WITH PROFESSIONALITY

FORMAÇÃO EM REDE PARA A DOCÊNCIA COM PROFISSIONALIDADE

FORMACIÓN EN RED PARA ENSEÑAR CON PROFESIONALIDAD

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ABSTRACT: The question that this article brings to the discussion is whether network training for teaching with professionalism can become a new modality of teacher development. This is a theoretical essay with the aim of initiating discussion and deepening studies on the subject. It is based on authors such as Cocco, Enguita, Imbernón, Lévy, Masetto, among others. The themes of professional teacher education are discussed; Learning process in the digital age; Network design for teaching; Constitutive principles of teacher education network; and Points to consider. The reflections consider that the network training modality is an interesting and promising possibility, as it offers advantages to enhance teacher development. At the same time, it is complex and challenging, provoking new questions and encouraging the continuity of studies.


RESUMO: A questão que esse artigo traz à discussão é se a formação em rede para a docência com profissionalidade pode se tornar uma nova modalidade de desenvolvimento do professor. Trata-se de um ensaio teórico com objetivo de iniciar discussão e aprofundar estudos sobre o tema. Está baseado em autores como Cocco, Enguita, Imbernón, Lévy, Masetto entre outros. São discutidos os temas de Formação docente com profissionalidade; Processo de aprendizagem na era digital; Concepção de rede para docência; Princípios constitutivos de rede de formação de professores; e Pontos a considerar. As reflexões ponderam que a modalidade de formação em rede é uma possibilidade interessante e promissora, pois oferece vantagens para potencializar o desenvolvimento docente. Ao mesmo tempo, é complexa e desafiante, provocando novas questões e incentivando a continuidade dos estudos.


RESUMEN: La pregunta que este artículo trae a la discusión es si la formación en red para enseñar con profesionalismo puede convertirse en una nueva modalidad de desarrollo docente. Este es un ensayo teórico con el objetivo de iniciar la discusión y profundizar los estudios sobre el tema. Se basa en autores como Cocco, Enguita, Imbernón, Lévy, Masetto, entre otros. Se discuten los temas de la formación profesional docente; Proceso de aprendizaje en la era digital; Diseño de redes para la enseñanza; Principios constitutivos de la red de formación docente; y Puntos a considerar. Las reflexiones consideran que la modalidad de formación en red es una posibilidad interesante y promissoria, ya que ofrece ventajas para potenciar el desarrollo docente. Al mismo tiempo, es complejo y desafiante, provocando nuevas preguntas y fomentando la continuidad de los estudios.

Introduction

Teacher education in contemporary times is unanimously valued among educators as one of the decisive resources for promoting the quality and improvements that society demands from educational systems. Its purpose is to promote educational experiences in which teachers participate with the main objective of improving their knowledge, skills and/or professional attitudes so that they can carry out their teaching activity with greater quality or effectiveness. As its scope is broad, there is a multiplicity and diversity of proposals, designs and modalities of teacher education, which is why it is considered a complex issue involving numerous aspects of investigation. In this article, we bring to the debate the training of teachers in a network, for teaching with professionalism.

Masetto and Gaeta (2013) detail that professionality was incorporated into the international debate on professions as a set of skills, knowledge and experiences socially recognized for the exercise of a certain function. For the “teaching profession”, the authors emphasize, there are three dimensions to be developed: (i) in-depth and updated knowledge of their area of knowledge, provided by scientific research and experience; (ii) pedagogical competence understood as mastery of the teaching and learning processes; (iii) and the political interface of the teacher as a citizen with social responsibility and in favor of professional recognition and appreciation, with the right to lifelong training, career development, decent remuneration and other benefits common to those in this profession they're part.

The question that moves us in this article is: whether network training for professional teaching can become a new modality of teacher development? The network perspective, in this case, goes beyond the meaning of a communication tool (for exchanging research and pedagogical content), to transform itself into a broad and complex fabric of a teacher education process that can take place with the support of tools web technologies. Training based on the development of teaching professionalism.

