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### **FRAMEWORK OF PROFESSIONAL COMPETENCIES OF EDUCATORS: A CASE RESEARCH OF TEACHERS IN WESTERN KAZAKHSTAN**

#### *Abstract*

This research focuses on analysing the professional competencies of educators within the context of contemporary educational challenges. Using a qualitative approach and phenomenological design, semi-structured interviews were conducted with 13 teachers to examine their perception and implementation of professional competencies. The research revealed a common understanding of competencies as a complex of knowledge, skills, and abilities, but also uncovered significant discrepancies between theoretical understanding and practical implementation, especially in the areas of digital and research competencies. The results showed a high appreciation for the importance of social-emotional competencies, but insufficient attention to the development of digital skills and research practices. The research identified the need for a more structured approach to developing professional competencies and systemic changes in teacher training. It emphasizes the importance of developing a comprehensive framework of professional competencies that takes into account all aspects of modern pedagogical activity. Recommendations include strengthening training in digital technologies, integrating research competencies into professional development programs, and creating a support system for the continuous professional development of teachers.

*Keywords:* educator, the framework of professional competencies, professional competencies, Professional Standard Teacher.

**Introduction.** In the era of digitalization, globalization, and the ever-changing demands of the labor market, teachers face new challenges that require constant updating of their professional skills and competencies (Redecker, 2017). The relevance of the research on the professional competence of teachers and the formation of the framework of professional competencies is due to the rapid changes in the educational environment and the introduction of the Professional standard Teacher in Kazakhstan in 2022. The framework of professional competencies of a teacher is a structured model that describes the key knowledge, skills, and personal qualities necessary for the effective implementation of pedagogical activities. It is a comprehensive tool used to identify, develop and evaluate the professional qualities of teachers, including several main components: subject

knowledge reflecting a deep understanding of the discipline taught and the ability to transfer this knowledge to students (Shulman, 1987); pedagogical skills, including the ability to plan and conduct lessons, use various teaching methods, evaluate student progress (Darling-Hammond, 2006); technological competencies, implying the ability to effectively integrate digital technologies into the educational process (Redecker, 2017); socio-emotional skills, allowing one to create a positive learning environment, manage the classroom, interact with students and colleagues (Jennings & Greenberg, 2009); research competencies, including the ability to analyze and reflect on their practice, participate in professional development (Cochran-Smith & Lytle, 1999); intercultural competencies necessary to work in a diverse educational environment and take into

account the cultural characteristics of students (Deardorff, 2006); and leadership qualities that inspire students and initiate changes in the educational environment (Leithwood et al., 2020).

The teacher's professional competence framework serves as a guideline for developing teacher training programs, evaluating their effectiveness, and planning professional development, helping to standardize expectations from teachers and providing the basis for a system of certification and career growth in education. The formation of a professional competence framework is necessary for several key purposes. First, it allows you to standardize expectations from teachers and ensure the quality of education at the systemic level (Caena & Redecker, 2019). Secondly, such a framework serves as a guideline for teachers' professional development, helping them identify areas for improvement and areas of growth (Darling-Hammond et al., 2017; Tzafilkou et al., 2023). Thirdly, it contributes to the development of more effective teacher training and professional development programs that meet the real needs of the educational system (Toom, 2019).

Well-defined competencies help in evaluating the effectiveness of teachers and can be used in certification and career advancement (Guerrero & Deligiannidi, 2017). In the context of the digital transformation of education, the digital competencies of teachers are of particular importance, which are necessary for the effective use of technology in teaching and preparing students for life in a digital society (Falloon, 2020; Āboltaņa et al., 2024; Moorhouse, 2023). Research also shows that well-defined professional competencies contribute to teachers' self-efficacy, which, in turn, has a positive effect on student learning outcomes (Zee & Koomen, 2016). In the context of the globalization of education, the professional competence framework also contributes to the international mobility of teachers and the harmonization of educational standards (European Commission, 2019). Finally, in light of the growing attention to inclusive education, the competence framework should include skills

to work with a diverse contingent of students, which requires teachers to develop intercultural and socio-emotional competencies (Ainscow, 2020).

Thus, the formation of a framework of professional competencies of teachers is a critically important tool for improving the quality of education, adapting educational systems to modern challenges, and ensuring the professional growth of teachers in a rapidly changing world.

