

Exploring Teachers' Professional Growth Through Reflective Practice in School Settings

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Abstract

Teacher professional growth is a reflective and contextual process shaped by both personal and institutional factors. This study aim investigates how reflective practice within school settings fosters professional development, focusing on teachers' experiences in a Lithuanian general education school implementing a unique personal professional development (PPD) framework. Sixteen teachers participated in semi-structured phenomenographic interviews to explore their reflective experiences. Analysis using phenomenographic methodology revealed three interrelated categories of professional growth: (A) changes driven by individual reflection, (B) collegial collaboration aligning personal and institutional goals, and (C) development enabled by the school's organisational framework. These categories form a recursive structure within the PPD framework, where each one supports and enhances the others. This study emphasises Category A – reflection-driven growth – as a foundational method for learning from one's own and others' experiences. Teachers who engaged in continuous, systematic reflection – linking theory and practice – demonstrated improved self-awareness, enhanced pedagogical practice, and a stronger professional identity. Key elements contributing to growth include personal attitudes, student-focused teaching, and emotional engagement in teacher-student interactions. The findings highlight the significance of structured reflective practice as a catalyst for sustained teacher development in school contexts.

Keywords

Teacher, Professional Growth, Reflective Practice, School Settings

Introduction

The modern world is marked by rapid changes and uncertainty. This demands continuous learning and adaptability. In this context, teachers play a key role – not only as knowledge providers but as reflective learners who grow professionally (Illeris, 2004; Korthagen, 2014, 2016; Korthagen & Nuijten, 2022). As a result, growing attention is given to teachers' deeper professional growth, including personal change and identity development (Clarke & Hollingsworth, 2002; Evans, 2014; Taylor, 2020; Mockler, 2024). Traditionally, professional development involved short-term external training – seminars, courses, or lectures – where teachers acted as passive recipients (Guskey, 2000). These rarely brought lasting changes in beliefs or behaviour (Korthagen & Vasalos, 2005). Newer research frames professional development as a continuous and meaningful process – professional growth. It includes knowledge development, self-reflection, and identity strengthening (Rodgers, 2002; Beauchamp & Thomas, 2009; Evans, 2014; Pylväs, Li, & Nokelainen, 2022).

Teachers grow by learning from experience, reflecting on practice, and aligning actions with student needs and personal goals (Clarke & Hollingsworth, 2002; Núñez Pardo & Téllez Téllez, 2015). Reflection plays a central role – it supports analysis, improvement, and value clarification (Korthagen, 2001; Rodgers, 2002). Growth happens through interaction with colleagues, students, and school context (Opfer & Pedder, 2011). Thus, it involves both individual and collective learning, supported by a strong professional culture (Hargreaves & Fullan, 2012; Donohoo et al., 2020). Schools that build reflective cultures create favourable conditions for sustainable teacher development (Vescio et al., 2008; Putnam & Borko, 2000).

Professional growth is often seen as a key outcome of professional development. It includes both external skill acquisition and internal change in thinking, values, and behaviour through reflection (Evans, 2014; Pylväs, Li, & Nokelainen, 2022). It becomes an integrated process where learning and personal transformation reinforce each other. Despite this attention, teachers' lived experiences of growth are still underexplored. Research tends to focus on formal training, neglecting self-reflection as a change driver in real school settings (Opfer & Pedder, 2011; Taylor, 2020). It is therefore important to examine professional growth in con-

texts where teachers reflect, collaborate, and act. Such environments foster genuine professionalism.

This article aims to contribute to the scholarly debate on teachers' professional growth by analysing the importance of reflection as an essential tool for learning from experience. The study is based on the view that professional growth is both a personal and social process taking place in an environment based on the specific context of the school. *The problem research question:* How does reflective practice within school settings promote teachers' professional growth?

The aim of the research is to investigate teachers' professional growth through reflective practice in the school context, analysing the significance of reflection as a key method of learning from one's own and others' experiences.

Theoretical background

Intersection of professional development and professional growth

In the scientific literature, the concepts of professional development and professional growth are often confused or used interchangeably, although their contents differ. Professional development is usually defined as a career-long learning process covering both the development of knowledge and skills and the formation of value attitudes related to professional and personal abilities (Illeris, 2003). Many studies link professional development to teachers' learning in practice to achieve better student outcomes (Avalos, 2011; Postholm, 2012).

Professional growth, in contrast, implies a deeper identity change based on reflection and context. It is both an outcome and a goal of development (Pylväs, Li, & Nokelainen, 2022). Growth is shaped by subjective experience and supported by school culture—values, structures, and collaboration (Hargreaves & Fullan, 2012). Teachers grow through experimentation, reflection, and shared practice (Min et al., 2020).

