



THE POTENTIAL OF PROFESSIONAL LEARNING NETWORKS IN FOSTERING TEACHER DEVELOPMENT: A STUDY CARRIED OUT IN PORTUGAL

O POTENCIAL DAS REDES DE TRABALHO COLABORATIVO NA PROMOÇÃO DO DESENVOLVIMENTO PROFISSIONAL DE PROFESSORES: UM ESTUDO REALIZADO EM PORTUGAL

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EL POTENCIAL DE LAS REDES DE TRABAJO COLABORATIVAS PARA PROMOVER EL DESARROLLO PROFESIONAL DE PROFESORES: UN ESTUDIO REALIZADO EN PORTUGAL

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Abstract: This paper explores teachers' views of leadership and the potential of networking in fostering teacher professional development. The study draws upon a broader piece of research aimed at examining conditions for teacher leadership in challenging circumstances. Data were collected through questionnaires with open-ended questions with 66 teachers from five Portuguese schools. Findings suggest that the participation of teachers in networks created an opportunity to foster professional collaboration and support from the peers in their daily professional lives. Issues of professional dialogue, reflection and feedback emerged from the data.

Keywords: Teacher leadership. Collaborative work. Networks. Professional development. Teachers.

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Resumo: Este artigo explora as visões dos professores sobre a liderança e sobre o potencial das redes colaborativas na promoção do seu desenvolvimento profissional. O estudo baseia-se num estudo mais amplo que visou analisar as condições para o desenvolvimento da liderança docente em circunstâncias desafiadoras. Os dados foram recolhidos através de questionários com questões abertas com 66 professores de cinco escolas portuguesas. Os resultados sugerem que o processo de formação colaborativa criou oportunidades de colaboração e de aprendizagem em rede entre os professores no quotidiano profissional, contribuindo para fomentar o diálogo, a reflexão e o *feedback* promovendo o seu desenvolvimento profissional.

Palavras-chave: Liderança docente. Trabalho colaborativo. Redes colaborativas. Desenvolvimento profissional. Professores.

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Resumen: Este artículo explora las opiniones de los profesores sobre el liderazgo y el potencial de las redes colaborativas para promover su desarrollo profesional. El estudio se basa en un estudio más amplio que tiene como objetivo analizar las condiciones para el desarrollo del liderazgo docente en circunstancias desafiantes. Los datos fueron recolectados a través de cuestionarios con preguntas abiertas con 66 profesores de cinco escuelas portuguesas. Los resultados indican que el proceso de formación generó espacios de “compromiso” de los docentes con sus pares y con la vida diaria profesional, contribuyendo a fomentar el diálogo, la reflexión y la retroalimentación promoviendo su desarrollo profesional.

Palabras-clave: Liderazgo docente; Trabajo colaborativo; Redes; Desarrollo profesional, Profesores.

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Introduction

Teacher professional learning and development plays a pivotal role in efforts to enhance the quality of education. As Sachs (2009, p. 9) argues, “when learning is at the centre of the teaching enterprise we would assume that the continuing professional development of teachers would be a priority of both education systems and teachers alike.”

However, professional development has been defined as an ambiguous and conceptually vague concept (Friedman & Phillips, 2004; Fraser *et al.* 2007) entailing a complex, dynamic and multifaceted nature (Avalos, 2011; Day, 2001). Thus, it is possible to identify a wide array of meanings and purposes for teacher professional development (Boylan *et al.*, 2017) which are related to different conceptions of being a teacher and of teaching practice (Sachs, 2009).

Relevant opportunities for teachers to learn and develop are dependent upon a number of variables related to policy, context, professional and personal issues. These include both formal and informal dimensions (Avalos, 2011) as well as both functional and attitudinal orientations (Evans, 2008) related to what teachers do and know but also how they think, work and feel. In other words, functional development incorporates procedural and productive issues as it focuses on procedures and what and/or how much people ‘produce’ or ‘do’, at work” (Evans, 2008, p. 31). Attitudinal development entails intellectual and motivational dimensions and is associated with “individuals’ development in relation to their thinking, thought processes and ideas, and their motivation” (Evans, 2008, p.31). Such broad understanding of teacher development calls for a multifaceted and complex array of professional learning opportunities. For instance, Day (2017, p. 23) argues that professional learning and development is a “process by which teachers as change agents, alone or with others, extend their *emotional and career-long* commitment to the broader ethical and moral purposes of teaching [...]; review and renew their *sense of positive professional identity and professional capital*; acquire and develop critically the values, dispositions, qualities, knowledge, skills, planning, practices and *capacities for everyday resilience* [...] and engage in *functional and attitudinal* professional learning and development”. In turn, Avalos (2011) states that, despite the many forms that teacher professional development may take, it entails both cognitive and emotional involvement from the part of the teachers both individually and collectively. She argues that



“professional development is about teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students’ growth” (p. 10).

