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Prospects for Professional Training for the Development of Autopedagogic Competence in Future Primary School Teachers

Abstract

Introduction. This article examines the issue of forming autopedagogic competence in future primary school teachers, highlighting the significance of lifelong learning in the context of educational modernization. Special emphasis is placed on fostering teacher professionalism and self-education, which are among the key objectives of Kazakhstan's national education development strategy. The study explores the psychological and pedagogical foundations of self-directed learning, identifying essential components of pedagogical competence and the need for continuous professional growth. **Methodology and Methods.** The study employed a combination of theoretical and analytical methods, including literature review and comparative analysis of contemporary pedagogical research. A qualitative assessment was conducted to evaluate current approaches to the development of autopedagogic competence, with a particular focus on teacher education practices in higher education institutions. **Results.** The research findings indicate that one of the primary indicators of successfully developed autopedagogic competence is the future teacher's awareness and readiness for independent professional development. Although various studies have addressed professional development more broadly, key aspects remain insufficiently explored – particularly those relating to the personalization of teacher training, the integration of self-education strategies in university curricula, and the articulation of clear indicators of pedagogical competence specific to the primary school context. **Scientific novelty.** This study contributes to the theoretical understanding of autopedagogic competence by identifying its core components and the factors influencing its development. It reveals significant gaps in teacher training programs regarding the support of self-directed learning, thus offering a new perspective on how universities can structure teacher education to promote lifelong professional growth. **Practical significance.** The findings offer evidence-based guidance for higher education institutions aiming to prepare competitive and competent primary school teachers. By emphasizing self-education, self-reflection, and continuous development, the study supports the design of teacher training programs that align with modern educational demands and foster meaningful, sustained professional engagement.

Keywords: autopedagogic competence; personality-oriented education; lifelong learning; motivation to learn; self-education; future primary school teacher.

Introduction. In light of ongoing global transformations, there is a growing need for a more qualified and skilled workforce. This highlights the importance of reinforcing national labor market strategies and modernizing the educational framework to fully realize the country's human capital.

At the same time, rapid technological advancements and the rise of new job categories demand contemporary competencies. Therefore, while enhancing the system for training young

specialists, it becomes increasingly vital to develop continuous education opportunities for the current labor force. In connection with the aforementioned trends, on July 8, 2021, the Government of the Republic of Kazakhstan issued Resolution No. 471, approving the Concept of Lifelong Learning (Continuing Education) (Adilet.zan, 2021).

To reveal the above, we made an analysis of the literature devoted to this topic. Russian historical experience shows that already in the

XIX century many famous figures of science, literature, art, and public organizations helped others in resolving this problem – they created national libraries, reading rooms, people’s houses, etc. In 1863–1866, the educational and literary magazine *Self-education* was published in St. Petersburg. At the beginning of the XX century, books were widely distributed.

In the second half of the 20th century, adult self-education and professional development systems were intensively developing. This need was reinforced by the development of mass media, which, on the one hand, enriched the process of self-education, and on the other hand, involved individuals in global events, creating the need to understand them.

The beginning of the XXI century is characterized by the humanization of self-education. Today it is aimed at the harmonious development of personality, the disclosure of human abilities, creative potential, self-expression, and the realization of spiritual interests. Self-education skills are developed primarily in the process of conducting various types of independent work of students provided for in the curricula (choosing the necessary literature, taking notes, reviewing what they read, writing abstracts, preparing reports, etc.) (Tarasova, 2017).

Modern educators and psychologists have also published various books on self-education of the individual. A good example is the book of R. Brandenburg (2008), *Powerful Pedagogy: Self-Study of a Teacher Educator’s Practice (Self-Study of Teaching and Teacher Education Practices)*, which describes the development of inner strength that encourages learners to achieve any learning goal they set for themselves.

Currently, there are various concepts of self-education; everyone understands it differently. However, in the process of our research we intend to reveal the topic of self-education and give an accurate definition of the term *autopedagogic competence*, which was first mentioned in O. M. Shiyan’s research work (1999), where she justified the relevance of a term that had never been used before.

N. Kukharev and A. Markova characterize teaching competence as a synthesis of

essential personal traits, including initiative, accountability, persistence, decisiveness, and confidence (Kukharev & Markova, as cited in Arenova, 2012). Similarly, N. Gluzman and E. Beznosyu highlight the critical role of embedding competence within the motivational-value framework of the individual, emphasizing that it significantly reflects the level of cognitive assimilation of knowledge (Gluzman & Beznosyu, as cited in Arenova, 2012). M. Kholodnaya conceptualizes competence as a distinct category of specialized subject knowledge that enables individuals to make effective decisions within a specific domain of activity (Kholodnaya, as cited in Arenova, 2012). L. Mitina defines competence as a combination of knowledge, skills, abilities, and applied methods, encompassing practical implementation, communication, and personal self-development (Mitina, as cited in Arenova, 2012). Within pedagogical science, A. Arenova emphasizes that competence is regarded as an integrative characteristic of an individual, determining their professional activity and authority in a given field (Arenova, 2012).