Clarke and Peter (1993, p. 167) used the term 'professional growth' to emphasise that the teacher's changes are the result of continuous professional learning. Clarke and Hollingsworth (2002), referring to Guskey (1986), developed an integrated model of professional growth that allows interpreting the teacher's growth process as a dynamic interaction between personal practice, external factors, and reflection. This interac-

tion operates through the teacher's experience, and professional growth is not only related to learning, but also to personal and collective meaning-making practices. Finally, professional growth takes place in the social and material work environment, where the teacher's individual experiences and perceptions of the environment determine the direction of his/her learning and growth (Pylväs, Li, & Nokelainen, 2022). The transition to a culture of continuous professional growth is a prerequisite for achieving long-term improvement of teachers and the entire education system.

Professional growth through reflective practice

Professional growth involves intentional change in thinking, behaviour, and values. It reflects both skill development and personal transformation, where reflection plays a central role (Clarke & Hollingsworth, 2002; Evans, 2014). Teachers grow by analysing their actions, integrating theory with practice, and learning from experience. In the late 20th century, teachers began to be seen as reflective practitioners. Reflection enables them to understand their work and improve it deliberately (Korthagen, 2001). It helps explain decisions, adjust actions, and increase professional satisfaction (Villegas-Reimers, 2003).

The teacher's activity is inherently complex and multifaceted, therefore, reflection becomes an essential condition for the ability of teachers to solve professional problems and adapt to constantly changing educational conditions (Korthagen, 2001). Teachers' reflection is necessary because of the constant encounter with situations of professional uncertainty, when they have to act on the basis of hypothetical knowledge, intuition, and practical insights (Ferraro, 2000; Tarrant, 2013). In these conditions, reflective thinking allows teachers to make more appropriate decisions, clearly understanding their consequences and applying the necessary changes. Reflection is often associated with critical thinking, which is significant in evaluating the teacher's practice in various aspects, allowing for the identification of strengths and areas for improvement (Larrivee, 2008; Riveros et al., 2012). Liu (2015) emphasises that a reflective teacher must critically evaluate not only his/her own actions, but also their reasons, goals, and expected changes, thus better understanding and managing his/her professional practice and improving his/her professional identity.

The importance of reflection increases even more in the context of a learning organisation. Collective reflection allows teachers to share experiences and together solve problems arising in the educational process, thus strengthening community learning and cooperation (Segal, 2023). Team reflection allows one to avoid isolated learning, encourages the sharing of ideas, advice, and practices, and therefore helps teachers not only better understand their work, but also improve it more effectively (Ohlsson, 2013; Min et al., 2020). The importance of critical thinking in reflective practice is also emphasised by Liu (2015), who states that reflection allows teachers to rethink and reorganise their existing attitudes and professional knowledge. Teachers are given the opportunity to move from automated acting to a conscious, deliberate, and purposeful teaching/learning process, which better meets the dynamic educational environment and the constantly changing needs of students.

Research methodology

Research context

This analytical process was strongly informed by the theoretical underpinnings of teacher professional growth as a reflective, identity-shaping process (Clarke & Hollingsworth, 2002; Korthagen, 2001). The chosen phenomenographic methodology aligned with this conceptualization, allowing us to explore variations in reflective experiences as both individually and socially constructed. The iterative comparison between empirical categories and theoretical constructs ensured that analysis was not only data-driven, but also theory-informed, thereby reinforcing the conceptual robustness of the findings.

The presented research was conducted in one Lithuanian general education school, where the Personal Professional Development (PPD) framework is consistently being developed. Its implementation was driven by both internal needs, i.e., the desire to improve educational practices referring to the analysis of student achievements, and external impulses, i.e., nationally formed priorities for improving teacher qualifications. The school community, having assessed the impact of the CPI (Child's Individual Progress) framework on student achievements, initiated a targeted systematisation of teachers' professional growth, in which the responsibility for improvement was transferred to the teacher himself/herself, while maintaining organisational support.

The school's PPD model differs from typical PD approaches in that it integrates reflection into daily practice at multiple levels—individual, group, and institutional—rather than relying on external training. This internal, recursive system positions teachers not as recipients of change but as active agents of their professional transformation, which is still rarely seen in national or international PD practices. The PPD model at the school was developed as a framework for reflective workplace learning based on collegial cooperation, continuous self-assessment, and practice improvement. The framework is organised at three levels: individual (setting personal development goals, reflections, consultations with the curator), group (thematic exchange of experience, integrated activities with colleagues), and institutional (internal and external training, cooperation with other educational institutions). Professional development is understood as inseparable from everyday activities and taking place cyclically: planning – activity – reflection – corrections – activity.