Drawing upon four metaphors, Sachs (2009) identifies four forms of teacher continuing professional development (CPD): CPD as retooling; CPD as remodelling; CPD as revitalising; and CPD as re-imagining. She argues that CPD as retooling has been the dominant form of CPD as it points to a view of teaching as an activity that can be improved through learning and development of new skills. As such it relates to what Kennedy (2005, p. 237) refers to as a Training Model which “supports a skill-based, technocratic view of teaching whereby CPD provides teachers with the opportunity to update their skills in order to be able to demonstrate their competence”. Thus, a practical view of teaching is emphasised in so far as it highlights its immediate application in classrooms and views teachers as managers of students’ learning. In addition, this form of CPD “does not allow any consideration of the social and cultural factors which influence the design and delivery of teaching and learning” (Sachs, 2009, p.12) pointing to what Sachs describes as an “old style professional development” seen as “something that is done for the teachers”. As a result, CPD is mainly delivered by an external expert within a perspective of “controlled professionalism” in which teachers are seen as craft workers.

CPD as remodelling also emphasises a practical approach to teaching, which is described mainly as teachers’ performance whose role is to engage/entertain students. Thus, this form of CPD points to a transmission model (Kennedy, 2005) but its focus is on altering existing practices to ensure that teachers are compliant with government change agendas. As such it addresses teachers’ content and pedagogical knowledge.

In turn, CPD as revitalising “connects teachers with other teachers and with the needs of students” (Sachs, 2009, p.13). The focus is, therefore, on teacher learning and professional renewal “through opportunities to rethink and review practices and in so doing become reflective practitioners”. Sachs (2009) includes in this form of CPD the professional development networks. Drawing on Morris, Chrispeals and Burke’s work (2003), Sachs (2009) argues that “external teacher networks that focus predominately on enhancing teachers’ pedagogical knowledge and collaborative and leadership skills in a content area when linked with internal school reform networks and projects can provide the transformative power to alter professional development and teacher learning in powerful and sustainable ways” (p.14).

Finally, CPD as re-imagining is different as it “requires imagination both on the part of those delivering CPD as well as those who are the recipients of it” (Sachs, 2009, p.15). This entails a transformative view of CPD aimed at equipping “teachers individually and collectively to act as shapers, promoters and well informed critics of reforms”. As such, it entails a political dimension pointing to a “transformative view of teacher professionalism” which seeks to develop teachers who are creative developers of curriculum and innovative pedagogues (Mockler, 2005). It involves, therefore, building collaborative partnerships between various stakeholders whose task is to work together, combining their experience, expertise and resources. In addition, it “positions teachers as researchers of their own and their peers’ practice” (Sachs, 2009, p.16) in order to understand and transform it in line with the view of an activist teaching profession (Sachs, 2003).

In a review focusing on teacher professional development, Avalos (2011) distinguishes structured or semi-structured processes (such as partnerships, collaborative networks) and informal contexts (such as the workplace interactions) facilitating learning and stimulating teachers to alter or reinforce teaching and educational practices. She identified three main contributions to CPD: school and university partnerships, teacher co-learning and workplace learning. Avalos (2011) also identifies conditions and factors influencing professional development, namely the macro conditions (the nature and operation of educational systems, policy environments and reforms, teachers’ working conditions as well as historic factors that determine what is accepted or not as suitable forms for professional development) and school cultures (administrative and organisational structures, and how these interact to facilitate or constrict teacher workplace learning).

In a similar vein, Richter *et al.* (2011) identify formal and informal professional development opportunities. The formal ones occur in structured learning environments according to a specific curriculum (Feiman-Nemser, 2001), namely courses, modules and workshops, often linked to a training model and more traditional forms of professional development. Informal opportunities do not follow a specific curriculum and are not limited to given environments (Desimone, 2009), but they include individual activities such as reading books and classroom observations as well as collaborative activities such as conversations with colleagues and parents, mentoring activities, teacher networks and study groups.