The process of cultivating autopedagogical competence in future primary educators remains an understudied area within contemporary pedagogical scholarship.

Materials and Methods. In our study, we carried out a theoretical analysis of domestic and international psychological, pedagogical, scientific, methodological, and specialized literature related to the research topic. Additionally, we examined the State Mandatory Educational Standard of the Republic of Kazakhstan and the standard curriculum for the educational program 6B01301 – Pedagogy and Methodology of Primary Education. This comprehensive analysis aimed to determine the stages of forming autopedagogical competence in future primary school teachers.

In contemporary culture, there are a number of opinions about the use of the concept of “competence” in teaching. For instance, it is considered: “this is an imitation of new words, they cannot be used, because there are traditionally used alternatives to “graduate level” and “academic qualifications”, or

“competence” is widely used in other spheres of human activity and reflects the high quality of professional activity (C. Fernández-Morante et al., 2023). However, competence is a person’s mastery of the relevant components, which include their personal attitude to this action and to their subject. Consequently, competence as a construct encompasses a wide spectrum of elements – ranging from cognitive and operational-technological dimensions

to motivational, moral, interpersonal, and behavioral factors.

In order to activate an in-depth understanding of competence in our observations, we analyzed the formation of this term. It is well known that current pedagogical theory defines concepts by which, according to most researchers, it is possible to identify the main signs of teacher professionalism, which is indicated in Table 1 below.

Table 1. *The main signs of a future teacher’s professionalism*

<i>The main signs of a future teacher’s professionalism</i>	<i>Authors (researchers)</i>
Qualification, professionalism	V. Y. Sinenko
Professional competence (professional pedagogical competence)	I. A. Zyazyun, I. A. Kolesnikova, A. K. Markova
Autopedagogic competence	O. M. Shiyan
Pedagogical skill	V. I. Zagvyazinsky, I. A. Zyazyun, G. I. Khoziainov
Pedagogical creativity	V. A. Kan-Kalik, N. D. Nikandrov

The above-mentioned fundamental theories were the basis for the following conclusions. For example, E. F. Zeer focuses on professional competence as a complex of professional knowledge, skills, as well as methods of performing professional activities. V. A. Adolf defines teacher’s competence as “a complex education that includes a complex of knowledge, skills, properties and qualities of a personality that provide variability, optimality and effectiveness of the construction of the educational process” (Arenova, 2012).

On the ground of current educational trends, the role of the primary school teacher extends far beyond the mere transmission of knowledge. Today’s educators are expected to foster student engagement, cultivate intrinsic motivation, and create conditions conducive to individualized learning and continuous self-improvement. Achieving this involves a gradual transition from teacher-led instruction to a more autonomous learning environment, where pupils progressively take ownership of their learning process while maintaining a respectful and collaborative relationship with the teacher.

Within such an evolving pedagogical landscape, it becomes imperative for the primary

educator to continuously broaden their expertise and actively apply their potential in solving complex instructional challenges. Professional excellence in this context is characterized by intellectual curiosity, commitment to the teaching profession, subject mastery, command of didactic methodologies, emotional intelligence, and the capacity to organize and communicate effectively. Pedagogical mastery, thus, is grounded in a constellation of refined professional traits.

The professional qualities of a teacher may be broadly categorized into three clusters: traits reflecting the educator’s vocational orientation, attributes indicative of pedagogical talent, and competencies essential for the effective preparation of well-rounded pupils (Shchur et al., 2022). In this way, the teacher’s personality emerges as a multifaceted synthesis of subject knowledge, humanistic values, and pedagogical skill.

In this manner, the notion of competence transcends the traditional understanding of knowledge, skills, and abilities. It encompasses motivational dynamics, ethical orientation, cognitive flexibility, problem sensitivity, and a strong sense of personal agency. A competent

teacher is not only capable of performing routine tasks but is also prepared to navigate non-standard situations with independence, purpose, and adaptability (Menlibekova et al., 2020).

From all this, a modernized concept arises as innovative teaching competence, which contributes to the formation of self-education of primary school teachers in accordance with the change in the strategy of the educational environment.

Accordingly, competencies do not exclude knowledge, skills and abilities, although they fundamentally differ from them. From knowledge – by the fact that they must be embedded within practical experience, rather than merely existing as abstract knowledge. From skills – by the fact that competencies can be applied to solving various kinds of tasks and in different situations (they have the property of transference). From abilities – by the fact that they are conscious and not automated; this allows a person to act not only in a typical, but also in non-standard situations (Mahlomaholo et al., 2023).

