

# Professional Profile and Needs of Basic Education Teachers: Envisioning Nurturing Communities of Practice

Renata Godinho Soares<sup>1</sup><sup>a</sup> Caroline Pugliero Coelho<sup>1</sup><sup>a</sup> Cátia Silene Carrazoni Lopes Viçosa<sup>1</sup><sup>a,b</sup> Pedro Ribeiro Mucharreira<sup>1</sup><sup>b</sup> Phillip Vilanova Ilha<sup>1</sup><sup>c</sup> Raquel Ruppenthal<sup>1</sup><sup>c</sup>

 <sup>a</sup> Universidade Federal do Pampa, Programa de Pós-Graduação Educação em Ciências, Uruguaiana-RS, Brasil.
<sup>b</sup> Universidade de Lisboa, Portugal.
<sup>c</sup> Universidade Federal de Santa Maria, Programa de Pós-Graduação Educação em Ciências, Santa Maria-RS, Brasil.

> Received for publication 16 Nov. 2022. Accepted after review 10 Jul. 2023 Designated editor: Claudia Lisete Oliveira Groenwald

# ABSTRACT

**Background**: Teacher Training has needed new possibilities to make teaching practice more flexible and less boring. Therefore, using school-centred training is essential, so there is a need to investigate in loco the profile and needs of teachers. **Objective:** Identify the professional profile, the teaching know-how, the difficulties and needs in the teaching processes to cultivate communities of practice with teachers in a municipality placed in the interior of Rio Grande do Sul State. Design: This is qualitative, descriptive, and exploratory research using the content analysis technique for data processing. Setting and Participants: Four school contexts of Basic Education were investigated, with 63 teachers coming from two municipal schools and two state schools in a municipality on the West Frontier of Rio Grande do Sul State participated in the study. They were intentionally selected. Data collection and analysis: A structured questionnaire with questions related to the teachers' profiles was used for data collection, as well as open questions related to their pedagogical practice. **Results**: It was found that there is a high percentage of teachers working in more than one school, a factor that must be considered. We highlight the reflection and autonomy in pedagogical practice and the need for training actions regarding the diversity of methodologies to assertively address the different gaps in students. Conclusions: It is considered important to identify the profile and emerging needs of teachers in order to

Corresponding author: Renata Godinho Soares. Email: renatasoares1807@gmail.com

facilitate the organisation of Communities of Practice that aim for school-centred teacher education.

Keywords: teacher training, school context, pedagogical practice.

#### Perfil profissional e necessidades de professores da educação básica: vislumbrando cultivar Comunidades de Prática

#### **RESUMO**

Contexto: A Formação de Professores tem necessitado de novas possibilidades para tornar a prática docente mais flexível e menos maçante, para isso, utilizar-se de uma formação centrada na escola se faz essencial, para tanto, há necessidade de investigar o perfil e as demandas dos professores in loco. Objetivo: Identificar o perfil profissional, o saber-fazer docente, as dificuldades e as necessidades nos processos de ensino para cultivar comunidades de prática com professores de um município do interior do Rio Grande do Sul. Design: Trata-se de uma pesquisa qualitativa, de caráter descritivo e exploratório, sendo utilizada a técnica de análise de conteúdo para o tratamento dos dados. Cenário e Participantes: Foram investigados quatro contextos escolares de educação básica, sendo participantes do estudo 63 professores dos anos finais do Ensino Fundamental oriundos de duas escolas municipais e duas escolas estaduais de um município da Fronteira Oeste do Rio Grande do Sul, sendo selecionados de maneira intencional. Coleta e análise de dados: Utilizou-se para a coleta de dados um questionário estruturado com questões relacionadas ao perfil dos professores, bem como questões abertas relacionadas a prática pedagógica dos mesmos. Resultados: Evidenciou-se o elevado percentual de professores atuantes em mais de uma escola, fator que deve ser considerado. Destacase a reflexão e autonomia na prática pedagógica e a necessidade de ações formativas referente à diversidade de metodologias para atender assertivamente as distintas defasagens na aprendizagem dos alunos. Conclusões: Considera-se importante identificar o perfil e as necessidades emergentes dos professores de modo a propiciar a organização de Comunidades de Prática, que visem uma formação de professores centrada na escola.

Palavras-chave: formação de professores, contexto escolar, prática pedagógica.

#### INTRODUCTION

After the pandemic period that affected the world educational scenario, it is understood that the school format of the late nineteenth century does not fit in the educational context of the moment. Thus, "the school needs the courage of metamorphosis, to transform its form" (Nóvoa, 2022, p. 15). The aforementioned author reinforces that the new educational scenario suffered sudden and abrupt changes imposed by the Covid-19 pandemic, with no time for adaptation or teacher training proposals, and nothing planned. On the other hand, Soares, Engers, & Copetti (2019, p. 02) state that "new directions in education need different teaching strategies."

The teacher training advocated in this study refers to the professional training of the teacher, being of extreme importance for the qualification of the pedagogical work within schools, reflecting on the potentialization of the teaching and learning process of students. Galindo & Inforsato (2016) explain that it is necessary to overcome the shredded models used in continuing education, advancing new practices and training proposals to meet diversity in its uniqueness and in generality. From this perspective, we understand the need to think about teacher training centres in the school, taking into account that each reality has different contexts and specificities. Thus, if the school is in a process of transformation, the proposals for teacher training must also follow the same path.

In the same way that the metamorphosis of the school implies the creation of a new educational environment (a diversity of spaces, practices of cooperation and common work, and close relations between study, research, and knowledge), the change in teacher training also implies the creation of a new environment for professional teacher training (Nóvoa, 2022, p. 62).

Thus, for Nóvoa (2009), professional training is decisive for teacher learning, especially when it relates to the specific context of each school in the real formative needs of teachers individually and collectively. According to the evidence of studies proposed by Mucharreira (2016, 2017), there is a need to increasingly think about training centred or contextualized in the school reality experienced by teachers so that they can learn and, consequently, propose new or better ways of teaching.