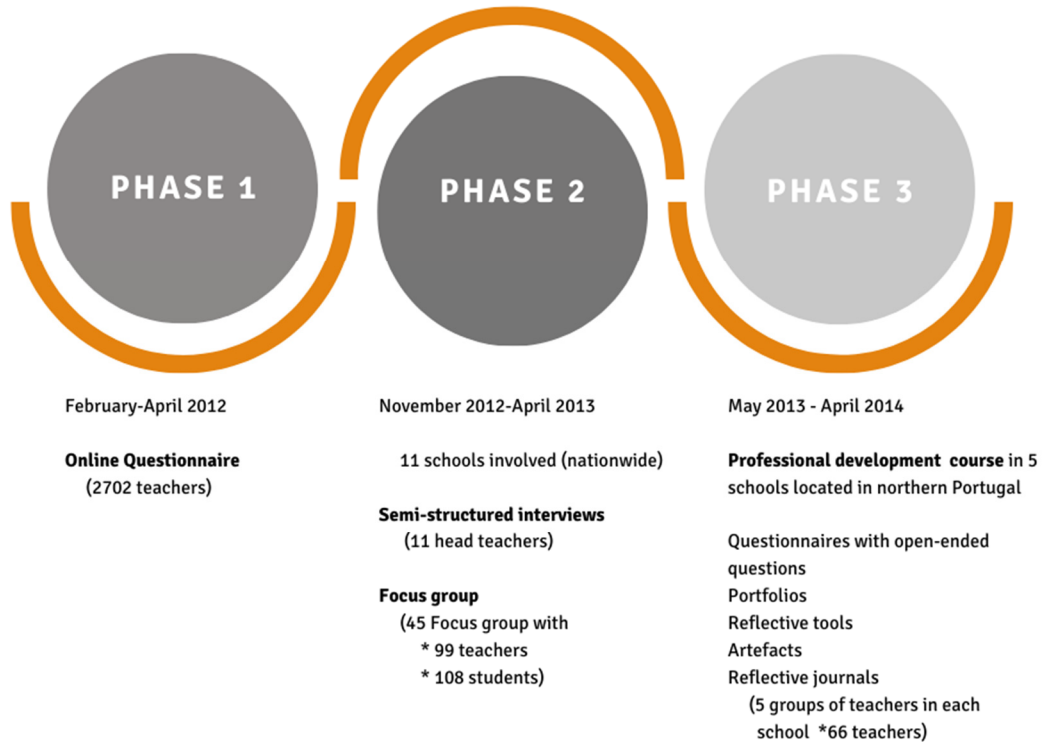
The work by Schiff, Herzog, Farley-Ripple and Iannuccilli (2015) identified three teachers network types: (1) In-School, Formal Networks (school-level networks, department-level networks, grade-group networks, and student support networks); (2) in-School, Informal Networks (varied from instrumental to expressive); and, (3) out-of-School Networks (organised in three different areas: content, pedagogy, and teacher preparation; school systems/models; and teacher voice/policy). The authors highlighted the deep and diverse nature of out-of-school networks, however, they can also be less clearly defined than in-school networks. Regardless of the focus of the network, they are influenced mainly by the motivations of teachers rather than by school structure (Schiff *et al.*, 2015). This has influence on the willingness to engage in networking activities. Teachers who affirmed they were more overwhelmed noted their lack of energy to engage in outside school networks. In contrast, teachers enrolled in other activities display greater willingness to engage in out-of-school teacher networks to expand their knowledge, research and/or complement in-school networks, enabling teachers to bring out-of-school knowledge into their schools and providing venues for participation and professional development (Schiff *et al.*, 2015).

Despite existing literature on teacher professional development, further research is needed particularly on collaborative professional development focusing on the ways in which the associations between the functional academic and the attitudinal motivation, commitment, and efficacy needs of teachers may be met (Zeng & Day, 2019). This paper reports on findings drawn from a wider research project aimed at understanding how a group of teachers involved in a professional learning network look at their experience in relation to their development and work as teachers.

The study

The study draws upon a broader research project - 'Teachers Exercising Leadership' (TEL) -, financed by the Portuguese National Foundation for Science and Technology (PTDC/CPE-CED/112164/2009). A mixed-method design was chosen to understand the ways in which teachers build their professionalism and develop strategies that enhance teacher leadership (cf. Figure 1).

Figure 1 - Phases of data collection, methods and participants



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Source: Authors

The project was based on the key ideas of teacher leadership, the development of innovations, and the construction of professional knowledge, within and beyond the classroom and the school, as key to enhancing teachers' professional development and school improvement. Data presented in this paper correspond to phase III of the Project.

Research questions

The following research questions are addressed in this paper:

- (1) Why do teachers engage in learning networks and what do they learn from them?
- (2) Which conditions enhance or inhibit professional learning?

Participants

The study used a convenience sample of 66 teachers from five Portuguese schools located in northern Portugal. The participating teachers engaged in a professional development



project centred on their concerns and on issues relevant to their work and schools. Teachers come from a diversity of backgrounds, ages, qualifications and years of experience (cf. Table 1). Most of the participants were female, aged between 41 and 50 years old, teaching in the second and third cycles of education, and have between 21 to 30 years of experience. The schools in which they taught were located in different contexts, including urban, rural and suburban.