We chose the theoretical essay as a methodological path, as it is a conscious and intentional option for understanding a certain object of study which, in this case, represents learning to teach with professionalism through networks for teacher education. In Meneghetti's (2011) understanding, essays are deep, detailed reflections, which require involvement, reflection and analytical and critical capacity in thinking and rethinking in relation to the proposed theme. This essay was organized into five stages: Professional teacher education; The Learning process in the digital age and teacher education; Contemporary conception of a
Network for teaching; Constitutive principles of a teacher education network; and Teacher education network: points to consider.

**Professional teacher education**

The craft of master has, in the words of Miguel Arroyo (2000), the very appropriate declaration of the representation of the meeting of masters of living and being people, the meeting of masters of being and living with students who are beginners in the art of living and be people. Every educational relationship is built in these remarkable meetings for the reinvention of each and every one. The same author agrees that teaching requires qualified, professional knowledge, typical of this area of knowledge, something that only masters can do. As great artisans and artisans, masters share knowledge and artistically contribute to the training of students.

What is a professional teacher? How do we define and conceptualize professional action in relation to teaching? How does a teacher incorporate and develop the set of skills and qualifications to teach? One can defend “teaching as a profession and a craft, which as such, requires acquisition and development of a set of skills, training, combined with dedication, and availability to exercise it” (GAETA; MASETTO, 2013, p. 97, our translation).

Teaching professionalism synthesized in the teacher's pedagogical competence is an essential factor for success in the teaching role, a competence that is developed in three areas: in the area of each teacher's specific knowledge, in the pedagogical area and in the political dimension (MASETTO, 2012). Stopping being a student and becoming a teacher fully exercising technical, pedagogical and political skills is still a very complex and unassisted process (AIMI; MONTEIRO, 2022).

Teaching professionalism is related to the recognition of the interactive dimension of teaching work; the creation of a professional culture in training and work involving the research-training binomial in close association with the profession and its context in an engaged and critical way, training that addresses the collective challenges of the teaching profession; that allows the construction of a culture of collaboration between teachers, breaking with the isolation of teaching limited to the classroom (PENTEADO; BUDIN; COSTA, 2022). This perspective reinforces the construct of organizing teaching professionalism in a network based on principles of mutual commitment, co-construction, research, and joint production of new knowledge.
Mizukami (2006) already proposed the investigative attitude as a constitutive axis of training for the construction of solid knowledge that is flexible and appropriate for teaching teaching. It is necessary to build less authoritarian, verticalized and invasive professional development strategies, allowing the objectification of beliefs, personal theories, values, starting to establish, if possible, learning communities with relational and professional links when training teachers.

We agree once again with Miguel Arroio that the Master identifies with the craftsman who possesses “qualified knowledge”, “which only he knows how to do, which belongs to him, because he learned his secrets, his knowledge and his arts (ARROYO, 2000).

The learning process in the digital age and teacher education

Brown (2000) states that connectivism is the learning theory of the digital era where knowledge changes rapidly, new information is continually generated and technology and the internet result in new opportunities to learn, share information and build knowledge enabling us to learn. It argues that learning is a process of connecting sources of information, ideas, diversity of opinions to create an integrated whole and generate knowledge, therefore, it is necessary to be connected to learn.

In this sense, a learning network can be defined as a series of connections between entities (people with the same intentions). Networks work through the simple principle that entities can connect information and ideas, generate knowledge and learning that are also connected to create an integrated whole. This knowledge, when specialized, can gain recognition for its expertise and generate a cross-pollinated connection between learning communities.

Rodrigues and Almeida (2021) defend, in times of intensification of digital information and communication technologies in schools and universities, the possibility of increasing digital narratives for teacher engagement and training. The incorporation of digital learning narratives into curricular and training practices can emerge and enable technological knowledge combined with pedagogical knowledge and the experience of the subject in training stitched together along the narrative path, in a record that leads to the movement of action-reflection-action in construction curriculum and training. Having more critical interlocutors in this digital fabric, more comments and contributions, allows, in a way, the construction of a shared version, always combining theory and the authentic practice of the teacher/researcher. This process, according to the authors, can be maximized on multimedia platforms (such as social networks) which are
tools loaded with training and educational potential that range from technological fluency and multiliteracies to the formation of subjects who are increasingly autonomous and with authorial, participatory and reflective profiles regarding the world in which they live (RODRIGUES; ALMEIDA, 2021).