In its context, the training proposal centred in the school reveals a continuous learning process, proposing reflection and formative actions that instigate the teacher to question, review, improve or even redefine their practices (Silva, 2003). For the aforementioned author, such a process reinforces the teacher's proactivity, being ahead of the construction of new knowledge important for his/her contextualized practice, as well as, minimizing collectively the challenges of his/her own daily school life.

According to Imbernón, Neto & Silva (2020), Communities of Practice (CoPs) emerge as groups where subjects have the opportunity to learn, create, manage, and share knowledge. Thus, CoPs are not mere "meetings"; they rely

on the engagement and mutual commitment of the participants to be effective. Thus, a group of people involved in a context, sharing ideas and collectively enhancing learning, characterizes communities of practice. In this perspective, "learning can be the fuel of the community or it can be something that was generated from the interaction among community members" (Soares et al., 2022, p. 216).

CoPs have three essential characteristics, which are the Domain, the Community, and the Practice. The arrangement between these three characteristics is what constitutes a community of practice. The Domain would be the common interests with the valuation of competencies in a collective way so that the learning is mutual and, thus, the participants learn in the exchanges. The Community seeks the interests of the domain, and some relationships contribute to empathy and bilateral learning. Finally, the Practice will develop the compilation of resources, tools, and strategies that have been shared (Wenger & Wenger, 2015; Soares et al., 2022). It is emphasized that the central goal of Communities of Practice focuses on solving problems related to the reality of the subjects involved and is cultivated on the interest and engagement of those involved (Wenger, Mcdermott, & Snyder, 2002).

Considering the need for powerful actions to think about teacher training, effective for the new school scenario of the 21st century and from the reflection on the concepts addressed, this paper aims to identify the professional profile, the teaching knowledge, the difficulties and needs the teaching processes to cultivate communities of practice with teachers of the final years of Elementary School.

#### Teacher training in communities of practice

As an essential step in teacher training, it is important to seek differentiated spaces for teacher training, in order to consider the plurality of ideas, cultural diversity and the institutions themselves, with the aim of valuing and significantly perceiving the educational contexts in which teachers are inserted (Cyrino, 2021). By listing the school as a training space for teachers, it values the school environment as a focus of professional self-improvement, based on specific weaknesses. According to Cyrino (2021) these training spaces enable teachers to assume the production and sharing of specific knowledge related to the teaching process, characterized as a movement of transformation, criticality, creativity and active participation in the construction of knowledge necessary for their professional practice.

According to the aforementioned author, in these formative spaces a movement of negotiation of meanings, provoked by the interaction of teachers in the processes of participation and reification, is constituted (Wenger, 1998), these being considered important elements of the educator's learning mechanisms. "The focus of these actions is on people who learn throughout life, and how they can invest in this learning" (Cyrino, 2021, p.21). According to Wenger, McDermott & Snyder (2002, p.28) "a strong community fosters interactions and relationships based on mutual respect and trust." Furthermore, it encourages the voluntary action of sharing ideas, exposing our doubts and difficulties, asking difficult questions and listening carefully, favoring self-reflection and the perception of training needs.

In a Community of Practice learning takes place with a focus on social participation, in which there is a constant process of negotiation of meanings. Conforming to Wenger (1998), negotiation is a way of characterizing the movement through which we experience the world and engage with it. According to Rocha & Cyrino (2019, p.171) "The process of negotiation of meanings assumes the interaction of two other processes: participation and reification. Participation deals with the experience of life in social groups, involves doing, talking, thinking, feeling and belonging, also including dealing with emotions."

As mentioned by Wenger (1998) in line with Estevam & Cyrino (2019), the CoPs are like stories of shared learning, not being just a personal matter or a collective experience, but rather a cyclical process of participation and reification (transformation). These two elements, for their interaction, constitute the process of negotiation of meanings and, consequently, the learning developed. Experience and practice are always on the move, relating to other practices and experiences that somehow conceive participation and reification as cyclical processes. Thus, there is no way to think of CoPs as a training process without considering the importance of collectivity and social interaction among teachers.

The teacher's participation takes place through a mutual recognition (of him and other teachers in the community), as well as in the development of the group's identity and professional identity. Through participation in social communities our identity is developed, generating changes in relation to experiences, in addition to expanding and modifying the meanings given to elements of our life. That is, "it is also a way to change these communities that we are involved with" (Rocha & Cyrino, 2019, p.171).

According to Wenger (1998), as well as to Estevam & Cyrino (2019, p.231), the process of negotiating meanings in a Community of Practice takes place through a continuous process of "giving and receiving, influencing and being influenced, as well as the intervention of different factors and different perspectives." Participation is conditioned to the negotiation of meanings, being a social experience of commitment to the community, demanding an active intervention with social undertakings. It manifests itself as "[...] a complex process that combines doing, talking, thinking, feeling and belonging. In addition, it involves our person, our bodies, minds, emotions and social relationships" (WENGER, 1998, p. 56). All these actions take place in such a way that the group recognizes itself as a social being, responsible for change.

Reification, as a fundamental part of this process, seeks to convert knowledge into objects (products) or new knowledge. This transformation presupposes "real things" such as "[...] make, draw, represent, name, code and describe, as well as perceive, interpret, use, reuse, decode and restructure" (WENGER, 1998, p.59). In this process, the teacher is an active agent and protagonist of the desired transformations. It is important to add that:

Whereas in the process of participation we recognize each other from relationships with other individuals and experiences of meaning, in the process of reification we project our meanings onto the world, so that this projection takes on an independent existence (we don't need to recognize ourselves in it). We give an intrinsic meaning that gains a reality of its own in the context of social groups, recognized as points of focus for the CoP negotiation and related to its accrual regime (Estevam & Cyrino, 2019, p.231).