Table 1 - Demographic characteristics of the participants

	<i>n</i>	%
Gender		
Male	17	25.8
Female	49	74.2
Age		
[30-40]	8	12.1
[41-50]	31	47.0
[51-60]	27	40.9
Experience as teachers		
[11-20]	20	31.7
[21-30]	26	41.3
[31-40]	17	27.0
Sector of Education		
Pre-school	9	13.8
Primary school (1 st cycle)	14	21.5
Elementary school (2 nd and 3 rd cycles)	30	46.2
Secondary school	12	18.5
School background		
Urban	22	33.3
Semi urban	15	22.8
Rural	29	43.9

Source: Authors

Methods and procedures

Questionnaires with open-ended questions were used to analyse teachers' initial expectations and final perceptions about the project. In addition to these, several reflective tools were examined, such as portfolios and reflective diaries. The sessions took place in each of the schools, including three network events organised over one year in which teachers shared their projects and reflected on their experiences. These network events were led and organised by the participating teachers in their schools.

The professional development project entitled "Leadership and Curriculum Development at School: the potential of project work" had a total of 45 hours of training, 15 hours of face-to-face sessions and 30 hours of autonomous work. This training project aimed at providing a space

for the co-construction and sharing of professional knowledge and the transformation of practices contributing to the development of a broader and more interactive teacher professionalism. Intervention and research projects were developed based on the concrete concerns of teachers. The goal was to create a space for developing projects and curriculum initiatives, enhancing the exercise of teacher leadership (informally and formally). This project also aimed at understanding how teachers influence and mobilise others to improve their schools. The national project - TEL School Network - was developed along with the ITL Network - International Teacher Leadership - which provided shared experiences, discussion and development of projects in face of the problems identified by the teachers at a national and international level.

Ethical issues

The research project was carried out according to the research ethics standards in international educational research, particularly within the scope of the American Educational Research Association (AERA) and the British Educational Research Association (BERA). Of particular relevance were data confidentiality, informed consent, voluntary participation, and the use of the data collected only for research purposes. The participants were fully informed about the research goals through the research protocol. All participants confirmed their voluntary informed consent to participate in the study.

Data analysis

Data were analysed using IBM SPSS Statistics 22. Qualitative data was analysed through content analysis guided through the principles of completeness, representativeness, consistency, exclusivity and relevance (Bardin, 2009), but also considering the interactive nature of the data analysis (Miles & Huberman, 1994). A mixed-method approach and the definition of more general categories were privileged (Bardin, 2009; Esteves, 2006), articulating an inductive (emergent character of the data) (Cho & Lee, 2014) and a deductive perspective through the definition of categories of analysis in compliance with the research goals and the theoretical framework (Ezzy, 2002). The categories of analysis were semantic (Miles & Huberman, 1994).

Results

Learning from teaching networks

Teacher collaboration and the construction of learning networks

Data pointed to the role of school and teacher-based projects in creating opportunities for teachers to collaborate with their peers and to share their professional experience. Each project led by the teachers was experienced in its singularity but also met the collective experience within the teacher network which was assumed as a reflection and professional knowledge opportunity and also as a condition for change to happen.

The participating teachers recognised the possibility for collaboration arising from action-research projects drawn from their specific concerns and difficulties which, in turn, were linked to the aim of solving real problems in their schools. During the professional development course, teachers were able to work in groups with teachers from different sectors of education and teaching areas in the “development of a project, providing the integration of multiple pieces of knowledge” (Male, 24 years of experience, rural school). In addition, they also highlighted the well-defined and shared goals of their projects involving the entire school: “What I have learned from this course was the ability to work on a common project for the entire school” (Female, 27 years old of experience, rural school). Teachers experienced the design and development of positive concrete interactions, which enabled the school community to collaborate and work together in the best solutions for the problems and challenges identified in the schools.

The dynamics of collaboration achieved during the design and implementation of the projects enabled teachers to share concerns and put them into perspective: “the opportunity to share concerns that sometimes we thought were only private. I also looked at the problems from a different angle” (Female, 34 years of experience, urban school). The possibility for sharing and the development of new opportunities for reflection were also at the forefront of teachers’ accounts: “This project enhanced the possibilities of each teacher to find solutions to his/her concrete problems (implicit learning opportunities)” (Male, 24 years of experience, urban school). Such plural and diverse understandings facilitated interpersonal reflection (Sá-Chaves, 2000) and the ability to cope with challenges.



Be open to others implies collaboration. Working with others encourages the process of sharing experiences and the production of knowledge about teaching: “I had the opportunity to share and to receive a lot of information from the projects developed in other schools” (Female, 34 years of experience, rural school). The willingness to collaborate challenges teachers to renew and revisit their professional challenges and values fostering their active role in the direction of their professional development: “The reflection and the exchange of experiences in groups continue to be the best way to find solutions to improve the school” (Female, 30 years of experience, urban school) and to learn that “professional knowledge can be built collectively” (Female, 27 years of experience, rural school).