When working on the concept of networked teacher education in this article, we understand that a formative, interactive, highly connected network of teachers in study and joint production can occur in physical environments and in person. However, it is impossible to remain oblivious to the intense movements of this digital era that increasingly brings teachers and researchers from different geographic areas closer together. The digital movement and its contribution intensified and maximized the training potential of teacher education and professional development networks.

The activities developed in a network are based on a new system of relationships, based on social interaction and brings an increasingly recognized perspective in the educational area that enhances the use of networks: learning is not necessarily an individual process, or formalized by a course, but it takes place in the collaboration of members (with each other and with the community), in the exchange between professionals who work in the same or different contexts, in the relationships that are established between all actors in the learning process (SÁNCHEZ et al., 2022).

Learning and/or training networks develop commitment, improve the co-construction of knowledge for the benefit of the collective, leaving individualized assumptions behind. Group work, collaboration and dialogue develop a sense of belonging. Training established based on the principles of belonging and dialogue fosters joint and constant growth, focuses on the improvement and evolution of individual and group technical, emotional and behavioral skills and capabilities, in addition to improving performance, learning and building relationships. Collaborative learning or training is more active, centered on participants, with relationships established between equals who together seek to exchange ideas, information and skills with the aim of reinforcing the production of knowledge, the integration and application of conceptual information. He ends by stating that the network, from this point of view, is understood as “a true learning window” (HARASIM et al., 2000, p. 23, our translation).
Contemporary design of a teaching network

We understand by “network”, as a starting point, an open structure, made up of connected people or organizations that share common values and objectives. This strategy, which is not new, with the help of technologies has gained emphasis on uniting organizational or personal efforts to be part of constant transformations and innovations, which make processes, products and services more complex and require better training from those involved.

A simple grouping or passive interaction of people, or any connection between organizations does not characterize a network. There is the assumption of a dynamic and productive interaction, a driving element of solutions and innovations or a generator of new knowledge. The main premise of network activity is to obtain, in institutional terms, collective solutions that would be more difficult to achieve in isolation, or, in individual terms, to promote transformations. As observed by Cocco et al. (2003) networks are not considered as mere spaces of exchange, but rather as circulation infrastructures and production sites.

Fundamental characteristics of networks are: enabling horizontal relationships that are not necessarily hierarchical between participants, decentralization of management and self-generation of their design. In the understanding of Duarte and Frei (2008), networks are, therefore, not just another form of structure, but almost a non-structure, in the sense that part of their strength lies in their ability to be made and unmade quickly. To generate interactions and seek innovations. Among the authors researched, we highlight two of them for presenting conceptions of “network” in a comprehensive, complex, and profound way that provoked us a lot.

Lévy (2003) states that networks are more than an interconnection of computers, as they allow articulation between connected people, increasing the collective intelligence potential of groups. His argument begins with the statement that people are interested in constituting themselves as either a group or a virtual community to get closer to the ideal of an intelligent collective, more imaginative, faster, more capable of learning and inventing, as it values and puts individual and collective knowledge into synergy. The author continues, “collective intelligence is “[...] an intelligence distributed everywhere, incessantly valued, coordinated in real time, which results in effective mobilization of skills” (LÉVY, 2003, p. 28, our translation).

The guidance of network participants towards collective intelligence, the result of everyone's collaboration for the development of knowledge, presents itself as a challenging factor for the creation of a network. According to the same author, this synergy happens best in environments mediated by technology whose resources are elements that facilitate and
encourage collaborative work and create an environment conducive to the development of collective intelligence and collaborative construction of knowledge.

The second author who caught our attention was Enguita (2008), when he highlights the following attributes of networks: supported by the internet, which facilitates communications, networks are flexible structures, and can easily incorporate new members, new contacts, new methodologies, new tools and new knowledge. They have lightweight links and completely permeable borders that allow physical barriers to be eliminated, facilitating and democratizing access. They present enormous adaptability and easily mobilize knowledge, offering more opportunities and freedom to participants.