The study proposed by Oliveira & Cyrino (2022) have exposed aspects of practice in a CoP that enabled and influenced the professional development of teachers, in a collaborative and collective way. Such aspects are related to the repertoire built and shared together, which allowed the subjects of that study to strengthen and support themselves to face situations of vulnerability, under a positive reflection towards their self-esteem and professional self-image.

It agrees with the Wengerian perspective mentioned by De Paula & Cyrino (2018), based on the studies of Etienne Wenger (1998), that demonstrate possible initiatives to promote Professional Identity through training actions based on active participation, engagement of teachers, articulation of ideas and undertakings and negotiation of meanings. That is, the teaching identity is

forged and strengthened in the midst of social, collective and collaborative action.

Therefore, Imbernón, Shigunov Neto & Silva (2020) corroborate when talking about the CoPs being groups of teachers who exchange, reflect and learn from each other based on their practices, which is an important characteristic for their professional training. For these authors the knowledge constituted in practice is configured in a tacit, non-formal knowledge, which generated from the dialogues and experiences lived in CoP collaborate to be externalized, debated and transformed (reified) into explicit knowledge.

Finally, Fiorentini (2010) states that studies on the training of teachers in action describe how complex teaching practice is in environments of constant change, which requires that their learning be continuous and not punctual, or disconnected from the context. In view of the presented scenario, one can see how valid and significant the cultivation of Communities of Practice becomes in and for teacher training in different contexts of action.

This way, it is necessary to know the professional profile, the elements of their practice, as well as their training needs or demands or related to teaching practice before proposing training activities. Listening and diagnosing demands and the school reality experienced by teachers in loco are defended as a way to better cultivate training spaces that are meaningful and that truly contribute to quality education.

#### METHODOLOGY

The study was characterized as qualitative research of exploratory and descriptive nature. As for the descriptive characteristics of the study, Gil (2010, p.27) emphasizes that these "[...] have as their primary objective the description of the characteristics of a given population. Sixty-three teachers in the final years of Elementary School from four Basic Education schools in a municipality on the Western Border of the State of Rio Grande do Sul took part in the study. It is noteworthy that they were two state schools and two municipal schools.

As for the procedures and instruments used, we initially contacted the management and pedagogical teams of the four schools to present the research proposal. Next, direct contact was made with the teachers to present the proposal and sign a term to participate in the research. Thus, this study presents

the initial diagnosis of teacher training and reports on the initial organization of these communities.

To better understand the subjects participating in the study, a questionnaire with closed questions was applied in person at the beginning of the 2022 school year to identify the professional profile of the participants, as well as open questions (Figure 1) regarding their participation in formative actions, the role of reflection and autonomy in pedagogical practice, and questions related to the main formative demands and to develop their classes in the face-to-face return of students. The content of the questionnaire was submitted for validation by six researchers with expertise on the theme who pointed out doubts and suggestions to make it more understandable and reliable to the objectives of the study.

#### Figure 1

Open questions applied to the teachers.

Questions
Your participation in continuing education courses was by invitation or search staff for improvement? What were the main motivations that led you to participate in these training activities?
How do you rate the continuing education courses you have attended in recent years?
Did the courses contribute to your teaching practice? If you didn't participate, justify.
In your opinion, what is the role of reflection and autonomy in your pedagogical practice? Explain.
Thinking about the post-pandemic teaching context, what do you believe is necessary to better develop your classes?
What are your training needs in this context?

As for the data analysis of the closed questions, the descriptive frequency was used. Regarding the open questions, it was used the Content

Analysis proposed by Bardin (2016), which seeks the initial treatment of the material, pre-analysis, exploration of the material, and treatment of the results seeking to identify the reality of teachers as close as possible to their context. After a floating reading of the material, in the exploration of the material, codes of analysis were listed (units of meaning: extracts of sentences that make the feelings or perceptions explicit). In certain questions, the participants could list more than one motivation, contribution, or need, and, consequently, the codes were grouped into categories related to the semantic context, which explains why the total percentage of some tables exceeded 100%.

To better organize the data obtained by the open-ended questions, they were stored in the Atlas to qualitative data analysis software for further treatment by the researchers. The computer-assisted qualitative data analysis software is a resource that can, if used correctly, facilitate file management, speed up coding and search for answers, and facilitate communication and data analysis. It is important to emphasize that this software is only a support tool, the researcher (Schlosser, Frasson, and Cantorani, 2019) does data analysis.

The ethical precepts established by Resolution # 510/16 of the National Health Council (Brazil, 2016) were respected, and the anonymity of the subjects was guaranteed. Thus, the subjects who agreed to participate in the research signed the Informed Consent Form, which presented the objectives and justification of the research, as well as the risks and benefits of the study. Thus, this is a sample of a doctoral research study approved by the Research Ethics Committee of the institution of origin, under Opinion # 5.071.698.

#### **RESULTS AND DISCUSSION**

The results are presented in three sections: the context of the participating schools and the professional profile of the teachers; the teachers' perceptions about the courses or formative actions they have participated in previously; and the reality and formative needs of teachers in the current context.

From the floating reading of the data obtained, we observed similarities in the profile of the participants' answers, and therefore the results of these analyses are presented in a general way. Because the last two years were atypical (pandemic), it is assumed that the schools made use of the same teaching process (remote teaching and printed materials) without all the students having access or even without the teachers knowing how to use the available resources for their teaching practice. Initially, we describe the information related to the professional profile of the 63 teachers participating in the study. These are arranged in four different school contexts described in Table 1.

#### Table 1

Characterization of the School	Localization	Number of teachers
School 1- State (E1)	Outskirts	8
School 2- State (E2)	Center	16
School 3- Municipal (E3)	Outskirts	25
School 4- Municipal (E4)	Center	14

Organization of schools by number of teachers.

Regarding the professional profile, these teachers have an average age of 47.8 years, with a higher incidence of initial training in Literature (32.3%), History (17.7%), and Mathematics (16.1%). The average time of completion of the teachers' initial training was 19.7 years. As for complementary training, 66.1% of them have a specialization, 6.5% have a Master's degree, and 27.4% have no complementary training.