The school consciously created a culture of support and trust that encouraged teachers to actively engage in learning processes, share good practices, initiate change, and experiment with educational practices. In this way, the PPD framework has become the axis of organisational culture, the main goal of which is to ensure both individual and collective professional growth. Based on this practice, the study aimed to reveal how teachers experience professional growth while participating in the PPD framework, how reflective practice activities are carried out that encourage them to analyse their experiences and learn from each other, and promote their personal and professional growth, and what ways of perceiving the phenomenon emerge when analysing these experiences.

Research participants

The study involved 16 teachers working at the same school. The participants were selected according to the following criteria: pedagogical nature of work, qualification category, pedagogical experience (at least 1 year), and stability of the workplace. The experience of the selected participants was diverse: their pedagogical experience ranged from 1.5 to 25.5 years, and the qualification categories included teacher, senior teacher, and methodologist levels. Such selection ensured a diversity of research experiences and a conceptual analysis of the phenomenon.

Data collection and analysis methods

The research is based on the phenomenographic methodology of qualitative research, the main goal of which is to reveal different ways of experiencing and understanding the phenomenon under study (Marton, 1986; Bowden, 2000). In this case, the professional growth of teachers, arising from personal experiences of participating in the PPD framework, was examined. Phenomenography was chosen to not only describe the experiences of teachers, but also to conceptualise different notions of development in the learning workplace.

Data were collected using semi-structured interviews, which are considered the main phenomenographic data collection method. The interviews took place in a school environment chosen by the participants themselves, i.e., in an outdoor classroom, in the school garden, or inside the building. The teachers were asked what professional growth in school means to them and how they understand and interpret this process. They were also asked to share their professional growth experiences, what feelings and experiences they had during the professional growth process, and what helped them understand that they had 'grown up'. Each interview lasted 42–66 minutes, was recorded and later transcribed. In order to ensure data accuracy, the transcriptions were submitted for review by the participants and anonymised only after their approval. During the interviews, the researchers sought to maintain the structure of the dialogue, and open-ended questions encouraged the participants to reveal their personal relationship with the phenomenon and the nuances of its understanding.

Data analysis was conducted following the steps of phenomenographic data analysis described by Åkerlind (2005). In the first phase, all the transcriptions were read several times, and primary themes reflecting the participants' experiences were identified. The selected quotes were then grouped into a preliminary pool of meaning, interpreted both in relation to the individual transcript and in the context of the collective dataset. Following this, transcripts were compared side-by-side to identify similarities and differences in the participants' experiences, ensuring that emergent categories were grounded in collective rather than individual meaning, as recommended by Åkerlind (2005).

In the second phase, the thematic similarities and differences between different statements were searched for, primary categories were formed. These categories were subsequently revised to assess their internal con-

sistency, and in the fourth phase, the space of the results was constructed: the interrelationships between the categories, their hierarchical structure, and the conceptual nature of the interaction were analysed. During the analysis, attention was maintained to both the referential (what the phenomenon means) and structural (how the phenomenon is understood) aspects of the phenomenon.

Ethical aspects and reliability

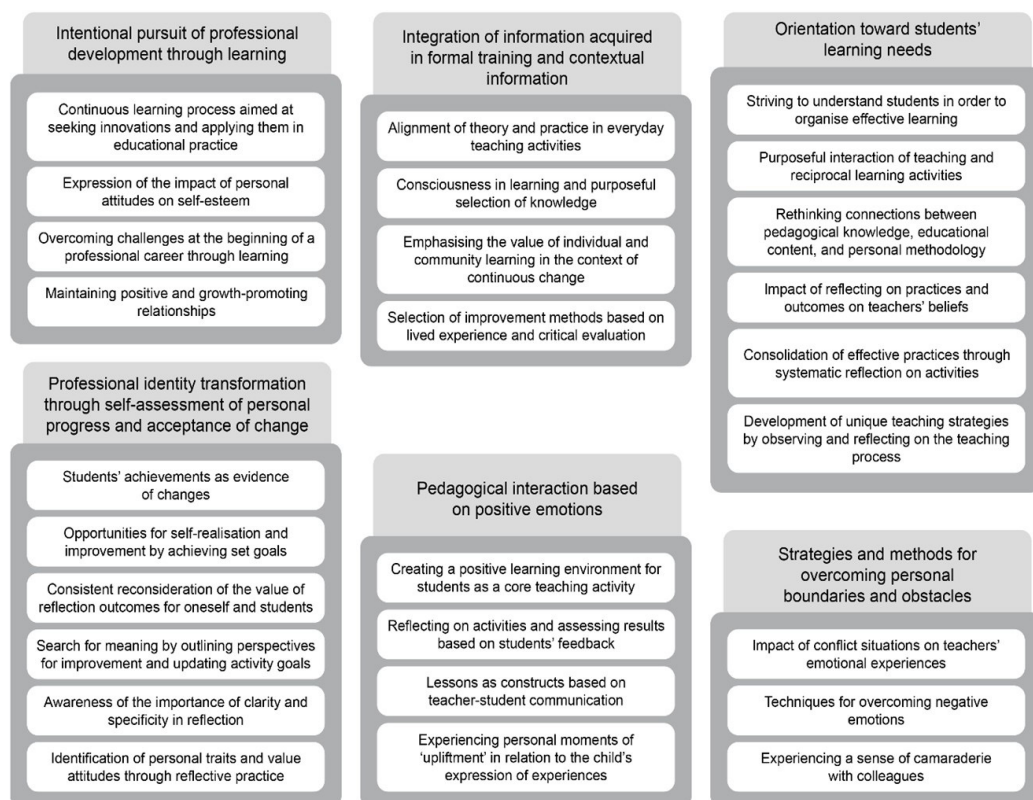
In order to ensure the reliability of the research and the validity of the results, several quality criteria of qualitative research were applied. The reliability of the data is based on a consistent process of analysis, multiple readings of the texts, feedback from the research participants, and constant review of the results by comparing them with the original data. The validity of the results was ensured by contextual interpretation: each category was formed considering its relationship to the whole and justified by quotes from the participants.