Analyzing the presented definitions, competence can be understood as a multifaceted category comprising five key components:

1. *Profound understanding* – a deep awareness of the essence of tasks and problems being addressed.

2. *Expertise and experience* – strong knowledge of existing practices in the field and active mastery of its best achievements.

3. *Adaptive decision-making* – the ability to select appropriate methods and strategies based on specific conditions of place and time. Therefore, it can be said that the autopedagogic competence of a primary school teacher is a complex, multidimensional psychological and pedagogical construct, each element of which involves the performance of mental and practical actions in their logical sequence, as well as the daily updating of knowledge and the desire to learn unusual things in a lifelong learning.

4. *Responsibility* – a strong sense of accountability for the outcomes of one's work.

5. *Reflective learning* – the capacity to analyze mistakes and make necessary adjustments in the pursuit of goals (Ilanloua & Zandb, 2011).

Equally important is that professional-individual competence includes a number of qualities, such as kindness and interest in students, willingness to accept constructive criticism from colleagues, having one's own view of the social situation and the world around, and understanding people with other values, interests, and abilities. All this presupposes the development and formation of self-education of a modern primary school teacher, which corresponds to the trends of the educational environment.

Looking into diverse scientific articles and dissertations, we generalized the term *autopedagogic competence* as follows: it is an integrative characteristic of a teacher's professional activity, including skills of self-education, self-development, introspection, and reflection, as well as the ability to independently improve and adapt to changing conditions of the educational process.

Equally important is the fact that professional and individual competence encompasses a broad range of personal attributes. Among these are empathy and genuine interest in students' development, openness to constructive feedback from colleagues, a well-formed personal worldview, and the capacity to engage with individuals who hold differing values, interests, or abilities. These qualities collectively contribute to the cultivation of a self-directed professional identity in the modern primary school teacher, aligning closely with the dynamic demands of today's educational landscape.

Through an analysis of a wide array of academic articles and dissertations, we have synthesized a working definition of the concept of *autopedagogic competence*. In this context, autopedagogic competence may be understood as an integrative trait of a teacher's professional profile, encompassing the abilities of self-directed learning, personal and professional growth, critical self-assessment, and reflective practice. It also implies the capacity for continuous improvement and autonomous adaptation in response to the evolving challenges of the educational environment.

The level of professional competence across any field is strongly influenced by an individual's

capacity to cultivate their creative potential and engage in purposeful self-improvement. Findings from our multiple experimental studies confirm a significant correlation between one's propensity for self-development and the nature and outcomes of their professional activities. These insights support the view that the cultivation of autopedagogic competence serves as a critical factor in attaining professional excellence, fully aligning with the principles of lifelong learning.

Based on the above, the professional and personal qualities of a teacher can be effectively interpreted through the lens of autopedagogic competence in future primary school educators. This integrative construct may be characterized by the following attributes:

- *a high degree of determination, proactiveness, and self-regulation;*
- *pedagogical self-awareness, reflected in the individual's unique cognitive and emotional framing of the educational world;*
- *a stable set of individual psychological traits, strong moral foundations, and other personal qualities essential to effective teaching practice.*

Thus, the autopedagogic competence of a primary school teacher can be defined as a multidimensional psychological and pedagogical construct. It includes the ability to perform cognitive and practical actions in a logical sequence, regularly update knowledge, and maintain motivation for continuous learning throughout life.

To accomplish the objectives of this research, the following methodological approaches were employed:

1. Statistical analysis – this enabled the collection and interpretation of data relevant to the development of autopedagogic competence among future primary school teachers.

2. Ranking technique – a rating-based evaluation was conducted to determine the hierarchy and significance of various components involved in cultivating self-educational capacity.

3. Scaling method – used to assess participants' levels of readiness for self-development and the degree of their professional competence formation.

Results. The notion of personal self-development is multifaceted and can be understood through its most defining characteristics. Firstly, self-development constitutes both a core human value and an intrinsic necessity. It reflects a person's moral obligation to oneself, rooted in the desire for personal growth and embedded in one's engagement with the surrounding world. Secondly, self-development emerges as the outcome of deliberate goal-setting and meaningful, value-driven activity. It encompasses the individual's pursuit of purposeful self-realization, inner reflection, and spiritual self-construction within a constantly evolving social and educational environment. Thirdly, self-development is a dynamic and transformative process, involving continuous internal change aimed at achieving personal growth. It is directed toward enriching one's moral, intellectual, and practical capacities, thereby fostering a fuller expression of one's potential. At its core, self-development is a creative endeavor – conscious effort to resolve internal contradictions and strive toward harmony across spiritual, physical, and social dimensions. In the context of teacher education, professional self-development may be defined as a purposeful and reflective process through which the future specialist seeks to fully actualize themselves within the social and professional spheres defined by their chosen field (Tarasova, 2017).