**Materials and methods.** The professional competence of a teacher is an integrative characteristic, including a set of knowledge, skills, and personal qualities necessary for the effective implementation of pedagogical activities. This multifaceted concept encompasses the ability of a teacher to solve professional problems, apply modern educational technologies, interact with students, colleagues, and parents, as well as constantly improve their professional skills.

Many domestic and foreign scientists, including Slastenin (2002); Zimnaya (2004); and Markova (1996) have been engaged in the research of the teacher's professional competence. Slastenin (2002) considers the professional competence of a teacher as a unity of his theoretical and practical readiness to carry out pedagogical activities, emphasizing the importance of forming not only subject knowledge in a teacher but also the ability to apply it in specific pedagogical situations.

Zimnaya (2004) proposed the structure of a teacher's professional competence, including motivational, cognitive, behavioural, and value-semantic components, making a significant contribution to understanding the multidimensional nature of this concept. Markova (1996) identified several types of professional competence of a teacher: special, social, personal, and individual, emphasizing the importance of developing all these aspects for successful pedagogical activity.

In foreign science, Raven (1984) considered competence as a multi-component phenomenon that includes cognitive, emotional, and volitional components. Modern research focuses on various aspects of a teacher's professional

competence. De-Juanas Oliva et al., (2019) studied the relationship between teachers' professional competence and their self-efficacy. Zhu et al., (2020) investigated the impact of teachers' professional competence on students' academic achievement.

The understanding of a teacher's professional competence is constantly evolving due to changes in the education system and society. Modern research is increasingly paying attention to such aspects as the digital competence of teachers, their ability to communicate interculturally, and their readiness for continuous professional development (Moorhouse et al., 2024). The professional competence of a teacher is a complex characteristic, including knowledge, skills, and personal qualities necessary for effective pedagogical activity. This concept covers the ability of a teacher to solve professional problems, apply modern educational technologies, and interact with various participants in the educational process.

Recent research has significantly expanded the understanding of a teacher's professional competence. Garzón-Artacho et al., (2022) conducted a systematic review of the literature on teacher digital competence, analyzing 73 studies and identifying key factors in its development. Fernández-Batanero et al., (2021) focused on the inclusive competencies of teachers, examining their preparation for working with students with special educational needs.

Pöntinen and Rätty-Záborszky (2020) explored teachers' competencies in the field of sustainable development, demonstrating how educators integrate these principles into their practice. Mercader and Gairín (2020) studied the competencies of teachers in the field of innovation management in educational institutions, developing a model of key competencies for successful innovation. Caena and Redecker (2019) presented the European System of Digital Competencies for Teachers (DigCompEdu), which defines 22 competencies in six areas. This work offers a comprehensive approach to understanding and developing teachers' digital competencies.

The research on the professional competence of a teacher in Kazakhstan was conducted by several scientists who made a significant contribution to understanding this problem in the context of the national education system. Taubayeva (2020) studied pedagogical innovation and the development of the professional competence of teachers, focusing on the formation of their research culture. Zhajtapova (2006) investigated the issues of professional growth of teachers in the professional development system, considering the competence-based approach in the training of teaching staff. Usпанov (1999) studied the problems of the formation of professional competence of future teachers in the context of informatization of education. Abildina (2017) focused on the formation of the professional competence of future primary school teachers. Mynbayeva (2022) researched innovative teaching methods and their impact on the development of professional competence of teachers. The work of these researchers covers various aspects of the problem, including the training of future teachers, the professional development of existing teachers, the development of digital competencies, and the introduction of innovative approaches in education.

These studies show that the modern understanding of the professional competence of a teacher includes not only traditional pedagogical skills but also competencies in the fields of digital technologies, inclusive education, sustainable development, and innovation management. They also emphasize the importance of continuous professional development of teachers in a rapidly changing educational landscape.

*Research question.* How do teachers in Western Kazakhstan perceive and implement professional competencies in their teaching practice, and what are the discrepancies between their understanding of competencies and the real needs of modern education?

*Research design.* An approach based on phenomenology was used to design qualitative research. The paradigm is constructivist, as the research is based on the interpretation of

teachers' experiences through their own stories and explanations in interviews.

