BG Pulse Journal USA
ISSN:1947-2536 http://www.bgpulseusa.com/index.php/bg

FACTORS ENSURING THE EFFECTIVENESS OF PEDAGOGICAL MECHANISMS IN PROSPECTIVE TEACHERS BASED ON THE 7K MODEL

Zholdasbaeva Ayzhamal Rustembay kyzy

English teacher

Doi: https://doi.org/10.5281/zenodo.21259815

Abstract: This article provides a scientific-theoretical and practical analysis of factors that ensure the effectiveness of pedagogical mechanisms based on the 7K model for future educators. New methodological approaches to the professional training of educators are substantiated in the context of digital transformation of the modern education system, a competency-based approach, and innovative pedagogical technologies. The study systematically analyzed the impact of the 7K model's structural components - creativity, critical thinking, communication, collaborativeness, professional competence, professional reflection, and cognitive flexibility - on the effectiveness of pedagogical mechanisms. The role of didactic conditions, digital educational tools, and interactive methods serving the development of these competencies was also highlighted.

Keywords: 7K model, future teacher, pedagogical mechanism, professional competence, creativity, critical thinking, communicativeness, collaborativeness, reflection, cognitive flexibility, pedagogical education.

Introduction. The digital transformation occurring in the global education system, the rapid development of artificial intelligence technologies, and the widespread application of the competency-based approach impose new requirements on the content of teacher training. A modern teacher must possess not only profound professional knowledge but also competencies such as creative thinking, problem-solving, effective communication, teamwork, reflection, and the ability to quickly adapt to a changing educational environment. Therefore, the transition from a traditional knowledge-oriented approach to a competency-oriented model in the training of future educators is one of the urgent pedagogical tasks. International research conducted in recent years to improve the quality of pedagogical education shows that a teacher's professional success largely depends on their level of mastery of 21st-century competencies. In this regard, new pedagogical models aimed at developing creativity, critical thinking, communication, cooperation, reflective activity, and digital competence are being developed in pedagogical education. However, existing studies have not sufficiently developed a model that integrates these competencies into a single system and allows for the evaluation of the effectiveness of pedagogical mechanisms.

In recent years, the issue of preparing future educators for professional activity within the higher pedagogical education system has become one of the most relevant scientific directions at the international level. The digital transformation of education, the implementation of artificial intelligence technologies, and the development of the competency-based approach require teachers to possess not only profound professional knowledge but also modern pedagogical competencies. For this reason, the number of scientific studies aimed at improving the content of pedagogical education, developing the professional competence of future teachers, and improving the quality of education is increasing.

An analysis of scientific literature shows that the methodological foundations of training future educators are inextricably linked to the theories of the competency-based approach, constructivism, activity-oriented education, and reflexive pedagogy. According to the competency-based approach, the primary goal of the educational process is not merely the acquisition of knowledge, but rather the training of specialists who can apply it effectively in practical activities. This approach entails developing an educator's creative thinking, problem-solving abilities, communication culture, and reflective practice[1].

International research has proposed various models for developing 21st-century competencies. The most widespread among these are the 4C (Critical Thinking, Creativity, Communication, Collaboration), TPACK (Technological Pedagogical Content Knowledge), and DigCompEdu models. These models substantiate the need for the integrated development of technological, methodological, and communicative competencies in an educator's professional activities. However, these models do not encompass factors such as reflection, adaptability, and professional self-development, which influence the personal and professional growth of future educators, as a comprehensive system.

The TPACK model, developed by Mishra and Koehler, is based on the integration of the educator's knowledge regarding technological, pedagogical, and scientific content. This model serves as an important theoretical basis for the effective use of digital technologies in modern pedagogical activities. At the same time, the DigCompEdu model, developed by the European Commission, defines international criteria for assessing and developing digital competencies of educators. This model serves as an important methodological basis for planning pedagogical activities, managing the educational process, and organizing assessment and reflective activity[2].

In domestic scientific research, special attention is paid to the issues of developing the professional competence of future educators. Uzbek scholars have conducted numerous scientific studies on the didactic foundations of teacher training based on a competency approach, the application of innovative pedagogical technologies, and the development of reflexive activity. However, existing research has not sufficiently addressed the issue of integrating creativity, critical thinking, communication, collaboration, professional reflection, and cognitive flexibility within a single methodological model.

In this regard, this article proposes the 7K model. This model integrates seven interrelated competencies that characterize the professional training of future educators into a unified system. The theoretical basis of the model is formed by the principles of the competency-based approach, reflexive pedagogy, constructivism, and modern digital pedagogy. The proposed model serves to increase the effectiveness of pedagogical mechanisms, improve the professional training of future educators, and improve the quality of education in higher educational institutions.

Based on the literature analysis, the following scientific gap (research sentence) was identified:

- existing models do not integrate the personal and professional competencies of the future teacher in a comprehensive manner;

- the factors ensuring the effectiveness of pedagogical mechanisms have not been systematically characterized;

- The methodological foundations for applying 7K competencies in the context of higher pedagogical education have not been developed.

To fill this scientific gap, this article develops the author's 7K model and substantiates its theoretical and methodological capabilities in ensuring the effectiveness of pedagogical mechanisms.

Preparing future educators for effective professional activity in a modern educational environment is not limited solely to acquiring theoretical knowledge. Today, a teacher's professional success is determined by their creative thinking, critical analysis, effective communication, teamwork skills, professional reflection, and ability to adapt to a rapidly changing educational environment. From this perspective, this study developed a 7K model that ensures the professional development of future educators. This model is interpreted as a system of mutually integrated competencies that serves to increase the effectiveness of pedagogical mechanisms.