Regarding the role of a teacher, the research subjects have an average of 16.3 years of professional practice. Regarding the schools investigated, the teachers' working time had an average of 6.9 years, with an average working week of 26.3 hours. As for the level of teaching, 83.9% of the teachers work only in the final years; 12.9% work in the early and final years; and 3.2% in supervision. The fact that 61.3% of the teachers work in another school is not surprising. In a study by Soares & Copetti (2020), the authors found that among the subjects, 65.4% worked in another school, with a workload of 20 hours in each school context. Given the above, data released by the Ministry of Education published in 2018, revealed a significant number of teachers (40%) working in two or more schools (Brazil, 2018) which is a factor that needs to be considered when thinking about and investigating training strategies.

On the other hand, the 2020 School Census (INEP, 2022), through the Teacher Regularity Indicator (IRD), evaluated the permanence of professionals in the same work environment, presenting an advance concerning 2019. The percentage of schools in the medium-high range of the indicator went from 42.6% in 2019 to 45.9% in 2021. It is noteworthy that, "The longer a teacher remains on the staff of an institution, the better he or she knows the school and the more

he or she contributes to the relationship with students and the community" (Brazil, 2021).

Corroborating the findings, the teacher's assignment in more than one school requires more time dedicated to planning to consider the specificities of each school context (Soares, 2021). According to Campos & Viegas (2021), this factor ends up becoming a barrier because organizing their activities for different environments may cause the teacher not to identify with the school contexts where they work.

#### Perceptions of participation in continuing education courses

About the reasons listed for the teachers' participation in continuing education courses, among the answers, 29% said they participated because they were looking for personal improvement; the other 29% described personal improvement and also because they were invited to attend, either by the school or by the institution, and also 21% said they had been invited to participate. The other participants did not have evidence of the form of participation.

As for the motivations that led subjects to participate in training activities, two categories were highlighted: "Professional improvement" followed by "Improvement of pedagogical practice". The categories are detailed in Table 2.

#### Table 2

Category	%	Description	Excerpt
Professional improvement	46%	Seizure of new knowledge and techniques, without mentioning the practice pedagogical.	P25E3: My participation in continued training courses was by searching for people, improving myself, and seeking knowledge.
Improvement of pedagogical practice	29%	Seizure of methods and strategies for the	P1E1: My motivation to attend training always started from the principle of qualifying my own practice, reflecting on it

Motivations for participating in continuing education courses.

		improvement of pedagogical practice.	and expanding the perspectives in the classroom. I believe that learning and teaching is a continuous process, never-ending with graduation.
Exchange of experiences	9,5%	Share and perceive other ways of working with determined thematic or content.	P10E2: By personal improvement, looking to share and absorb knowledge. P45E3: For graduating purposes and exchange of learnings with colleagues.

It is worth mentioning that 4.7% of the teachers reported that they participated in the training courses because they were offered by the school, another 3.1% of the teachers reported that they did not have time to participate in training activities, and 7.7% of the teachers did not report their motivations. Regarding the evaluation of the continuing education courses they have participated in in the last few years, 50% of the teachers evaluated them as "very good," 48.4% as "good," and 1.6% as "indifferent.

Work intensity and work overload are two phenomena that are interconnected. To Campos and Viegas (2021, p. 425) "The greater the number of operations (sensory-motor and intellectual) that a worker needs to accomplish in the same time interval, the greater the intensity, thus increasing work overload". As for the teaching work, Cruz et al. (2010) point out that the activities developed demand efforts that involve physical, cognitive, and emotional issues. The complexity of the teaching work increasingly involves a greater arrangement of activities, such as participation in management processes and the need to explore knowledge to address content and reformulate assessment instruments (Campos and Viegas, 2021; Cruz et al. 2010). This set of activities intensifies the teacher's work and reflects on the teacher's overload, which may explain the teachers' lack of involvement or motivation in the training.

Several courses were offered to help teachers facing the imposed scenario (Pandemic), in which digital technologies became allies for teaching outside the school environment. Many teachers had difficulties using digital tools and platforms. This reinforces the thought of Pontes and Barboza (2021) that continued education is necessary for teaching related to the use of technologies in the classroom. Thus, one can indicate this situation as an example that the training proposed to teachers should meet the emerging demands, aiming to enhance the teaching work.

When asked about the contributions of the courses they attended for their teaching practice, 84.1% described that the courses helped a lot, especially regarding digital technologies for teaching during the pandemic, as well as new actions to better develop the teaching practice, which is directly related to the finding of the previous question, about the motivation of teachers to participate in such actions. Although less frequently, 15.9% of the participants said that the courses contributed little to their pedagogical practice, and indicated as a justification the fact that they were theoretical courses and not connected to practice, or that they were not connected to the school reality experienced.

This reinforces the need to think about teacher training based on themes that address and focus on the demands of teachers, observed from the school context, which is specific to solve or minimize the difficulties found in each school reality. Soares et al. (2021, p. 471) point out that it is necessary to highlight "Formative actions that consider teachers' wishes" to provide models and pedagogical proposals adaptable to different school contexts.

In this same direction, Imbernón (2006) argues that teacher training being or taking place at school, based on the reality and effective demands of teachers, can favour a paradigm shift. In this scenario, teachers are the protagonists of their learning process, which happens from the definition of strategies to the resolution of the listed problems, not strictly depending on external agents for training to take place (Imbernón, 2006).

The culture of communities of practice can become allies in this teacher-training proposal, consistent with the reality of teachers and the school context in general. According to Rocha & Cyrino (2019), through the communities, it is possible to modify experiences and extend or modify meanings in the situations experienced. The CoPs propitiate the negotiation of ideas, actions, attitudes, and learning as a means of re-signifying pedagogical practice (Oliveira & Cyrino, 2022).