The implementation of the strategies and the evaluation of the projects were recognised by the teachers as relevant processes for (re)discovering their potential and for strengthening teachers’ professional relationships. As stated by one of the teachers: “We must go beyond individualism that characterises teachers in the classroom and share proposals, projects, and teaching practices to contribute to the improvement of teaching” (Male, 37 years of experience, urban school). Learning and building professional knowledge in interaction with others may enhance the social dimension of learning: “The sharing of knowledge, strategies and reflections has contributed to my personal growth” (Male, 13 years of experience, urban school); “More involvement, more engagement, more joint intervention” (Female, 25 years of experience, rural school).

As suggested by Redecker *et al.*, (2011), collaboration is an essential component of learning and training which reinforces the importance of developing and extending networking, empathy, and co-construction of knowledge skills through peer learning and collaboration communities (Redecker *et al.*, 2011). These communities play a crucial role in fostering professional development contributing to the sharing and co-construction of knowledge resulting from experiences in classroom.

The composition of the working groups

Teachers' accounts highlighted the impact of the training project on the development of collaborative practices and its contribution to the resolution of their concrete problems: “The



dynamics created in the sessions (due to the theoretical foundations), the strategies and the methods adopted fostered collective work” (Female, 37 years of experience, urban school).

In this project collaboration was of paramount importance. The formation of groups, organised by teachers' common professional concerns, boosted the development of the different projects and the co-construction of knowledge. Teachers' projects were shared with peers on a regular basis through peer feedback and dialogue with other colleagues. This helped the development of more effective communication and interaction strategies leading to the rethinking of activities and choices: “It promoted shared learning opportunities and productive interaction. It also fostered group dynamics and collaborative work” (Male, 18 years of experience, rural school).

Reflection and feedback as training strategies

Data revealed that teachers recognised and valued the strategies and the methodology adopted throughout the development of the project. In particular, the participating teachers point to issues of professional dialogue, joint reflection and peer feedback which promoted new and deeper processes of reflection: “feedback from others; sharing and criticism; the presence of the other in conversations about practice” (Female, 33 years of experience, suburban school). Feedback promotes reflection and encourages teachers to continue to develop their work (Orsmond, Merry & Reiling, 2005).

Feedback from colleagues helped to confirm, add, replace or restructure concepts and practices, contributing to the (re)construction of professional knowledge: “I learned how to formulate knowledge with the input from others. Even if there were different opinions, rich and engaging conversations were created” (Male, 20 years of experience, urban school); “Through feedback from colleagues, I could have another perspective of what being a teacher entails” (Female, 16 years of experience, urban school).

In addition to the feedback strategies adopted, teachers also valued the type and quality of communication making feedback more effective: “The dissemination of the distinct phases of the project through visits and feedback” (Female, 35 years of experience, urban school); “The quality and effectiveness of communication, taking into account the need to privilege unambiguous language and clarifying concepts, was another added value” (Male, 18 years of



experience, rural school).; “Positive communication has helped to overcome some constraints” (Female, 23 years of experience, rural school).

The (re)construction of the "leadership" concept

Data unveiled the (re)discovery of the leadership concept, understood not only in its formal dimension, associated with the exercise of management positions and functions in schools, but also in its informal dimension. Teachers may lead by undertaking and promoting contextualised activities and projects, individually but also collectively, with other professionals and students, to improve teaching practices, students' learning and achievement. Teachers highlighted the discovery of the "importance of leadership in teaching"; and, "the effects that a leader can have in the classroom, in school and in the community" (Female, 29 years of experience, urban school). They also highlighted the possibility of "experiencing a leadership process and the awareness of the existence of several types of leaders" (Male, 19 years of experience, rural school).

The enhancement of pedagogical leadership was highlighted by the participants: “The leadership of the teacher inside and outside the classroom and the way I can promote my students’ achievement” (Female, 24 years of experience, rural school); “Leadership has a lot to do with the innovation that we must implement at school” (Male, 34 years of experience, rural school). Teachers can make a difference in the classroom where "each teacher can lead formally or informally through his/her work" (Male, 26 years of experience, rural school), but also in the school.