The research was conducted in compliance with all ethical principles of social science research. All the study participants were informed about the aim, form, duration of the study and the voluntary nature of participation. Each participant signed an informed consent for participation, and anonymity and confidentiality were ensured: personal data were encrypted and identifying information was removed. Participants were given the right to withdraw from the study at any time, and the study material is used only for scientific purposes. In this way, the study aimed to ensure communicative validity, validity of data interpretation, and transparency of the study, and the phenomenographic analysis made it possible to reveal different ways of experiencing teachers' professional growth in the context of the PPD framework. To increase transparency, coding was conducted by two researchers independently in the initial phase. They used inductive coding to identify descriptive expressions and then collaboratively developed the categories of description. Discrepancies were discussed and resolved through dialogue to ensure intersubjective agreement. Coding decisions were documented in an audit trail, allowing for procedural traceability and confirmability.

Results

The results of the phenomenographic research revealed that the experiences of the professional growth of teachers through participation in the school's personal professional development (PPD) framework encompass three categories: A – changes determined by the teacher's reflection as an experience of professional growth; B – collegial collaboration while seeking coherence between personal and institutional goals; C – personal professional development enabled by the organisational framework. All categories intertwine, supplement, and develop each other, and they are all connected by the personal professional development framework created and used at the school, which acts as a recursive structure. This article details and analyses Category A in more detail, justifying the significance and importance of reflection as an essential method of learning from one's own and others' experiences in school settings. The six subcategories identified under Category A reflect key theoretical dimensions of reflective practice, such as self-directed learning, emotional self-regulation, and identity reconstruction. These elements resonate with Korthagen's (2001) concept of core reflection and Clarke and Hollingsworth's (2002) model of interconnected domains, providing a theoretical lens through which the qualitative differences in teacher experiences were interpreted (see Figure 1).

Figure 1: Changes determined by the teacher's reflection as an experience of professional growth: subcategories and their content (created by the author)



Each subcategory is based on the authentic insights of the research participants, which reveal how professional reflection affects their identity, educational practice, and relationship with students and colleagues. The subcategories of analysis presented below, illustrated with specific quotes from the research participants, encompass reflection processes on various aspects of professional growth, from the conscious pursuit of learning to the strengthening of emotional resilience:

Intentional pursuit of professional development through learning. The research data showed that teachers perceive professional growth as a continuous and purposeful learning process that arises from internal motivation and the desire to improve. This process is inseparable from the constant search for innovations, their application in practice, and the

promotion of critical thinking. Joré describes it as *'constant moving forward, searching... and accepting innovations in your professional activity'*. Professional development helps teachers adapt to modern educational challenges, strengthens their pedagogical self-concept, and increases job satisfaction. In addition, it allows for a better understanding of students' needs and the effectiveness of educational methods. According to Emilija, *'you are forced to learn throughout your life'*, which shows that professional growth is understood as a continuous path leading to a deeper understanding of the teacher's identity and vocation. Teachers also emphasise that professional growth provides an opportunity for self-realisation through pedagogical activities, which helps maintain motivation, avoid routine, and contribute to students' progress.