#### Diagnosis of the teachers' reality

To offer interventions related to the teachers' educational context, we sought to identify the teachers' characteristics and main difficulties during the

period of return to the face-to-face teaching model. The first open question of the instrument is related to the role of reflection and autonomy in the teachers' pedagogical practice because we consider reflection is a fundamental part of the formative process, and autonomy is an important characteristic to think about diversifying pedagogical practice.

We agree with Vergara (2020, p.101) when the author reports that "the pillar for training today is the use of experiences in the teacher training process." Understanding one's own professional practice through reflection on it makes it possible for the teachers' learning history to serve as a reference for understanding educational environments. The author highlights the importance of thinking about training from the perspective of teachers' practice, since these perspectives are often forgotten or left aside due to the overload of everyday life.

Moreover, we seek subsidies from reality for the initial organization of communities of practice, knowing that both reflection and autonomy are fundamental for the best development of the teacher's knowledge. Table 3 presents the main categories that reflect the research subjects' positions on the concepts of reflection and autonomy.

#### Table 3

Category	%	Description	Excerpt
Practice improvement	42,8%	Reflection and autonomy as fundamental to the improvement of activities of the teacher in the classroom	P20E2: Key role. Through reflection, we acquire greater autonomy and the two talk about the reframing of our practice.
Student's protagonism	15,9%	Reflection and autonomy are fundamental for the improvement of the practice and, consequently the student's protagonism.	P1E1: It is necessary to exist dialogue, collaboration and active student participation so that the learning can be significant.
Decision	14,3%	Regarding autonomy,	P28E3: Useful to adjust

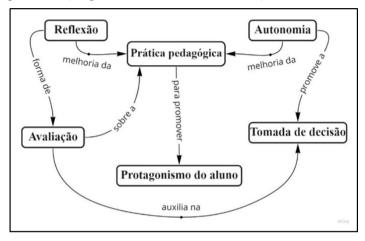
The role of reflection and autonomy in teachers' pedagogical practice.

making Assessment over the pedagogical practice	14,3%	perception of how to act in the face of situations in classroom. Regarding reflection about the pedagogical practice, evaluation of the development of your classroom practice.	paths and purposes. P59E4: Important and fundamental to always be reflecting on our practice so we can assess what should be improved.
Student's learning	7,9%	Reflection and autonomy as fundamental to the aid in student learning.	P15E2: Relevant, because so to understand how to help my students in the most different situations. P34E3: I don't feel that
Barriers	6,3%	Limiters for the development of reflection and autonomy in pedagogical practice.	I have space for this reflective role and that I am losing the autonomy of pedagogical planning, for many "things" that comes ready from the maintainer.

A significant percentage of teachers listed reflection and autonomy as fundamental for the "improvement of their pedagogical practice", a category that relates directly to "student protagonism", since it is through the improvement of the practice that viable subsidies and strategies are found for the development of such ability. Nevertheless, it is noticeable that there is a need for an "evaluation of pedagogical practice" (reflection) to be able to make the most appropriate "decision making" (autonomy) about their classroom reality, factors that are directly related to "student learning" (Figure 2).

#### Figure 2

*Relationships established from the perception of reflection and autonomy in teachers' practice.* (Prepared with the miro.com tool)



It is worth mentioning that, although not expressive, 6.3% of the teachers reported that there are barriers that prevent them from being autonomous in their practice, reporting issues related to lack of security to develop their activities or due to actions that arrive vertically, imposed by the sponsor; or still report the need for reform of the educational system.

Freire (1991, 1993) states that a permanent teacher-training program is required to develop actions on the teachers' practices. It is through this practice that, according to Saul A. M. & Saul A. (2017, p. 9) "One must discover what is the 'embedded theory' or what are the fragments of the theory that are in the practice of each of the educators, even if one does not know what that theory is". The main fragment of this exercise is a reflection on lived experience, not just isolated practice.

According to Saul A. M. & Saul A. (2017, p.6), "teaching knowledge/doing presupposes the construction and not the transmission of knowledge", knowledge that is always related to the context (Student Protagonism) and that develops in practice, generating new praxis (Improvement of practice). For the authors, teaching knowledge requires critical reflection on pedagogical practice and aims at the autonomy of the teacher and the student.

The autonomy under discussion is related to critical-emancipatory didactics, which enables the teacher and the student to be able to intervene and change their reality. It is through experience and critical reflection that their practices are deepened and improved, building subsidies for the school or social environment. Here, autonomy is related to the movement of creation, recreation, and decision, which allows the engagement of the human being in the context and not only its passive adaptation (Saul A. M. & Saul A., 2017).

Next, the teachers were asked about what they believed was necessary to better develop their classes. The most evident needs were related to "Methodological diversity" by using new methods to instigate the student's interest. Another highlight was the importance teachers gave to considering the "Reality of the students" to develop their classes. Finally, the category "Emotional well-being" was also highlighted, with patience and emotion being the aspects most often mentioned by the teachers. Table 4 describes the categories and shows their frequency for the analysed corpus.

#### Table 4

Category	%	Description	Excerpt
Methodological Diversity	31,7%	new methods, active methodologies to instigate the interest of students.	P25E3: I believe that it is needed new methodologies for develop classes, looking for interest and student involvement in classes.
Student's reality	30,1%	Consider the context experienced by the student to be able to plan and develop your classes.	P38E3: A good planning, with clear objectives according to the student's need.
Emotional welfare	28,5%	Main feature mentioned was the patience, followed by loving care and	P13E2: Patience and understanding, so we can rebuild the bonds with our students.

Needs to better develop lessons.

Infrastructure improvement	17,4%	attention interaction with students. Physical resources that help practice: good Internet signal, computers, etc.	P55E4: Have more technologies at school, internet, computers, etc.
Student's behaviour	17,4%	Values and attitudes related to the behaviour of students.	P1E1: Rescue of values from youngsters attended by the school.
Revision of contents	11,1%	Resumption of basic contents that were not seized during the pandemic.	P40E3: The need to realise that the resumption will be needed.
Time	7,9%	Decrease of workload to better plan the activities, excess of activities.	P43E3: Fewer charges of different projects and excess of activities.
Family's participation	4,7%	The need of a family approach for the best understanding of what it is experienced classroom.	P24E2: Having parental support, more participatory, encouraging the children.
Collaborative planning	3,2%	Planning, considering the various areas of knowledge and the pedagogical team.	P35E3: A work together between teachers, orientators, direction and now the school psychologist.