H. Cirali Sarica and Y. K. Usluel (2022) write in their works about the possibility of separating two types of self-education by independence level:

1. *Associated self-education* – caused and directed by an educational institution (school, university, courses, etc.); pursues the goal of expanding, supplementing, and deepening the material studied in an educational institution; related to the implementation of assigned tasks.

2. *Autonomous self-education* – caused, directed, and controlled by a person's own internal interests and needs; considered the highest level and more valuable with regard to individual creativity.

The following table 2 demonstrates the main components of autopedagogic competence and

their content (Akimov et al., 2023). This table may serve as a basis for the development of methods for the formation of autopedagogic competence in future teachers, as well as for assessing their current level of development within the framework of professional training.

Table 2. *Components of autopedagogic competence*

Component of autopedagogic competence	Content
Motivational	- interest in self-education; - striving for self-development; - desire to improve oneself in professional activities.
Cognitive	- theoretical knowledge in pedagogy, psychology, and teaching methods; - skills and abilities for organizing and implementing self-educational activities.
Operational and activity	- knowledge of methods and techniques of self-education; - ability to implement pedagogical tasks and solve professional problems.
Reflexive	- ability to adapt, refine, and enhance professional competencies in response to evolving demands.

The process of professional self-development is inherently linked to the formation of a creative and autonomous personality in the future specialist. For students, both personal and professional self-development must be regarded not merely as educational components, but as intrinsically valuable and personally meaningful objectives. To foster this perspective, the aims and content of university education must explicitly reflect the importance of self-development within the framework of professional training.

Accordingly, the foundational principles of primary teacher education programs are rooted in the idea of promoting both personal and professional growth. Activities such as self-education, self-directed learning, and systematic self-improvement – when combined with meaningful engagement in professional practice – serve as key mechanisms in shaping the autopedagogic competence of prospective primary school teachers (as well as specialists in other fields).

In its broadest formulation, the process of self-development may be understood as unfolding across several interrelated stages:

1. Developing self-awareness through deliberate introspection and self-knowledge;
2. Establishing a realistic self-assessment and recognizing the need for personal transformation;

3. Defining clear goals for self-development and creating a personalized plan for self-organization;

4. Executing this plan through self-educational practices, including self-regulation, self-analysis, self-control, and self-correction (Ilanloua & Zandb, 2011).

In this context, a teacher’s autopedagogic competence emerges as a comprehensive personal and professional attribute. It reflects the educator’s readiness and capacity to cultivate their creative potential and to engage in productive, ongoing self-improvement.

Ultimately, the realization of self-development within a student’s professional journey contributes directly to the formation of a coherent system of autopedagogic competencies. These competencies are actualized through purposeful actions oriented toward solving personal and professional development tasks. They are grounded in pedagogical knowledge, practical experience, and a deep, value-laden commitment to the teaching profession.

At present, several approaches exist for integrating the concept of self-development into the professional formation of future primary school teachers. These approaches include:

- cultivating students’ self-development skills primarily through pedagogical practice (the most common method);

- developing knowledge and skills related to self-development via a dedicated course on professional growth, supplemented by pedagogical practice (less frequent);

- integrating content on personal self-development across multiple domains – including a specialized course, methodological training, and pedagogical practice – (rarely applied) (Garcia, 2021).

Additionally, self-development has been conceptualized as a foundational principle in the construction of pedagogical education models. Within this framework, five structural blocks are identified, each corresponding to a phase of the developmental cycle: diagnostic, theoretical, technological, value-oriented, and problem-research components.

The formation of autopedagogic competence in future educators is influenced by a number of key factors:

- *The internalization of a professional value system and the development of a strong commitment to pedagogical excellence;*

- *Direct experience gained through teaching practice;*

- *Increased readiness and willingness to transform one's personality in alignment with the demands of the teaching profession* (Parpieva, 2023).

From a structural standpoint, the development of autopedagogic competence in students of primary education may be divided into two main stages:

1. *The Preparatory Stage* – This spans from the beginning of psychological, pedagogical, and methodological coursework to the conclusion of the initial phase of pedagogical practice. During this period, the focus is on systematically addressing tasks related to the students' personal and professional self-growth, such as:

- Enhancing motivation for pedagogical activity and fostering commitment to the teaching profession;

- Acquiring both theoretical knowledge and practical skills relevant to autopedagogic development, including self-knowledge tools (e.g., self-observation, self-diagnosis, self-analysis) and self-education techniques (e.g., self-discipline, self-organization);

- Developing essential professional traits and creative individuality, such as reflexivity (pedagogical reflection, introspection), pedagogical thinking, empathy, tolerance, and psychological flexibility (Crespí, 2022).