The meaning of participating or not in the network, continues Enguita (2008), is constructed and reconstructed in each decision to participate or not, with these or those, for as long as you want; according to needs or convenience. A difference is then established: the relationship between the participant and the network is based on free collaboration. Because it is a connection between people, these principles of openness and porosity find limits in the identity that is the driving force for the relationships of trust that are established. In other words, the network groups people more because of their relationships, objectives and common interests than because of their attributes (gender, age, social class).

It is worth highlighting the fundamental attributes for a “network”, according to Enguita (2008): supported by the internet, facilitating communications; flexible structures, which can easily incorporate new members, new contacts, new methodologies; lightweight links and fully permeable borders facilitating and democratizing access; easily mobilize knowledge; the relationship between the participant and the network is based on free collaboration; identity is the driver for trusting relationships; the network groups people more based on their relationships, objectives and common interests.

In this context, participation or not in a collaborative network is related to common interests in which each participant is a point and all points are fundamental to the constitution of the network. Also, according to Enguita, this synergy best happens in virtual environments: there are programs, systems, and tools that are put at the service of cooperative learning devices; The technological resources available online are elements that facilitate and encourage collaborative work and create an environment conducive to the exploration and co-construction of knowledge.

Networks have presented themselves as a possibility for expanding teacher development processes, transforming themselves into training networks in the physical and digital space.
Imbernón (2012) points out that it is possible to “promote connectivism”, that is, a process of formation and learning between people from different places, with different experiences, connected to each other, who meet whenever they want, breaking with the previous process of meet and learn from a colleague who is nearby. The important thing is to understand the extent to which networks can offer a new and different modality of teacher education and teaching learning in a network.

We understand, in short, that networks constitute a privileged space for research, production, systematization and exchange of knowledge, exchange of practices and dissemination of experiences among people interested in the same object. Space, therefore, conducive to teacher education.

**Constitutive principles of teacher network training**

Based on the previous considerations, we can propose some basic principles of a teacher education network as shown in the following figure:

![Network relationship constructs](image)

**Figure 1 — Network relationship constructs**

Source: Prepared by the authors

1. **Network identity**: is a set of characteristics that identify it, its principles, objectives, profile of participants, etc. Specially considers the construction, production and systematization of knowledge based on collaboration and joint learning, sharing values, knowledge, experiences, research.
2. **Connectivity**: goes beyond the sense of creating connections for the production and circulation of knowledge, as it is intended to connect intentions, ideas, values, information to generate knowledge, develop and improve the collective intelligence of the group. Connected people are linked to each other and to common goals.

3. **Horizontality**: Networking has been an experience in which cooperative relationships take place through a concept of horizontality, receptivity, a democratic attitude of dialogue and listening between participants in the processes of participation and management of the network. Everyone is important: each with their potential and expertise, contributes to the learning and training of others.

4. **Social interaction**: it is a mutual, dynamic and simultaneous approach of participants, towards a common objective. It provides for a democratic attitude of listening and exchanging ideas, values, knowledge and experiences that promote a continuous movement of reflection, review and transformation, enriching learning and transforming pedagogical practices with professionalism.

5. **Collaborative Learning**: Free participation of experts with the aim of cooperating to produce knowledge and develop the network's objectives. The training objectives will be developed seeking a consensus built among participants after working in a mediated and collaborative partnership. In this case, the collaborative learning obtained is not the result of individual and passive efforts, but “of social and educational interaction, of active collaboration between its members and between professionals who work in the same context, or in different contexts” (IMBERNÓN, 2010; HARASIM *et al.*, 2000).

6. **Mutual commitment**: Training networks improve the co-construction and sharing of repertoire with the socialization of knowledge and experiences for the benefit of the collective. They develop commitment to the collective, leaving individualized assumptions behind.