Integration of information acquired in formal training and contextual information. Teachers emphasise that knowledge acquired in formal training becomes valuable only when it is applied in practice and combined with individual experience. Roma notes that the acquisition of knowledge requires active participation: *'you try, you pass it through yourself'*. Teachers apply a critical approach to the information received and select the information that is most relevant and appropriate to their educational context. Giedrė raises the question: *'do we learn for certificates, or do we learn for knowledge?'*, thus revealing a conscious approach to learning goals. Most teachers emphasise that the most effective learning situation is one where the content meets their daily educational challenges and is directly applicable. At the same time, the community dimension becomes important: sharing insights with colleagues helps to reflect on newly received information and integrate it more deeply. This strengthens not only professional knowledge, but also mutual cooperation, and learning acquires a collective character, where knowledge becomes a common asset of the school culture.

Orientation toward students' learning needs. The study revealed that orientation towards students' learning needs is one of the most important objects of reflection. Teachers are constantly looking for ways to better understand students' experiences and effectively integrate them into the teaching process. They try to observe students' reactions, their emotional well-being, and cognitive abilities so that education is individualised and meaningful. Roma notes: *'the children themselves say: it's more difficult for us here, we're not doing well here, could you help?'*, emphasising the importance of children's voices in the educational process.

Teachers also admit that positive feedback from students motivates them to become more engaged in education, as Nomeda states, this '*encourages the best possible presentation of the material*'. Such mutual interaction develops responsibility and pedagogical sensitivity and allows to create more effective education that meets the needs of the student. This direction not only strengthens the effectiveness of education, but also the teacher's professional identity, as it helps to experience pedagogical joy and satisfaction arising from students' progress.

Professional identity transformation through self-assessment of personal progress and acceptance of change. Strengthening professional identity is a constantly reflected process related to the ability to self-assess, accept changes, and adapt to changing educational conditions. Teachers often identify the success of their activities through students' independence and progress. Ieva observes: '*if the teacher can 'rest' in the lesson and the children work... then everything is fine*'. This shows that self-confidence stems from real educational outcomes. In addition, professional identity is formed through reflection, which allows one to become aware of the experience, assess the significance of changes, and plan further actions. Nomeda emphasises the importance of structure: '*what I've been doing, what it means to me and the students, what I'm going to do next*'. This consistent model of reflection helps teachers strengthen professional confidence and remain open to educational change. Identity changes with experience, i.e., every new situation, challenge, or success becomes part of the teacher's self-perception. Therefore, the ability to reflect allows not only to adapt to changes, but also to consciously create one's own professional identity, which combines personal goals and the requirements of the educational context.

Pedagogical interaction based on positive emotions. Teachers recognise that a positive emotional atmosphere in the classroom is one of the most important factors that promote learning and motivation. Reflection on the emotional relationship with students helps develop pedagogical sensitivity and create trust-based communication and a safe environment. Giedrė reveals: '*when they have fun, I have fun too*', emphasising the importance of mutual emotional connection. Such an environment not only helps students feel good but also acts as a strong source of professional motivation for the teacher. In addition, reflection on the dynamics of lessons allows the teacher to better assess how emotions affect student engagement and educational effectiveness. Jorė's self-analysis: '*I'm recon-*

sidering myself, rethinking: well, how am I doing in classes?’ testifies that emotional engagement becomes a part of reflective practice and an important condition for professional development. Emotions become not only a result, but also a source of professional growth: their reflection helps to adjust the teacher’s behaviour, teaching style, and improves the relationship with students.

Strategies and methods for overcoming personal boundaries and obstacles. Teachers often face professional challenges that cause stress, uncertainty, and emotional discomfort. These experiences become an object of reflection, helping to shape resilience and self-regulation strategies. As Karina says: *‘it was scary... but with time, both that interest and that search helped’*. Such experiences become part of professional maturity. Teachers actively look for ways to overcome negative emotions, use the support of colleagues, analyse their own behaviour and feedback. Brigita notes: *‘our community helps each other when needed’*. This shows that collective support and reflective practice not only help to address emotional challenges but also strengthen a sense of community and long-term professional motivation. In addition, by reflecting on their own limits, teachers are able to identify their emotional needs, set realistic goals, and seek constructive solutions in stressful situations. Such practice allows maintaining emotional balance and ensures the sustainability of professional activity.

Professional growth in the teacher’s activity is a complex and constantly changing process, based on reflection, internal motivation, conscious relationships with students and colleagues, and the ability to adapt to changes. Purposeful reflection allows not only to improve practical skills, but also to strengthen professional identity, create an inclusive, emotionally safe learning environment, and maintain high quality education in the long term.