The use of teaching strategies and methodologies different from conventional methods (expository and traditional classes) are essential factors to develop skills such as student protagonism and autonomy, and such skills assist in the development of the teaching-learning process. Nevertheless, it is essential that the methods used are in line with each reality, thus, Piffero et al. (2020) emphasize the importance of dialogue between teacher and student to integrate the contexts. Corroborating, Cunha (2012) states that the dialogue sensitizes the teaching practice, interweaving and promoting the interaction of experiences, significantly benefiting learning according to the pedagogical contexts experienced.

The use of active methodologies in the perspective of strategies contextualised with the students' reality can be efficient in the development of the teaching practice. Soares (2021, p. 26) states that in the current moment, with constant changes in the educational scenario, "It is increasingly necessary to reflect on the action on professional teacher training and the search for approaches and learning methodologies that are consistent with this scenario". Active methodologies have a specific potential in instigating students' curiosity, valuing their contributions, and, thus, stimulating their engagement and belonging in the contexts (Berbel, 2012). Corroborating, Oliveira (2013) points out that the application of such methodologies tends to benefit the integral formation of students. Therefore, the legitimacy of the research participants' concern about methodological diversity without disregarding the aspects related to the student's reality and emotional well-being can be perceived.

It is important to emphasise that, for more assertive teaching practice in the classroom, the teacher's emotional health should be considered, as well as family involvement and students' behavioural issues, being a triad that reflects directly on the success of the school. Cordeiro, Gamboa, & Paixão (2018) state that teacher well-being is a motivational factor that directly interferes with the scope of teaching activities. The school must provide a positive, self-regulated, and motivational environment for teachers, thus contributing to the management of everyday issues.

Accordingly, Rausch & Dubiella (2013, p. 1059) state that "it is necessary a systemic articulation among the whole school community, seeking collectively and cooperatively the resolution of real and concrete problems of education". Thus, it is necessary to reflect on all subjects involved in education on the constructive and positive contribution to teaching performance.

In summary, for teachers' well-being to be optimized, professional tasks should be stimulating, and challenging, allow them to exercise their creativity and freedom of thought and action, and aim at the development of others and social contribution, in a climate of healthy interpersonal relationships, sustained by feelings of affection and trust (Cordeiro, Gamboa & Paixão, 2018, p. 59).

Finally, given the above, they were asked about the pertinent formative needs of the teachers in their contexts. They reinforced issues related to teaching methodologies (36.7%), how to deal with emotions (20.6%), and

greater training and resources related to digital technology (15.9%), as shown in Figure 3.

## Figure 3

*Word cloud about teachers' training needs*. (Prepared with the wordart.com tool)



The similarity of both questions is evident, but Table 5 reflects the teachers' desires for better development of their classes in an explicit way, and Figure 2 mentions the formative needs of the teacher in general. There is a close relationship between "Methodological diversity" and "Methodologies", as well as "Emotional well-being" related to the teacher's "Emotions". It is also necessary to talk about the infrastructure to develop classes because many teachers reported the importance of a good internet signal and equipment that provide digital technological fluidity in the classroom.

As for the technological infrastructure of schools regarding Internet signal coverage, a technical note from the Institute for Applied Economic Research reports that 97% of schools in the State of Rio Grande do Sul have Internet access, however, the same document points out that the speed is "relatively low for a high number of users," which explains "why most schools limit Internet use" (Kubota, 2020, p. 11).

To better develop teacher training in basic education, the first step is to conduct a diagnosis of the experiences of teachers and their needs regarding their knowledge in the classroom. This "investigation will generate subsidies that will answer questions about the school environment" (Soares, 2021, p. 102). Concerning this perspective, Lourenço, Souza, & Inforsato (2019) point out

that the training proposals generally ignore the profile and training needs of teachers and, in addition to not motivating teachers, impose a plastered training methodology without critical reflections, neither the creation of a solution or minimization of the difficulties found in the school context.

The diagnosis and the teacher training proposed so that the subjects build their own training, or actively participate in the search for solutions to their demands, are characterized as an innovative way of thinking about teacher training, dialoguing directly with the context of practice. Therefore, the nurturing of CoPs enhances this construction, based on the social dimensions of the process, learning happens "not in the head or outside it, but in the relationship between the person and the world", being researcher and teacher, or teacher and student subjects that mutually constitute themselves (Wenger, 2010, p.1).

Finishing this study, it is worth reaffirming the care that the researcher needs to have when entering the school environment, reflecting that the teachers who are there have their baggage of knowledge, experiences and also issues that favor or hinder their pedagogical practice. In this sense, it is important to consider teacher training as a space open to external contributions to reflect and propose solutions to school demands and not just as an environment for data collection to describe an educational panorama or the results in our dissertations and theses.

#### FINAL CONSIDERATIONS

This study aimed to identify the professional profile, the teaching knowledge; the difficulties, and needs in the teaching processes for the cultivation of communities of practice with teachers of the final years of Elementary School from four schools in a city in the countryside of the State of Rio Grande do Sul. It was noticed a majority profile of teachers that work in more than one school, a factor that hinders greater interaction, integration, and availability to the investigated contexts.

Positive contributions of the courses offered during the isolation period were identified when many teachers had to use strategies and resources that they would not have thought of using before. Hence, it is important to highlight the importance of courses related to the context of the teachers, which meet or minimize the demands found in the school context experienced by teachers to facilitate their teaching practice, which reinforces the importance of training focused on the school. The importance of reflection and autonomy in the pedagogical practice of teachers was evidenced, despite difficulties related to activities that arrive ready-made at school, and teachers' lack of confidence in acting autonomously and providing this ability to students. All the information obtained from the four realities found serves as subsidies for the development of communities of practice because they present similar contexts and, in the future, provide exchanges between the different school environments.