7. **Innovation**: The integration of these basic principles into a professional teaching training project can present itself as an innovative method of training these teachers. We understand as an innovation the possibility of going beyond the mere insertion of updated technologies into the educational environment or even changing a training curricular component. There are a set of points to be considered in innovation such as the social and epistemological contextualization of the training proposal; the intended educational objectives and the expected training profile; the training project; the active and problematizing perspective of methods and resources in action; the varied training scenarios, the interdisciplinary presence in the construction of knowledge and evaluation (MASETTO, 2004; 2011; 2012).
Teacher education network: points to consider

According to Imbernón (2010), a community of practice, or a learning community, opens up the possibility of networks for teacher education as they offer possibilities to expand the generation of specific pedagogical knowledge and exchange between teachers. Like any new, maturing process, challenges arise and we must remain alert to understand and face them. The context in which a teacher education network will be created, for example, presents itself as one of the greatest challenges to be understood and met.

In relation to defining the identity of a network, care must be taken to define it with sufficient clarity so that it is, at the same time, attractive and a link for the maintenance of its participants. In the case of the teacher education network, questions such as: What type of teacher education does this network intend to develop contribute to clarity in its objectives? What principles are you committed to: pedagogical innovation and professional teaching, for example? The identification of participants in a teacher education network with the intended educational objectives, as well as the proposed characteristics and principles, is fundamental for the development of a feeling of belonging to the group and joint learning of teaching with professionalism.

Network environments must promote and facilitate interactions “in the form of dialogue and joint activities that allow the creation of shared meanings about pedagogical practice based on personal concerns and experiences” (ZAMBRANO; GISBERT, 2017, p. 101, our translation). Integrative learning scenarios, physical or digital, are appropriate, so that teachers can connect intentions, ideas, values, create, share, dialogue, collaborate to improve teaching practices.

Network activities need to create opportunities to attract, encourage and develop collaborative learning, with joint construction. Always collaboratively, with open communication in order to generate cognitive dialogues, promote comparisons, raise alternative points of view, provoke reflections. Activities connect information to generate knowledge, develop and improve the group's collective intelligence.

For pedagogical mediation, we highlight, in the creation of networks, horizontality as a democratic attitude of dialogue and listening between participants. This attitude presupposes Pedagogical Mediation understood as a positive action that facilitates and boosts interactions in the network training process, reinforcing the feeling of belonging to the group, maintaining the focus on collaborative learning and facilitating the joint construction of teaching knowledge.
The evaluation of a teacher network training process requires an evaluation process integrated into the training process itself, accompanying it along the way, reflecting on the actions adopted, facing challenges, straightening out routes. Reflecting on the student's proficiencies requires a deep understanding of the content to be taught and the learning processes. In this way, the teacher reflects and evaluates his classes, his teaching and the materials he used.

Returning to the initial question: perspectives

We began this article by questioning the possibility of developing a new type of teacher education, based on interactions through “networks”. The reflections presented here indicate that this process can mean an interesting and promising renewal, as it offers advantages that can enhance teaching development.

Networking is not a new strategy, but it has been reinvigorated by current cultural changes that incorporate new forms of communication, interrelationship, and cooperation between social groups. These changes are facilitated, encouraged and intensified by technologies and virtual environments. In this context, training networks can make a great contribution to teacher education, as they attract and facilitate groups of professionals with the same objective; they give agility and flexibility to processes, create feelings of belonging to the group and promote commitment and responsibility in joint learning.

However, it must be considered that, like the different processes and modalities of teacher education for professional teaching, network training has its peculiarities and challenges. This is a new and complex process that presupposes clarity in understanding what teacher network training will entail, taking into account the aspects indicated in the text for its constitution and functioning. In addition to the great challenge of creating the network in interaction with a group of teachers who are interested in building it in partnership, in a committed, responsible and democratic way. Where each participant is a point and all points are fundamental to the constitution of the network.

This article opened some paths for the construction of the networked teacher education modality, at the same time that it made us attentive and open to discuss issues such as, for example, the interaction of connectivity between teachers; the perspective of production and socialization of knowledge and pedagogical practices among “networked” teachers; the exploration of technological resources to boost the “network”, among others.
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