*Data collection method.* Semi-structured interviews, which allow for both predefined questions and flexibility to investigate participants' responses in greater detail, were the type of data collection employed in this study.

*Sample.* Thirteen professors who were specifically chosen to offer contextual relevance made up the sample. The utilisation of this particular sampling technique guaranteed that the experiences of the participants were in direct correlation with the research topic, hence enhancing our comprehension of the unique

educational milieu in Western Kazakhstan.

*Data analysis.* Thematic analysis was used in conjunction with coding approaches for data analysis. Through the process of locating, classifying, and analysing patterns or themes in the interview data, researchers were able to thoroughly investigate the fundamental ideas of teachers' professional competencies and their practical application.

**Results.** A semi-structured interview with teachers was conducted with 13 teachers in Western Kazakhstan, including the following questions (Table 1):

Table 1. *Interview questions and analysis codes*

Interview Questions	Codes for Interview Analysis
Please tell us about your teaching experience and current position	The introductory part
How would you define the concept of «professional competencies of a teacher»?	PC: Understanding professional competencies
Which competencies, in your opinion, are the most important for a modern teacher?	
In which areas do you feel most competent as a teacher?	SC: Self-assessment of competencies
In which areas would you like to improve your professional skills?	
How do you usually develop your professional competencies?	DC: Development of competencies
What forms of professional development do you consider the most effective?	
How do you rate your skills in using digital technologies in education?	DC: Digital Competencies
What challenges do you face when integrating technology into the educational process?	
How important do you consider social and emotional skills to be in the work of a teacher?	SEC: Social and emotional competencies
How do you develop these skills for yourself and your students?	
How do you take cultural diversity into account in your teaching practice?	CC: Cross-cultural competencies
What difficulties do you face in working with students from different cultural backgrounds?	
Do you research your teaching practice? If so, how?	RC: Research Competencies
How do you use the research results in your work?	
Are you familiar with any framework of professional competencies of a teacher?	Frame C: Competence Frame
How do you think such a framework can be useful for teachers?	
What changes in the system of teacher training and support could help in the development of professional competencies?	SC: System changes
Is there anything else that you would like to add on the topic of professional competencies of a teacher?	

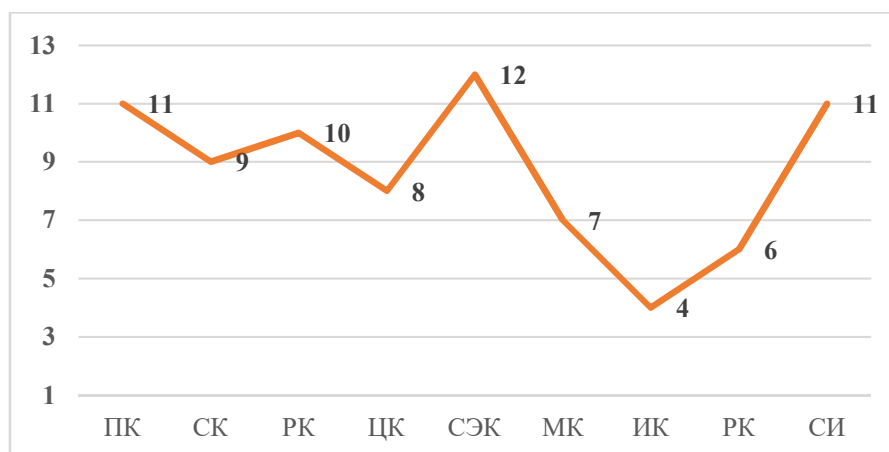


Figure 1: Interview results

**Discussion.** Based on the results of interviews with 13 teachers of Western Kazakhstan, we will analyze the interrelationships between the first question (definition of professional competencies) and other aspects of the interview:

1. *Definition of professional competencies (PC).* 11 out of 13 teachers defined professional competencies as a set of knowledge, skills, and abilities necessary for effective teaching activities.

Relationship analysis:

a) Self-assessment of competencies (SC):

- consistency: 9 teachers rated their subject knowledge highly, which corresponds to the inclusion of knowledge in the definition of PC.

- Discrepancy: 7 expressed uncertainties about digital competencies, which may indicate a lack of attention to technological skills in their definition of PCs.

b) Competence Development (RC):

- consistency: 10 teachers noted refresher courses as the main way to develop competencies, which corresponds to an integrated approach in defining the PC.