Discussion

The theoretical framework, particularly the model of professional growth by Clarke and Hollingsworth (2002), played a key role in interpreting the findings. These findings align with previous studies emphasising the role of reflection in teacher learning (e.g., Korthagen, 2001; Rodgers, 2002), but this study extends the literature by focusing on how reflection is systematically embedded within an institutional culture. Unlike many other

studies that examine fragmented or individual PD initiatives, this paper demonstrates how a structured school-wide PPD framework fosters ongoing identity transformation and collaborative growth. Each identified category was cross-validated with this model, revealing how individual reflection, collaboration, and institutional support interact dynamically. This alignment supports the analytical claim that professional growth emerges at the intersection of personal agency and contextual affordances. The results of the study confirm the provisions set out in the theoretical justification that reflective practice is an essential condition for professional growth. In the study, teachers described professional growth as a continuous process based on self-regulation, during which a new professional quality is formed through reflection from experience. This corresponds to the statements of Korthagen (2001) and Rodgers (2002) that reflection allows the teacher not only to understand the meaning of his/her activities, but also to systematically change them in order to achieve better quality of education. The participants' statements, expressing the need for continuous learning, self-assessment, ability to overcome challenges, and self-realisation, correspond to the concept of professional growth as an in-depth phenomenon based on identity changes (Evans, 2014; Pylväs, Li, & Nokelainen, 2022). This means that growth does not take place through formal in-service training courses, but through reflective participation in the educational process. Such reflective activity at school turns into an action that has acquired personal significance, which changes not only the external forms of practice, but also the teacher's attitude, beliefs, and professional identity (Clarke & Hollingsworth, 2002; Taylor, 2020; Korthagen & Nuijten, 2022).

The practice of reflection turned out to be extremely important for the formation of professional identity. The research data show that teachers tend to identify with their pedagogical role when they can reflect on students' achievements as a result of their work. Such identity dynamics are based on the assumption that the perception of oneself as a teacher changes through constant reflection on the relationship with students, colleagues, and content (Beauchamp & Thomas, 2009; Korthagen & Nuijten, 2022). This confirms that reflection is not just a way of analysing information, it is an essential mechanism for identity formation. Also, an important observation is that teachers not only reflect individually, but also use collective reflection, sharing experiences, and looking for

solutions together with colleagues. This aspect is closely related to the importance of the professional community highlighted by Hargreaves and Fullan (2012): a culture of reflective practice in school strengthens cooperation and support and creates conditions for sustainable change. Donohoo et al. (2020) highlight that schools that develop reflective collective competence provide an environment for deep learning, and the results of the study empirically support this principle. Significantly, the teachers who participated in the study identified emotional engagement and positive interactions with students as important sources of growth. Reflecting on the emotional climate of the lessons and the students' response, they experienced professional satisfaction and motivation. The results are consistent with Korthagen and Vasalos' (2005) statements about teachers' core reflection, where emotional experiences act as a basis for changes in values and behaviour. Emotional reflection becomes a bridge between professional and personal growth, which confirms the integrality of reflection in the entire educational process.

Another important outcome is the ability to critically evaluate the information received in formal training courses and apply it in real-world situations. Teachers do not accept new information uncritically but rather transmit it through the prism of their own experience and context, which coincides with Putnam and Borko's (2000) statement that effective professional learning only occurs when knowledge is relevant, applicable, and reflected in real practice.

In conclusion, it can be stated that the study empirically substantiates the model of professional growth as a reflective, contextual, and dynamic process. This supports the model of professional growth proposed by Clarke and Hollingsworth (2002), in which reflection acts as a mediator between personal practice, external influences, and outcomes. The teacher's growth takes place in a constant interaction between inner thinking and outer action, and reflection, both individual and collective, is a necessary condition for this interaction.

Conclusion

The results of the study lead to the conclusion that reflective practice is one of the essential factors of teachers' professional growth. Professional growth is manifested through continuous learning, retrospective reflection, strengthening of professional identity, and the ability to adapt

to the dynamic educational process. The teachers who participated in the study perceive professional growth not only as the improvement of knowledge or skills, but also as a deeper personal change, the basis of which is self-reflection, emotional engagement, and conscious relationships with students and colleagues.

The most important contribution of the study is that the empirical data support the concept of professional growth as a dynamic, multi-layered process related to three interrelated areas: individual reflection, collegial cooperation, and organisational support. These factors work synergistically and create a favourable environment for teachers' professional development.

These results reflect broader educational trends promoting teacher agency, identity-focused development, and school-led innovation in professional learning. The study's insights could inform policy development, especially in systems seeking to decentralise teacher learning and embed reflective practices within school culture as a strategy for sustainable educational improvement. Reflection helps teachers not only solve educational challenges, but also maintain professional motivation, create an emotional connection with students, and maintain professional resilience. A reflective approach to everyday practice becomes an integral condition for high-quality pedagogical work, which paves the way for not only individual but also systemic educational change.