2. *The Main Stage* – During this phase, students actively demonstrate autopedagogic competence and gain practical experience in applying the principles of self-development. Pedagogical practice serves as a vital setting for this process, offering real-world scenarios through which students can test and refine their self-regulation and growth strategies.

This practical component includes a twofold structure:

- *Self-analysis of Professional Skills* – Upon completing the initial phase of practice, students reflect on their teaching performance, evaluating their core competencies and identifying key strengths and areas for improvement.

- *Autopedagogic Experiment* – In the subsequent phase, students design and implement a personalized self-development plan aimed at strengthening their pedagogical knowledge, teaching techniques, and professional attributes.

To support this process, students conduct a self-diagnostic assessment during the first week of practice. This evaluation measures their level of psychological, pedagogical, scientific, and methodological proficiency, alongside key variables such as teaching motivation, reflexivity, and pedagogical thinking. The results inform the creation of an individualized self-development program, which becomes the foundation for their internship journey.

Beginning in the second week, students follow their personalized plans while continuously engaging in self-monitoring and self-analysis. At the conclusion of the internship, they complete a final self-evaluation, reflecting on their growth trajectory and identifying further goals for professional development. This includes specifying the competencies and personal qualities that require continued advancement (Guillén-Gámez et al., 2022).

Building on these findings, a survey was conducted to assess the readiness of future primary school teachers to realize their developmental potential. The study sought to

evaluate their preparedness for entering the teaching profession and their ability to engage in sustained self-reflection and growth, drawing on their internship experiences as a foundation.

105 future primary school teachers of Zhetysu University named after I. Zhansugurov and

Abai Kazakh National Pedagogical University participated in the survey. The questionnaires were written in Kazakh and Russian. The answers contained four possible options (yes, no, I find it difficult, partially) presented in different positions (Table 3).

Table 3. *Survey Results on Professional Competencies of Future Primary School Teachers*

Question (№)	Main Question	Responses (%)	Interpretation
Q6 (Figure 1)	Changes in professional interactions with colleagues (attendance, knowledge sharing, consultation)	66.3% – Yes 24.7% – No change 9% – Difficult to answer	Most participants noted positive changes, though a quarter saw no change.
Q12 (Figure 2)	Difficulties using educational-methodological complexes of the new program	Main difficulty: topics do not correspond to age characteristics 71.6% – can adapt Others – partially, no, or difficult	Indicates difficulties in mastering the updated program independently; need to revise content according to students' age.
Q11 (Figure 3)	Ability to combine theory with practice & knowledge of psychology	22.8% – Technologies not a hindrance 28.4% – Lack of skills 21% – Lack of ICT skills 27.8% – Nothing is a hindrance	Shows insufficient preparation and varying confidence levels among participants.
Technologies used	Problems in applying new technologies	Most use 5–10 technologies 22.8% – Lack of skills or experience Other barriers: lack of self-regulation, insufficient opportunities	Indicates limited technological integration and difficulties in application.
Q20 (Figure 4)	Readiness for the profession of primary school teacher	42.1% – Low readiness	Demonstrates that many students are not fully prepared for professional practice.
Competency criteria (76% participants)	Key competencies for professional auto-pedagogical development	- Mindset in general education - Knowledge of social sciences & law - Linguistic and multilingual skills - Understanding professional significance - Ability to design and implement programs with ICT - Creativity, knowledge, and adaptability	Reflects core competencies required for future teachers to be effective professionals.

The survey assessed competence of future primary school teachers in four main areas: personal qualities; readiness for self-education and self-development; formation of professional competencies; and application of new technologies.

As R. Garcia (2021) noted, “The personality of a teacher in an environment of learning and upbringing takes the first place; one or another of his properties will increase or decrease the educational influence of learning”. Therefore, personal attributes have been recognized as

a fundamental dimension in the structure of autopedagogic competence among prospective primary school teachers.

The degree to which professional competencies are formed in these future educators is reflected in their demonstrated readiness for continuous personal growth and their sustained capacity

for self-directed learning and self-development. 70% of the survey participants indicated that they are proficient in modern teaching methods and can apply them competently in continuing education. However, 30% replied that they were not ready to work in the profession, as they considered their knowledge insufficient.