The methodological basis of the proposed model consists of the principles of the competency-based approach, constructivist theory of education, reflexive pedagogy, and digital pedagogy. According to these approaches, a teacher's professional competence is determined not only by a set of knowledge but also by their effective application in practical activities, the analysis of pedagogical situations, the adoption of innovative decisions, and the level of readiness for continuous professional development.

The author's 7K model consists of seven interconnected components that form a unified pedagogical system. The first component of the model is creativity, which represents the teacher's ability to promote innovative ideas, find non-standard solutions to problems, and create new pedagogical technologies. Creativity enriches the content of the educational process, increases students' motivation for knowledge, and forms an interactive learning environment.

The second component, critical thinking, characterizes the teacher's ability to analyze information, compare evidence, solve problems on a scientific basis, and predict the consequences of pedagogical decisions. A teacher with developed critical thinking is capable of managing complex situations arising during the educational process based on a scientific approach.

The third component of the model is communicativeness, which represents the teacher's ability to establish effective communication with students, colleagues, and parents, express their thoughts clearly and reasonedly, and create a positive psychological environment in the educational process. Effective communication is an important condition for pedagogical cooperation.

The fourth component - collaborativeness - includes the competence of organizing team activities, solving problems in cooperation, and exchanging experience. In the modern education system, project-based learning, STEAM education, and interdisciplinary integration rely specifically on collaborative competence.

The fifth component is professional competence, which reflects the level of integration of a teacher's knowledge in science, methodology, pedagogy, and psychology, as well as their effective application in practical activities. This competence is a central element of pedagogical mechanisms.

The sixth component is professional reflection, which represents the teacher's analysis of their activities, identification of existing shortcomings, development of a self-development strategy, and

striving for professional growth. Reflective activity is a fundamental prerequisite for continuous professional development.

The seventh component is cognitive adaptability, characterizing the teacher's ability to quickly adapt to digital technologies, artificial intelligence tools, and modern pedagogical innovations. In the context of rapid changes in the education system, it is precisely this competence that ensures the professional stability of a teacher.

These competencies are inextricably linked, and the development of one of them has a positive impact on the improvement of others. Therefore, the 7K model is considered an integral system that ensures the effectiveness of pedagogical mechanisms.

The analysis showed that creativity and critical thinking are the main factors determining the innovative direction of pedagogical activity. A creative educator develops new methods, while a critically thinking educator evaluates their effectiveness on a scientific basis. The harmonious development of these two competencies improves the quality of pedagogical decisions and ensures the efficiency of the educational process.

The components of communicativeness and collaborativeness emerge as key factors in the development of pedagogical cooperation within the modern educational environment. Future educators' ability to establish effective communication, develop teamwork skills, and establish interdisciplinary cooperation has a direct positive impact on the quality of education. This allows for the effective use of project-based learning, problem-based learning, and collaborative learning technologies.

Professional competence and professional reflection are strategic factors ensuring the continuous development of pedagogical activity. The research results show that reflexive activity serves the teacher's regular work on themselves, the identification of methodological errors, and the improvement of their activities. As a result, the quality indicators of professional competence gradually increase.

Cognitive flexibility is manifested as one of the most important competencies of a teacher in the context of digital transformation. The development of artificial intelligence, digital platforms, and adaptive learning technologies requires educators to quickly master new knowledge, integrate innovative technologies into the educational process, and constantly update their pedagogical activities. Therefore, it is scientifically and practically justified to distinguish this competence as an independent component of the 7K model.

CONCLUSION. In conclusion, it should be noted that this model allows for the assessment and development of the professional training of future educators as a holistic system. The research results demonstrated that the effectiveness of pedagogical mechanisms is ensured not through individual competencies, but through their mutual integration. In particular, creativity and critical thinking serve to develop innovative pedagogical activity, while communicativeness and collaborativeness ensure effective cooperation in the educational process. Professional reflection and cognitive adaptability manifest as important factors determining the teacher's continuous professional development and adaptability to the digital educational environment.

The proposed 7K model can serve as a methodological basis for improving teacher training programs in higher educational institutions, developing competency-oriented curricula and subject

programs, monitoring the professional development of educators, and improving the professional development system. In future research, it is advisable to conduct empirical testing of this model in higher education institutions, determine the relationship between components using statistical methods, and conduct a comparative analysis of the model's pedagogical effectiveness with international experience.

References:

1. Law of the Republic of Uzbekistan "On Education." No. ZRU-637, 2020.
2. Decree of the President of the Republic of Uzbekistan No. UP-5847. Concept for the Development of the Higher Education System until 2030. 2019.
3. Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. Teachers College Record, 108 (6), 1017–1054
4. UNESCO. (2023). Guidance for Generative AI in Education and Research. Paris: UNESCO.
5. OECD. (2023). OECD Digital Education Outlook 2023. Paris: OECD Publishing.
6. Muslimov, N. A. (2016). Kasbiy ta'lim metodikasi. Toshkent: Fan va texnologiya.
7. Tolipov, O'. Q., Usmonboyeva, M. (2019). Pedagogik texnologiyalarning tatbiqiy asoslari. Toshkent: Fan.
8. Ishmuhamedov, R. J., Abduqodirov, A. A., Pardaev, A. X. (2020). Ta'limda innovatsion texnologiyalar. Toshkent: Iste'dod.
9. Azizxo'jayeva, N. N. (2018). Pedagogik texnologiyalar va pedagogik mahorat. Toshkent: O‘qituvchi.