Discovering the power of networking in improving teaching and school

The voluntary participation of the teachers in the professional development dynamics, focused on solving problems collaboratively and enhanced the transformation of the participating schools into learning communities (Flores & Ferreira, 2012). It allowed “joint collective efforts and motivation” and “showed the potential of a committed public school” (Female, 33 years of experience, rural school). Teachers valued the opportunities to learn how to design and evaluate projects and other innovative initiatives at school. They highlighted as relevant learning opportunities the possibility of “structuring a project with an impact” (Female,

23 years of experience, rural school), of developing a project and understanding it in “its different components”, through the “planning and structuring of tasks and initiatives to achieve impact and desired results”(Male, 18 years of experience, rural school). Teachers' accounts show the importance they attach to collaborative and reflective networks and to professional learning in the wider professional community: “[I have learned] how to engage in a network, share, collaborate and articulate within the group, within each educational unit, between schools and even between countries” (Male 19, years of experience, rural school). “[I have developed] (1) Awareness of a reflective teacher professionalism; (2) the importance of establishing networks, beyond local contexts, to promote true educational leaders” (Female, 22 years of experience, suburban school).

The importance of reflecting together

Reflecting on their activities and on the pedagogical experience was widely stressed by the participating teachers as meaningful learning arising from their participation in the TEL project. By reflecting together through the development of the projects, teachers were able to rediscover the importance of reflection and its contribution to pedagogical innovation: “This project provided me with knowledge and competencies that led me to look at and reflect on my professional performance” (Female, 33 years of experience, suburban school).

There are several dimensions of reflection identified by the teachers, for example, the pedagogical practice and the relationship with families: “The importance of reflection on our pedagogical activity and the relationship with families” (Female, 33 years of experience, suburban school), but also students' perspectives: “Above all, I have learned to listen to students more and to reflect on their opinions” (Female, 12 years of experience, rural school); and teachers' professional values and leadership: “The reflection on professional values, the possibility of joint reflection on teacher professionalism and leadership forms was a positive contribution to my personal and professional development”. (Female, 21 years of experience, rural school).

Some teachers recognised collaborative experiences and reflective processes about practice as leadership strategies: “The reflection on action and the adoption of reflective methods, and assessment as well as the analytical tools consistent with the context and the



complexity of teaching were key to assume an influential and mobilising leadership with effects on the dynamics of the organisation" (Male, 18 years of experience rural school). These strategies also enhanced a deeper commitment from the part of the teachers with their profession and with their professional development: "The deepening of self-reflection and participation in collaborative work enhanced the possibilities for each teacher to lead solutions to answer to concrete problems in their professional lives and schools" (Male, 24 years of experience, urban school).

Conditions that enhance or inhibit professional learning

The commitment and involvement of teachers with their students' learning, and with their school development may be strongly influenced by the conditions in which they develop their teaching activities, namely through the development of innovative projects and collaborative activities. However, how "background contextual factors interact with learning needs varies depending on the traditions, culture mores, policy environments and school conditions" of a particular context (Avalos, 2011, p. 17). Avalos identify macro conditions and school culture influencing teachers' professional development. The macro conditions include the nature and operation of educational systems, the policy reforms and environments, teacher working conditions, historic factors "that determine what is accepted or not as suitable forms for professional development" (Avalos, 2011, p.12). In turn, the school culture covers "the operation of the administrative and organisational structures, and how these interact to facilitate or constrict teacher workplace learning" (Avalos, 2011, p.12).

The participating teachers in the TEL project point to several factors and conditions influencing their professional learning according to three key dimensions: (1) Structural (2) Contextual and (3) Personal. Structural conditions included teachers' working conditions and educational policies and reforms. In turn, contextual conditions covered school culture, including formal and informal leadership. Additionally, a personal dimension was included, based on the critical reflection on the teaching practices (cf. Figure 2).

Figure 2 - Conditions for professional learning



Source: Authors

Teachers identified issues such as workload and ongoing policy initiatives as hindering factors in terms of professional learning, In addition, they also report, the geographical distance among schools, the lack of involvement of the educational community (e.g. peers; parents / guardians / families), the lack of articulation among areas of knowledge / levels of education, and the lack of opportunities for reflection and sharing experiences. Time management, lack of motivation and fatigue were also aspects that contributed to difficulties in engaging in professional learning and development. The following quotes illustrate this:

“My main concern was the diversity of activities which I have to do within the position I hold, related to the participation and guidance in several projects developed in the group, leaving me “without space” for any other project” (Female, 33 years old of experience, suburban school).

“The requirement of the school, more meetings, one more document, one more project because the municipality requires it... it is a great constraint” (Female, 25 years of experience, rural school).



“The greatest difficulties were linked to the ability to articulate knowledge, highlighting the essential of each subject matter”(Male, 24 years of experience, rural school).

“The difficulty of sharing experiences with my peers, given the scarcity of spaces for this kind of professional reflection.” (Female, 33 years of experience, suburban school).

“The main difficulty I felt was the lack of time to achieve what was initially proposed.” (Male, 26 years of experience, rural school).