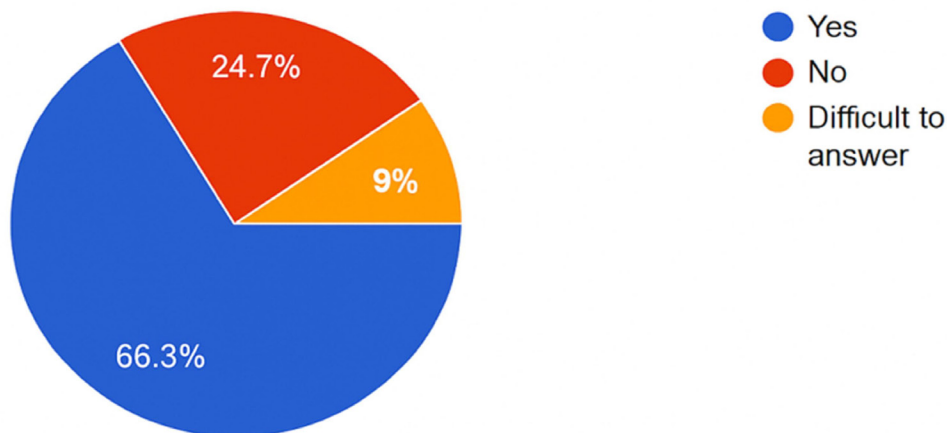


Figure 1: Result on question 6 of the questionnaire

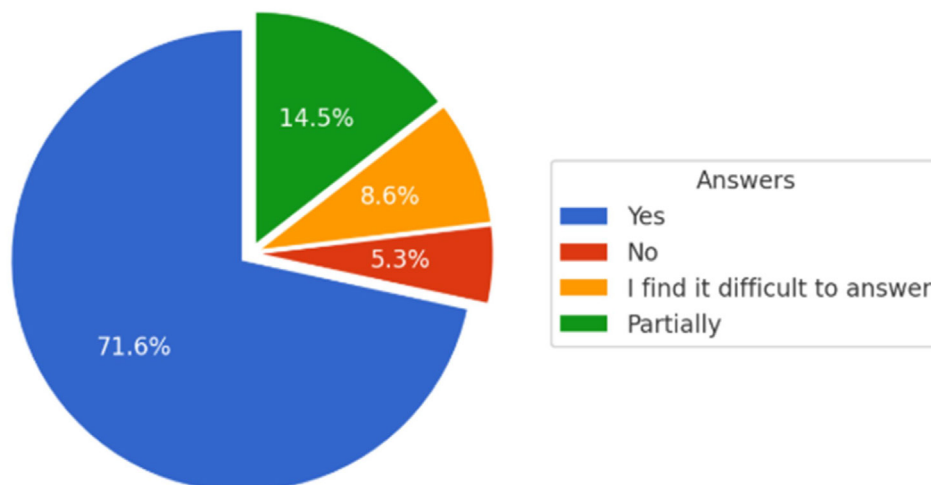


Figure 2: Result on question 12 of the questionnaire

During the survey, we also examined the problems and difficulties future primary school teachers might face when using new technologies, and obtained the following results.

According to the survey, 76% of participants confirmed the following criteria in the formation of professional autopedagogic competencies among future primary school teachers:

- has sufficient knowledge in general education disciplines and applies it when making professional decisions;
- understands the basic provisions of social sciences and uses regulatory legal documents in professional activities;
- possesses skills of linguistic communication on general and professional topics, as well as writing skills in the context of multilingual communication;

- recognizes the social importance of the teaching profession and is ready to perform professional duties;
- develops and implements educational, cultural, and outreach programs for different groups of learners, using modern information

- and communication technologies; is able to work with digital tools for information and professional tasks;
- demonstrates a high level of knowledge, creativity, and adaptability in the educational process.