Future research and limitations

Future research could expand this topic in several directions. First of all, it is worth investigating professional growth processes in different school contexts – institutions of different cultures – in order to identify contextual factors that influence the effectiveness of reflective practice. It would also be appropriate to develop long-term (longitudinal) research to reveal the development of professional growth over a longer period of time. It would make sense to analyse the forms of reflection and their impact more broadly, for example, how individual, interpersonal, or collective reflection differ, what their advantages and disadvantages are in various pedagogical situations. It is also possible to explore how reflection affects specific aspects of education, for example, student inclusion, assessment methodologies, use of digital technologies. It is recommended to include mixed research methods (quantitative and qualitative), which

would allow assessing the impact of reflection not only by subjective but also by objective indicators. This would help to substantiate the value of reflective practice not only from the perspective of teachers, but also from the perspective of the quality of education.

Despite the valuable insights, the study has certain limitations. First, the study sample was small (16 teachers), therefore, the results cannot be broadly generalised. The participants are from one educational institution that already had a reflective practice support framework in place, therefore, their experiences may be partly exceptional. Such contextual specificity limits the possibility of directly transferring the obtained findings to other settings. Second, data were collected using only one method, semi-structured interviews. Although this method allows to delve deeper into subjective experiences, additional data triangulation would strengthen the reliability of the study and help to better understand how reflection manifests itself in practical activities. The research conducted is focused on the qualitative aspect, therefore, it lacks quantitative data on the effectiveness, systematicity, or impact of changes on student educational outcomes. The school's already well-established reflective culture may have shaped participants' perceptions and responses, potentially amplifying the effects of the PPD framework. This raises the possibility of context-dependent bias. Future studies should critically examine how less supportive or more hierarchical school cultures influence reflective practices and teacher growth to evaluate the transferability of findings.

References

- Åkerlind, G. S. (2005). Variation and commonality in phenomenographic research methods. *Higher Education Research & Development*, 24(4), 321–334. <https://doi.org/10.1080/07294360500284672>
- Avalos, B. (2011). Teacher professional development in *teaching and teacher education* over ten years. *Teaching and teacher education*, 27(1), 10–20. <https://www.sciencedirect.com/science/article/abs/pii/S0742051X10001435?via%3Dihub>
- Beauchamp, C., & Thomas, L. (2009). Understanding teacher identity: An overview of issues in the literature and implications for teacher education. *Cambridge journal of education*, 39(2), 175–189. <https://doi.org/10.1080/03057640902902252>

- Bowden, J. A. (2000). The Nature of Phenomenographic Research. In J. Bowden and E. Wlash, eds. *Phenomenography*. RMIT University Press, 1–18.
- Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of teacher professional growth. *Teaching and Teacher Education*, 18(8), 947–967.
- Clarke, D., & Peter, A. (1993). Modelling teacher change. In B. Atweh, C. Kanes, M. Carss, G. Booker, & Mathematics Education Research Group of Australasia (Eds.), *Contexts in Mathematics Education. Proceedings of the 16th Annual Conference of the Mathematics Education Research Group of Australasia* (pp. 167–175). Mathematics Education Research Group of Australasia (MERGA). <https://pub.uni-bielefeld.de/record/2938175>
- Donohoo, J., O’Leary, T., & Hattie, J. (2020). The design and validation of the enabling conditions for collective teacher efficacy scale (ECCTES). *Journal of Professional Capital and Community*, 5(2), 147–166. <https://doi.org/10.1108/JPCC-08-2019-0020>
- Evans, L. (2014). Leadership for professional development and learning: Enhancing our understanding of how teachers develop. *Cambridge journal of education*, 44(2), 179–198. <https://doi.org/10.1080/0305764X.2013.860083>
- Ferraro, J. M. (2000). *Reflective Practice and Professional Development*. ERIC Digest. https://permanent.fdlp.gov/websites/eric.ed.gov/ERIC_Digests/ed449120.htm
- Guskey, T. R. (1986). Staff development and the process of teacher change. *Educational Researcher*, 15(5), 5–12. <https://doi.org/10.3102/0013189X015005005>
- Hargreaves, A., & Fullan, M. (2012). *Professional Capital: Transforming Teaching in Every School*. Teachers College Press.
- Illeris, K. (2004). A model for learning in working life. *Journal of workplace learning*, 16(8), 431–441. <https://doi.org/10.1108/13665620410566405>
- Korthagen, F. A. (2001). A reflection on reflection. In F. AJ. Korthagen, J. Kessels, B. Koster, B. Lagerwerf & T. Wubbels (Eds.). *Linking Practice and Theory: The Pedagogy of Realistic Teacher Education* (pp. 67–84). Routledge. <https://doi.org/10.4324/9781410600523-9>