- discrepancy: only 6 mentioned self-education, which may indicate an underestimation of the importance of self-development of skills.

c) Digital Competencies (CC):

- Discrepancy: 8 teachers recognized the need to improve their digital skills, which may indicate that this aspect is not sufficiently included in their initial definition of PC.

d) Socio-emotional competencies (SEC):

- Consistency: 12 out of 13 teachers emphasized the importance of SEC, which may indicate the inclusion of this aspect in their understanding of PC, even if it was not explicitly mentioned in the initial definition.

e) Intercultural Competencies (MC):

- Partial compliance: 7 teachers noted a growing need for MC, which may reflect the evolution of their understanding of PC during the interview.

f) Research Competencies (IC):

- significant discrepancy: only 4 teachers regularly research their teaching practice, which may indicate the absence of this aspect in their initial definition of PC.

g) Competence Framework (K-frame):

- discrepancy: only 6 teachers are familiar with the concept of the competence framework, and only 3 have used them in their practice, which may indicate a gap between the theoretical understanding of the PC and the practical application of structured approaches.

h) System changes (SI):

- consistency: 11 teachers spoke in favour of the need for systemic changes in teacher training, which corresponds to the comprehensive understanding of the PC expressed in the initial definition.

The analysis shows that there is a general consistency between the initial definition of professional competencies and the answers to subsequent questions, especially about subject knowledge and the importance of socio-emotional competencies. However, there



are significant discrepancies in the field of digital and research competencies, which may indicate a lack of attention to these aspects in the initial understanding of PC by teachers. This discrepancy highlights the need for a more comprehensive approach to defining and developing teachers' professional competencies.

**Conclusion.** The research on the professional competencies of teachers in Western Kazakhstan revealed a complex picture of the perception and implementation of these competencies in the modern educational context. The analysis of interviews with 13 teachers revealed both areas of consistency and significant discrepancies between the theoretical understanding of professional competencies and their practical implementation.

The majority of teachers (11 out of 13) demonstrated an understanding of professional competencies as a set of knowledge, skills, and abilities necessary for effective teaching, indicating that there is a common base for further development of professional standards. However, the research also identified several significant gaps and areas that require attention.

The most noticeable discrepancies were observed in the field of digital and research competencies. Despite the recognition of the importance of digital skills in modern education, a significant proportion of teachers (7 out of 13) expressed uncertainty about their digital competencies, pointing to the need to strengthen teacher training in the use of digital technologies in the educational process.

An even more pronounced gap was observed in the field of research competencies: only 4 out of 13 teachers regularly research their teaching practice, indicating insufficient attention to the development of research skills in existing teacher training and professional development programs. A positive aspect is the high assessment of the importance of socio-emotional competencies (12 out of 13 teachers), which reflects the growing understanding of the role of emotional intelligence in the educational process. However, further research is needed

on how teachers develop and apply these competencies in practice.

The results of the research also indicate the need for a more structured approach to the development of professional competencies. Only 6 teachers were familiar with the concept of the competence framework, and only 3 used them in their practice, indicating a gap between theoretical developments in the field of professional standards and their practical application in schools in Western Kazakhstan.

An important conclusion is the recognition by teachers (11 out of 13) of the need for systemic changes in teacher training, opening up opportunities for reforming the system of teacher education and professional development, taking into account the identified needs and gaps. The research highlights the importance of developing and implementing a comprehensive framework of professional competencies of a teacher that would take into account all aspects of modern teaching activities, including digital, research, and intercultural competencies. Such a framework should serve not only as an assessment tool but also as a guideline for the continuous professional development of teachers.

Within the framework of the research, it is recommended to strengthen teacher training in the field of digital technologies and their application in the educational process of schools; integrate research competencies into teacher training and advanced training programs; develop and implement a detailed framework of professional competencies; continue work on support and post-course support for continuous professional development of teachers based on identified needs and modern educational trends; Conduct regular monitoring and evaluation of teachers' professional competencies to identify areas that require further development.

This research represents an important step in understanding the professional competencies of teachers in Western Kazakhstan and opens up prospects for further research and practical measures to improve the system of teacher education in the country.

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