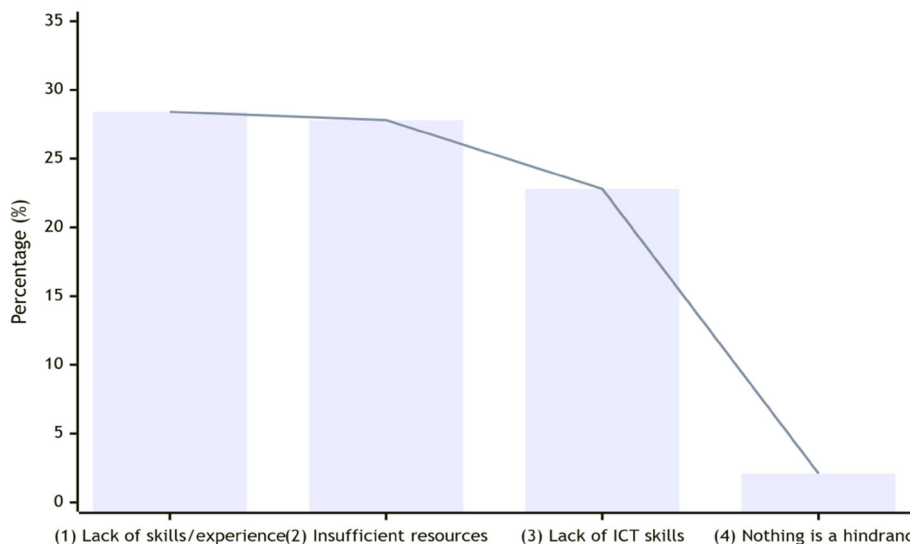


Figure 3: Result on question 11 of the questionnaire

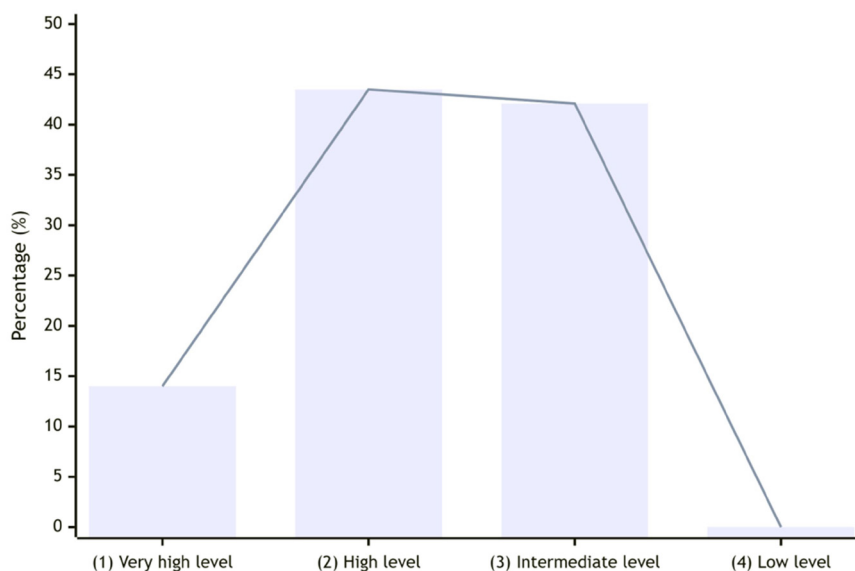


Figure 4: Result on question 20 of the questionnaire

Discussion. The findings of our study confirmed that the level of autopedagogical competence among future primary school teachers remains largely at a critical or low level. The predominance of responses such as “partially” and “no” indicates that most students do not fully understand the importance of self-

education, nor have they developed sufficient skills in self-analysis and self-assessment. These findings are consistent with recent international and Kazakhstani research.

Parpieva (2023) emphasizes that the development of autopedagogical competence requires not only the recognition by future

teachers of the necessity for continuous self-improvement but also the application of scientifically grounded and methodologically sound approaches to fostering independent learning skills. These observations align with Shiian's (2000) foundational work, in which the concept of autopedagogical competence was first systematically introduced and justified as a crucial component of professional self-development in educators.

A significant contribution to the theoretical framework is found in the work of Cirali Sarica and Usluel (2022), who distinguish between associated self-education – driven by external educational institutions – and autonomous self-education, which is intrinsically motivated and self-directed. This typology is compatible with our own conceptual framework and supports the view that autonomous self-education is the higher, more desirable level, particularly when fostering reflective and creative professionals. The necessity for digital and technological integration in teacher training – central to Education 4.0 – is addressed in the systematic review by Akimov et al. (2023). Their study highlights the importance of innovation and open digital competencies. However, as our research demonstrates, students often lack these competencies, particularly in terms of applying them to personal and professional development, revealing a further area of deficiency in teacher education curricula.

An important scientific contribution of our research lies in the refinement and operationalization of the term autopedagogical competence. Building on Shiian's (2000) earlier work, we propose a broader, integrative understanding of the concept – one that includes cognitive, motivational, and reflexive components essential for lifelong learning and modern pedagogical practice. This aligns with the current educational priorities of Kazakhstan, as formalized in the 2023 Concept of Lifelong Learning (Resolution No. 248 of the Government of the Republic of Kazakhstan), which emphasizes continuous personal and professional development across all stages of

education. Moreover, the international literature – particularly Brandenburg (2008) and Crespi et al. (2022) – increasingly emphasizes the importance of reflective and project-based learning as effective methods for developing meta-competencies and interpersonal skills. Our findings support this perspective, as future teachers with limited reflection skills show a corresponding deficit in their capacity for autonomous self-education.

Conclusions. This study investigated the phenomenon of autopedagogical competence in future primary school teachers. The research confirmed that the majority of students demonstrate insufficient readiness for independent self-development, self-reflection, and self-education. The goal of the study – to define and operationalize the concept of autopedagogical competence and to assess its current level among future educators – has been achieved.

The scientific novelty lies in clarifying the multidimensional structure of autopedagogical competence, encompassing motivational, cognitive, operational, and reflexive components. The practical significance of the findings is that they may inform the modernization of teacher training programs in higher education institutions. Nevertheless, the research faced certain limitations. The survey was conducted on a limited sample of students from two Kazakhstan universities, and the reliance on self-reported data may not fully reflect actual pedagogical practices. Future research should broaden the scope of participants, adopt longitudinal designs to trace the development of autopedagogical competence over time, and test the effectiveness of specific interventions such as digital learning platforms, project-based learning, and mentorship programs. Thus, this study provides both a conceptual framework and empirical evidence for strengthening the formation of autopedagogical competence, contributing to the preparation of reflective, autonomous, and lifelong learners in the teaching profession.