- Korthagen, F. A. J. (2014). Promoting Core Reflection in Teacher Education: Deepening Professional Growth. In C.J. Craig & L. Orland-Barak (Eds.) *International Teacher Education: Promising Pedagogies (Part A)* (pp. 73–89). Emerald Publishing Limited <https://doi.org/10.1108/S1479-368720140000022007>
- Korthagen, F. A. J. (2016). Inconvenient truths about teacher learning: Towards professional development 3.0. *Teachers and teaching*, 23(4), 387–405.
- Korthagen, F., & Nuijten, E. (2022). *The Power of Reflection in Teacher Education and Professional Development: Strategies for In-Depth Teacher Learning*. Routledge. <https://doi.org/10.4324/9781003221470>
- Korthagen, F., & Vasalos, A. (2005). Levels in reflection: Core reflection as a means to enhance professional growth. *Teachers and teaching*, 11(1), 47–71. <https://doi.org/10.1080/1354060042000337093>
- Larrivee, B. (2008). Development of a tool to assess teachers' level of reflective practice. *Reflective Practice*, 9(3), 341–360. <https://doi.org/10.1080/14623940802207451>
- Liu, K. (2015). Critical reflection as a framework for transformative learning in teacher education. *Educational Review*, 67(2), 135–157. <https://doi.org/10.1080/00131911.2013.839546>
- Marton, F. (1986). Phenomenography – a research approach to investigating different understandings of reality. *Journal of Thought*, 21(3), 28–49. <https://philpapers.org/pub/624/1986>
- Min, M., Akerson, V., & Aydeniz, F. (2020). Exploring preservice teachers' beliefs about effective science teaching through their collaborative oral reflections. *Journal of Science Teacher Education*, 31(3), 245–263. <https://doi.org/10.1080/1046560X.2019.1690818>
- Mockler, N. (2024). Troubled times and seeds of hope: some reflections on teacher professional learning as praxis development. *Professional Development in Education*, 50(3), 586–593. <https://doi.org/10.1080/19415257.2024.2339042>
- Núñez Pardo, A., & Téllez Téllez, M. F. (2015). Reflection on teachers' personal and professional growth through a materials development seminar. *How*, 22(2), 54–74. <https://files.eric.ed.gov/fulltext/EJ1128107.pdf>
- Ohlsson, J. (2013). Team learning: collective reflection processes in teacher teams. *Journal of Workplace Learning*, 25(5), 296–309. <https://doi.org/10.1108/JWL-Feb-2012-0011>

- Opfer, V. D., & Pedder, D. (2011). Conceptualizing teacher professional learning. *Review of Educational Research*, 81(3), 376–407. <https://doi.org/10.3102/0034654311413609>
- Postholm, M. B. (2012). Teachers' professional development: a theoretical review. *Educational research*, 54(4), 405–429. <https://doi.org/10.1080/00131881.2012.734725>
- Putnam, R. T., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational researcher*, 29(1), 4–15.
- Pylväs, L., Li, J., & Nokelainen, P. (2022). Professional growth and workplace learning. In C. Harteis, D., Gijbels., & E. Kyndt, (Eds.) *Research Approaches on Workplace Learning: Insights from a Growing Field*. (pp. 137–155) Springer International Publishing https://doi.org/10.1007/978-3-030-89582-2_6
- Riveros, A., Newton, P., & Burgess, D. (2012). A Situated Account of Teacher Agency and Learning: Critical Reflections on Professional Learning Communities. *Canadian journal of education*, 35(1), 202–216. <https://journals.sfu.ca/cje/index.php/cje-rce/article/view/837>
- Rodgers, C. R. (2002). Seeing student learning: Teacher change and the role of reflection. *Harvard educational review*, 72(2), 230–253.
- Segal, A. (2023). Rethinking Collective Reflection in Teacher Professional Development. *Journal of Teacher Education*, 75(2), 155–167. <https://doi.org/10.1177/00224871231188702>
- Tarrant, P. (2013). *Reflective Practice and Professional Development*. SAGE Publications, Ltd. <https://doi.org/10.4135/9781526402318>
- Taylor, P. (2020). The complexity of teacher professional growth – unravelling threads of purpose, opportunity and response. *Professional Development in Education*, 49(1), 16–29. <https://doi.org/10.1080/19415257.2020.1747106>
- Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and teacher education*, 24(1), 80–91. <https://doi.org/10.1016/j.tate.2007.01.004>
- Villegas-Reimers, E. (2003). *Teacher professional development: an international review of the literature*. International Institute for Educational Planning. <https://unesdoc.unesco.org/ark:/48223/pf0000133010>