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As for the factors facilitating teachers’ learning, the existence of relevant teacher professional development opportunities, the recognition of the specificities of each teaching cycle / area of knowledge, this existence of support from outside the school, teacher collaboration, peer feedback and networking were at the forefront of the participants’ accounts. They also highlighted issues such as motivation to learn and definition of the purpose and direction of own professional development as important factors for them to engage in professional learning.

“The disciplinary articulation, the enriching students' learning” (Female, 19 years of experience, rural school).

“It allowed me to reflect a little bit more on my practice, taking into account different levels of reflection” (Female, 19 years of experience, suburban school).

“The continuous reflection about my teaching practice leads me to see teaching in another way... essentially a more shared and collaborative way” (Female, 15 years of experience, suburban school).

“I have a broader perspective about teaching. I have developed my ability to reflect, the systematisation of knowledge and the definition of action-research projects” (Male, 28 years of experience, rural school).

Discussion and conclusion

In general, teachers revealed positive perceptions of their participation in the TEL project. They highlighted the opportunities for co-construction of knowledge, for sharing experiences, for joint reflection and networking in light of teacher professional development as revitalising and re-imagination, as Sachs puts it (2009). They also stress a deeper understanding of the leadership concept through the development of projects in their schools and classrooms

as they become to see themselves as agents of change within a more collective dimension of their work.

Promoting teachers' professional learning drawing on collaborative professionalism is important if the quality of teaching is to be enhanced. Teacher professional learning is a complex process which involves "cognitive and emotional involvement of teachers individually and collectively, the capacity and willingness to examine where each one stands in terms of convictions and beliefs and the perusal and enactment of appropriate alternatives for improvement or change" (Avalos, 2011, p. 10). All this occurs in specific school cultures that may be learning facilitators or inhibitors. Collaboration is a complex and dynamic concept that needs to be understood in context. Feelings of isolation among teachers still prevails, and opportunities to build a supportive network are vital in overcoming such feeling (Schiff *et al.*, 2015).

Findings from the research project reported in this paper contribute to unveil some of the motivations for teachers to engage in learning networks and lessons learnt, but also hindering factors that need to be considered. The training strategy (cf. Figure 3) fostered reflection and feedback. Reflection enhanced dialogue and new feedback leading to new and deeper reflection. Reflective dialogue emerges as key component in establishing learning (Lin & Lee, 2018). As such, reflection is seen as key element to pedagogical innovation enhanced by continuous feedback from teachers participating in the project (cf. Figure 3). As Nóvoa asserts, " teachers' reflection must be understood as a sequence of ideas and thoughts arising from the activity and with consequences in the practice." (2012, p. 34). It is a process that needs to be systematic and organised, and, inevitably, involves collaboration between teachers and, if necessary, with academia (Nóvoa, 2012).

The "Leadership and curricular development at school: the potential of project work" training strategy was based on the development of working groups organised by the teachers themselves sharing common professional concerns. It enabled the setting up of collaborative and reflective networks and professional learning communities within the schools and beyond. Teacher collaboration has become progressively more important for schools' improvement efforts and for enhancing teachers' professionalism. A growing body of research provides evidence of the importance of social relationships between teachers on improving schools and

learning (Johnson *et al.*, 2011; Leana & Pil, 2009). In addition, one of the main challenges to transform teaching and learning environments is the absence of training to facilitate “open, expansive, multidimensional, and collaborative learning”, as these demands the rethinking and the redesigning of teacher training and continuous professional development (Marope *et al.*, 2017).

Understanding teachers as key agents in innovation processes and as informal leaders is key to school improvement and teacher professional development. In this context, innovative and collaborative professional development opportunities focusing on pedagogy and curriculum play a central role. Professional collaboration “embodies genuine respect for teachers as professionals and recognises that collaborative spaces can support teachers in navigating through shifting policies and be a source of emotional support and growth.” (Datnow, 2020, p. 438). Thus, the design of effective professional learning opportunities emerges as a powerful tool to transform classroom practices, especially when it enables teachers to improve their academic and pedagogical content knowledge, taking into account the local background (Darling-Hammond, 2013).

In this project, collaboration (cf. Figure 3) is seen as an opportunity for teachers to engage with their peers in their daily professional lives. The construction of collaborative dynamics based on the sharing of problems, ideas, knowledge and experiences offer a stimulating professional learning environment contributing to the development of the social dimension of learning and to the consideration of plural perspectives about teaching and learning. The conditions that may enhance or inhibit professional learning are also identified, taking into consideration structural, contextual and personal factors which is in line with endogenous and exogenous motivations, school’s internal and external power dynamics and the lack of alignment between reforms, policies, and teachers’ everyday lives (Datnow, 2020).