References

Akimov, N., Kurmanov, N., Uskelenova, A., & Utegenova, Zh. (2023). Components of Education 4.0 in open innovation competence frameworks: Systematic review. *Journal of Open Innovation: Technology, Market, and Complexity*, 9, 100037. <https://doi.org/10.1016/j.joitmc.2023.100037>

Arenova, A. Kh. (2017). Professionalnye kompetentsii kak otrazhenie spetsifiki pedagogicheskoi deiatelnosti [Professional competencies as a reflection of the specifics of pedagogical activity]. *Mezhdunarodnyi zhurnal prikladnykh i fundamentalnykh issledovaniy – International Journal of Applied and Fundamental Research*, 8, 125–132. <https://applied-research.ru/ru/article/view?id=2976> [in Russian]

Brandenburg, R. (2008). Powerful pedagogy: Self-study of a teacher educator's practice (Self-Study of Teaching and Teacher Education Practices), Vol. 6. *Springer*. <https://doi.org/10.1007/978-1-4020-8196-5>

Cirali Sarica, H., & Usluel, Y. K. (2022). Pre-service teachers' future professional self-understanding: A reception study through teachers' digital stories. *Journal of Education for Teaching*, 48(2), 159–177. <https://doi.org/10.1080/02607476.2021.1967088>

Crespí, P., García-Ramos, J. M., & Queiruga-Dios, M. (2022). Project-based learning (PBL) and its impact on the development of interpersonal competences in higher education. *Journal of New Approaches in Educational Research*, 11(2), 259–276. <https://doi.org/10.7821/naer.2022.7.993>

Fernández-Morante, C., Cebreiro López, B., Casal-Otero, L., & Mareque León, F. (2023). Teachers' digital competence: The case of the University System of Galicia. *Journal of New Approaches in Educational Research*, 12(1), 62–76. <https://doi.org/10.7821/naer.2023.1.1139>

Garcia, R. (2021). Factors that influence students' learning progress in the science spiral progression curriculum. *Journal of Curriculum Studies Research*, 3(2), 79–99. <https://doi.org/10.46303/jcsr.2020.5>

Guillén-Gámez, F. D., & Mayorga-Fernández, M. J. (2022). Measuring rural teachers' digital competence to communicate with the educational community. *Journal of New Approaches in Educational Research*, 11(2), 323–341. <https://doi.org/10.7821/naer.2022.7.1053>

Ilanlou, M., & Zand, M. (2011). Professional competencies of teachers and the qualitative evaluation. *Procedia – Social and Behavioral Sciences*, 29, 1143–1150. <https://doi.org/10.1016/j.sbspro.2011.11.348>

Mahlomaholo, M., Israel, H., & Mahlomaholo, S. (2023). Relationally enhancing teacher education in early childhood learning environments towards sustainability. *Journal of Curriculum Studies Research*, 5(2), 56–68. <https://doi.org/10.46303/jcsr.2023.18>

Menlibekova, G., Zhumankulova, E., Kurmankulov, A., & Tussupbekova, G. (2020). The model of the formation of professional training of future social pedagogy teachers in the conditions of the university. *Journal of Intellectual Disability – Diagnosis and Treatment*, 8, 567–572. <https://doi.org/10.6000/2292-2598.2020.08.03.34>

Parpieva, M. (2023). Scientific and practical bases of studying the problem of developing autopedagogical competence of technological education teacher. *Web of Technology: Multidimensional Research Journal*, 1(8), 5–8. <https://webofjournals.com/index.php/4/article/view/284>

Qazaqstan Respyblikasy Ukimeti. (2023, March 28). Omir boyı oqy (uzdiksiz bilim bery) tujyrymdamasy bekıtu tyraly [On the approval of the concept of lifelong learning (continuing education)] (Resolution No. 248). <https://adilet.zan.kz/kaz/docs/P2100000944#z6> [in Kazakh]

Shchur, V., Arkavenko, N., Litinska, O., Boiko-Buzyl, Y., Davydova, O., & Pryshliak, O. (2022). Analysis of the essence of the concepts of “competence” and “competency” in the system of psychological and pedagogical categories. *Revista Romaneasca Pentru Educatie Multidimensionala*, 14(4), 449–462. <https://doi.org/10.18662/rrem/14.4/650>

Shian, O. M. (2000). The autopedagogical competence of the schoolteacher. *Russian Education & Society*, 42(7), 51–60. <https://doi.org/10.2753/RES1060-9393420751>

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