As for the main urgency of the contexts, the need for patience for better well-being and development of the teaching work was highlighted, and as for subsidies, the need for more practical knowledge about diversified teaching methodologies that help explore the student's protagonism during the teachinglearning process was highlighted.

Finally, as for the perspectives of the study, it is expected that this initial diagnosis will serve as a guiding element to understand the reality of teachers, thus proposing training focused on the school environment and cultivating CoPs, so that researchers and teachers organize and foster meaningful communities for teaching knowledge in the classroom and in the school environment as a whole.

### **AUTHORS' CONTRIBUTIONS STATEMENTS**

RGS and RR conceived the idea presented and carried out the studies and theoretical writings. RGS, CPC and CSCLV adapted the methodology to this context, created the instruments, carried out the activities and collected the data. PRM and PVI analysed the data presented and underwent a review. All authors actively participated in the discussion of the results, reviewed, and approved the final version of the paper.

#### DATA AVAILABILITY STATEMENT

The data presented and supporting this research results are available at a reasonable request to the first author, R.G.S.

#### ACKNOWLEDGEMENTS

This research received support from the Coordination for the Improvement of Higher Education Personnel and the Research Support Foundation of the State of RS.

#### REFERENCES

Bardin, L. (2011). Análise de conteúdo. Edições 70.

- Berbel, N. A. N. (2012). *A metodologia da problematização com o arco de Maguerez*: Uma reflexão teórico-epistemológica. Eduel.
- Brasil. (2021). Ministério da Educação. *Conheça o perfil dos professores* brasileiros. <u>https://www.gov.br/mec/pt-br/assuntos/noticias/conheca-o-perfil-dos-professores-brasileiros</u>
- Campos, M. F. & Viegas, M. F. (2021). Saúde mental no trabalho docente: um estudo sobre autonomia, intensificação e sobrecarga. *Cadernos de Pesquisa*, 28(2), 417-437. <u>https://doi.org/10.18764/2178-2229.v28n2.202132</u>
- Cordeiro C., Gamboa, V. & Paixão O. (2018). A importância dos valores pessoais e da motivação para a atividade letiva no bem-estar psicológico dos professores. *Revista Portuguesa de Pedagogia*, 52(1), 43-62. <u>https://doi.org/10.14195/1647-8614\_52-1\_3</u>
- Cruz, R. M., Lemos, J. C., Welter, M. M. & Guisso, L. (2010). Saúde docente, condições e carga de trabalho. *Revista Electrónica de Investigación y Docencia (REID)*, 4, 147-160.
- Cunha, A. E. (2012). *Práticas Pedagógicas para a inclusão e diversidade*. 2.ed. Walk.
- Cyrino, M. C. C. T. (2021). Ações de Formação de Professores de Matemática e o Movimento de Construção de sua Identidade Profissional. *Perspectivas da Educação Matemática*, 14(35), 1-26. <u>https://doi.org/10.46312/pem.v14i35.13408</u>
- De Paula, E. F., & de Costa, M. C. (2018). Perspectivas de Identidade Profissional de Professores que ensinam Matemática presentes em artigos científicos publicados entre 2006-2016. *Acta Scientiae*, 20(5), 778-799. <u>https://doi.org/10.17648/acta.scientiae.v20iss5id4151</u>

- Estevam, E. J. G. & Cyrino, M. C. D. C. T. (2019). Condicionantes de aprendizagens de Professores que Ensinam Matemática em contextos de Comunidades de Prática. *Alexandria: Revista de Educação em Ciência e Tecnologia*, 12(1), 227-253. <u>https://doi.org/10.5007/1982-5153.2019v12n1p227</u>
- Fiorentini, D. (2010). Desenvolvimento Profissional e Comunidades Investigativas. In: Dalben, A.; Diniz, J.; Leal, Leiva L; Santos, L. (org.). Convergências e tensões no campo da formação e do trabalho docente: Educação Ambiental, Educação em Ciências, Educação em Espaços não-escolares, Educação Matemática (v. 1, p. 570-590). Autêntica.
- Freire, P. (1991). A educação na cidade. Cortez.
- Freire, P. (1993). Professora sim, tia não: cartas a quem ousa ensinar. Olho d'Água.
- Freire, P. (1996). Pedagogia da autonomia: saberes necessários à prática educativa. Paz e Terra.
- Galindo, C. J. & Inforsato, E. C. (2016). Formação continuada de professores: impasses, contextos e perspectivas. *Revista online de Política e Gestão Educacional*, 20(3), 463-477. https://doi.org/10.22633/rpge.v20.n3.9755
- Gil, A. C. (2010). Como elaborar projetos de pesquisa. 5 ed. Editora Atlas.
- Imbernón, F. (2006). Formação docente e profissional: formar-se para a mudança e a incerteza. Cortez.
- Imbernón, F., Neto, A. S. & Silva, A. C. (2020). Reflexões sobre o conhecimento na formação de professores em comunidade de prática. *Revista Iberoamericana de Educación*, 82(1), 161-172. <u>https://doi.org/10.35362/rie8213663</u>
- Inep. (2020). Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. *Regularidade do Corpo Docente*. <u>https://www.gov.br/inep/pt-br/acesso-a-informacao/dados-abertos/indicadores-educacionais/regularidade-do-corpo-docente</u>
- Kubota, L. C. (2020). A Infraestrutura sanitária e tecnológica das escolas e a retomada das aulas em tempos de Covid-19. Repositório do