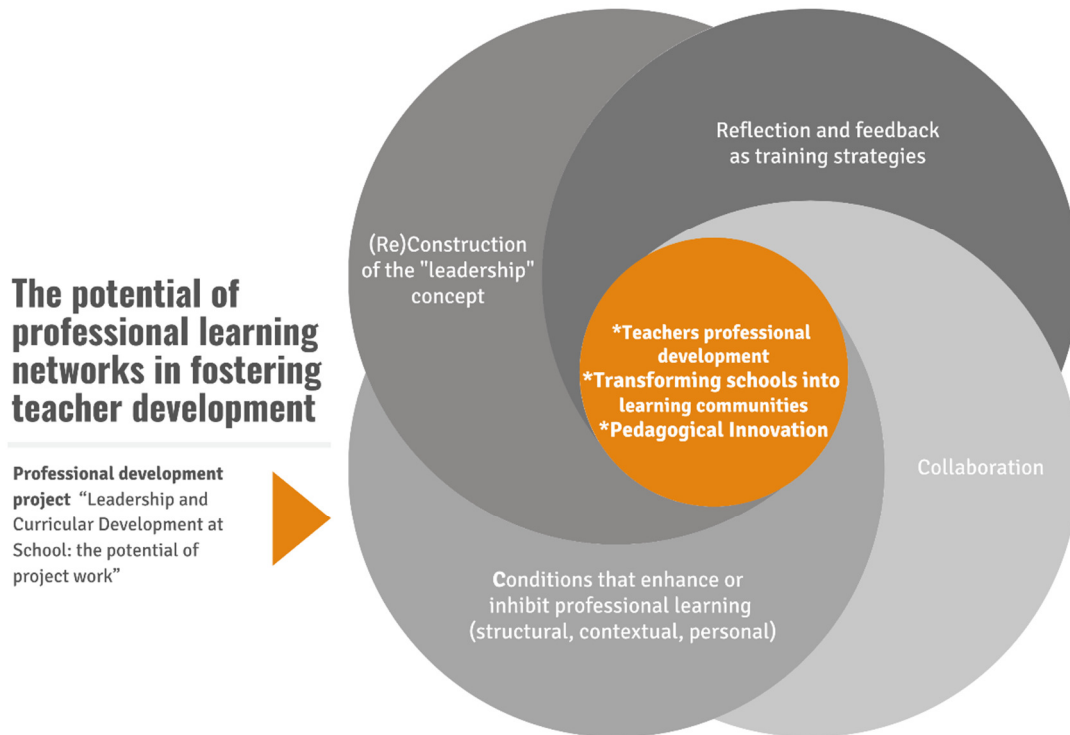
Networks are valued for their role in promoting friendships, school climate, and other social and emotional needs but also on sharing resources and expertise (Schiff *et al.*, 2015). They also contribute to improving teacher knowledge and expertise related to pedagogy, classroom management, and curriculum development (Schiff *et al.*, 2015).

The participation and involvement of teachers in the training project led to joint reflection and reconstruction of the “leadership” concept, understood beyond its formal



dimension (cf. Figure 3). This view of teacher leadership encompasses different modes of making the difference in the professional contexts through the influence and mobilisation of other actors and the participation in innovative initiatives (York-Barr & Duke, 2004; Danielson, 2006; Taylor *et al.*, 2011; Frost, 2012; Poekert, 2012). The school is seen as a learning community where teachers are encouraged to exercise leadership and engage in improving and change efforts of their schools and communities (Parente *et al.*, 2015; Flores & Ferreira, 2012). The transformation of the school into a learning community enables the professional development of teachers and, consequently, pedagogical innovation (see Figure 3). This project entailed mediation as a structured or semi-structured process (e.g. partnerships or collaborative networks) and informal contexts (e.g. workplace interactions) which “facilitate learning and stimulate teachers to alter or reinforce teaching and educational practices”, (Avalos, 2011, p.11). Furthermore, teachers’ participation in “networked professional learning communities seems promising for enhancing their professional learning” (Prenger, Poortman & Handelzalts, 2018, p. 441).

Figure 3 - The potential of professional learning networks



Source: Authors

This study highlighted the potential of professional learning networks in fostering teacher development. However, there is room for improvement. Possible avenues that may contribute to fostering teachers' professional development through collaborative initiatives may include: collaborative work taking into account different conditions: structural, contextual, and personal; activities and projects capable of reconciling the personal motivations and the social dimension of teachers' learning and the multidimensionality of professional development dimensions (i.e. functional and attitudinal); recognition of networks as paths for teacher engagement and leadership, reconceptualisation of the role of teacher networks in promoting collaborative professionalism and teacher agency.

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