conhecimentodoIPEA,2020.http://repositorio.ipea.gov.br/handle/11058/10121

- Lourenço, R. S. S. L., Souza, N. C. A. T. & Inforsato, E. C. (2019). Formação continuada em serviço: relações entre seus aspectos fundamentais e as práticas instituídas. *Práxis Educacional*, 15(32), 481-498. <u>https://doi.org/10.22481/praxis.v15i32.5065</u>
- Mucharreira, P. R. (2016). Formação contínua centrada na escola e desenvolvimento profissional docente: um estudo de caso. *Educação em Questão*, 54(42), 38-64. <u>https://doi.org/10.21680/1981-</u> <u>1802.2016v54n42ID10952</u>
- Mucharreira, P. R. (2017). O papel da formação contínua, centrada na escola, na (re)construção do projeto educativo e no desenvolvimento profissional docente: um estudo de caso. Lisboa: Instituto de Educação da Universidade de Lisboa.
- Nóvoa, A. S. (2009). Para uma formação de professores construída dentro da profissão. Educa.
- Nóvoa, A. S. (2022). Escolas e professores: proteger, transformar, valorizar. SEC/IAT.
- Oliveira, C. S. & Cyrino, M. C. C. T. (2022). Elementos da prática de uma comunidade de professoras na exploração de tarefas que envolvem o pensamento algébrico. *Revista Eletrônica de Educação Matemática*, 1-27. <u>https://doi.org/10.5007/1981-1322.2022.e84188</u>
- Oliveira, G. (2013). Estudo de Casos. In: Costa, Oliveira & Cecy, (Orgs) Metodologias Ativas: aplicações e vivências em Educação Farmacêutica. Abenfarbio.
- Oliveira, L. M. & Cyrino, M. C. D. C. T. (2022). Aspectos da prática de uma comunidade de professoras de matemática e o desenvolvimento da agência profissional. *Quadrante*, 31(1), 7-27. https://doi.org/10.48489/quadrante.27028
- Piffero, E. L. F. et al. (2020). Um novo contexto, uma nova forma de ensinar: Metodologias ativas em aulas remotas. *Educitec - Revista de Estudos e Pesquisas sobre Ensino Tecnológico*, 6. <u>https://doi.org/10.31417/educitec.v6.1420</u>

- Pontes, A. F. & Barboza, P. (2021). O professor de matemática frente às tecnologias e as dificuldades em integrá-las na sala de aula. *Ensino Em Foco*, 3(8), 33 – 47. <u>https://doi.org/10.55847/ef.v3i8.689</u>
- Rausch, R. B. & Dubiella, E. (2013). Fatores que promoveram mal ou bemestar ao longo da profissão docente na opinião de professores em fase final de carreira. *Revista Diálogo Educacional*, 13(40), 1041-1061. <u>https://doi.org/10.7213/dialogo.educ.13.040.DS11</u>
- Rocha, M. R. & Cyrino, M. C. C. T. (2019). Elementos do contexto de uma comunidade de prática de professores de matemática na busca de aprender e ensinar frações. *Revista Paranaense de Educação Matemática*, 8, 169-189. <a href="https://doi.org/10.33871/22385800.2019.8.15.169-189">https://doi.org/10.33871/22385800.2019.8.15.169-189</a>
- Saul, A. M. & Saul, A. (2017). O saber/fazer docente no contexto do pensamento de Paulo Freire: contribuições para a Didática. *Cadernos de Pesquisa*, 24(1)1-14. <u>https://doi.org/10.18764/2178-2229.v24n1p1-14</u>
- Schlosser, D. F., Frasson, A. C. & Cantorani, J. R. H. (2019). Softwares Livres para análise de dados qualitativos. *Revista Brasileira de Ensino de Ciência e Tecnologia.* 12(1), 539-550. <u>https://doi.org/10.3895/rbect.v12n1.9550</u>
- Soares, R. G. & Copetti, J. (2020). Formação Profissional Docente: perfil e compreensão de professores de uma escola pública do RS. *Práxis Educacional*, *16*(40), 573-591. https://doi.org/10.22481/praxisedu.v16i40.6446
- Soares, R. G. (2021). Formação profissional docente e metodologias ativas: uma pesquisa-ação com base na problematização. Dissertação de mestrado, Programa de Pós-graduação Educação em Ciências: Química da Vida e Saúde, UNIPAMPA.
- Soares, R. G. *et al.* (2021). Enseñanza híbrida en escuelas de educación básica: percepciones y perspectivas de los maestros. *Revista Paradigma*, 42(3), 454-475. <u>https://doi.org/10.37618/PARADIGMA.1011-</u> 2251.2021.p454-475.id1139
- Soares, R. G., Engers, P. B. & Copetti, J. (2019). Formação docente e a utilização de metodologias ativas: uma análise de teses e dissertações. *Ensino & Pesquisa, 17*(3).

https://periodicos.unespar.edu.br/index.php/ensinoepesquisa/article/ view/2796

- Soares, R. G.; et al. (2022). Comunidades de práticas e Metodologias Ativas: caminhos possíveis na e para a formação de professores. In.: Jesus, R. F., Soares, R. G., Copetti, J. & Folmer, V. (Org.). Metodologias Ativas: uma abordagem teórico-prática e investigativa, vislumbrando possibilidades. CRV.
- Vieira, A. C., Machado, C. T. & Souza, D. O. G. (2020). Formação docente, tecnologia educacional e Educação Ambiental pós-pandemia da Covid-19. *Revista Sergipana De Educação Ambiental*, 7, 1-17.
- Wenger, E. & Wenger, B. T. (2015). Communities of practice: a brief introduction. Wenger Trayner. <u>https://wenger-trayner.com/wpcontent/uploads/2015/04/07-Brief-introduction-to-communities-ofpractice.pdf</u>
- Wenger, E. (2010). Communities of practice and social learning systems: the career of a concept. <u>http://wenger-trayner.com/wp-content/uploads/2012/01/09-10-27- CoPs-and-systems-v2.0.pdf</u>
- Wenger, E., Mcdermontt, R. & Snyder, W. M. (2002). *Cultivating communities* of practice. Harvard Business School Press.