



## PRINCIPLES OF DEVELOPMENT OF PROFESSIONAL COMPETENCIES OF PRESCHOOL EDUCATION TEACHERS THROUGH DIGITAL EDUCATION TOOLS

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**Abstract:** *This article is devoted to the study of the principles of developing the professional competencies of preschool teachers through digital educational tools. The study analyzes the effectiveness of using modern digital platforms, interactive educational materials, and electronic educational resources in improving the professional qualifications of teachers. The article also examines the role of digital educational tools in the formation of creative thinking, practical skills, and professional culture of teachers, their integration with pedagogical methods, and the basic principles of organizing the continuous learning process.*

**Keywords:** *preschool education, teachers, professional competence, digital education, interactive methods, professional qualifications.*

## MAKTABGACHA TA'LIM PEDAGOGLARINING KASBIY KOMPETENSIYALARINI RAQAMLI TA'LIM VOSITALARI ORQALI RIVOJLANTIRISH TAMOYILLARI

**Annotatsiya:** *Ushbu maqola maktabgacha ta'lim pedagoglarining kasbiy kompetensiyalarini raqamli ta'lim vositalari orqali rivojlantirish tamoyillarini o'rganishga bag'ishlangan. Tadqiqotda pedagoglarning kasbiy malakasini oshirishda zamonaviy raqamli platformalar, interfaol o'quv materiallari va elektron ta'lim resurslaridan foydalanishning samaradorligi tahlil qilinadi. Shuningdek, maqolada pedagoglarning kreativ fikrlash, amaliy ko'nikma va professional madaniyatini shakllantirishda raqamli ta'lim vositalarining roli, pedagogik metodlar bilan integratsiyalashuvi hamda uzluksiz o'qitish jarayonini tashkil etishning asosiy tamoyillari ko'rib chiqilgan.*

**Kalit so'zlar:** *maktabgacha ta'lim, pedagoglar, kasbiy kompetensiya, raqamli ta'lim, interfaol metodlar, professional malaka.*



## ПРИНЦИПЫ РАЗВИТИЯ ПРОФЕССИОНАЛЬНЫХ КОМПЕТЕНЦИЙ ПЕДАГОГОВ ДОШКОЛЬНОГО ОБРАЗОВАНИЯ ЧЕРЕЗ ЦИФРОВЫЕ СРЕДСТВА ОБУЧЕНИЯ

**Аннотация:** *Данная статья посвящена изучению принципов развития профессиональных компетенций педагогов дошкольного образования посредством цифровых образовательных инструментов. В исследовании анализируется эффективность использования современных цифровых платформ, интерактивных учебных материалов и электронных образовательных ресурсов в повышении профессиональной квалификации педагогов. Также в статье рассматривается роль цифровых образовательных инструментов в формировании креативного мышления, практических навыков и профессиональной культуры педагогов, их интеграция с педагогическими методами и основные принципы организации непрерывного образовательного процесса.*

**Ключевые слова:** *дошкольное образование, педагоги, профессиональная компетенция, цифровое образование, интерактивные методы, профессиональная квалификация.*

In recent years, the widespread introduction of digital technologies into the education system has become a global trend. In world practice, online courses, interactive platforms, artificial intelligence, and educational systems based on AR/VR technologies are effectively used to improve the digital literacy of teachers. For example, a system for introducing and certifying digital qualifications of teachers has been introduced in universities of the European Union and the USA. Also, in such countries as South Korea, Singapore, and Japan, there is advanced experience in developing the practical and creative skills of teachers using interactive media in preschool education.

The processes of digital transformation are actively continuing in the education system of Uzbekistan. Within the framework of the “Digital Uzbekistan – 2030” program, measures are being implemented aimed at providing preschool teachers with modern digital tools, improving their professional training, and enhancing the effectiveness of pedagogical activity. At the same time, in recent years, the Ministry of Education of the Republic of Uzbekistan has introduced interactive platforms, electronic textbooks, online courses, and media resources, which have significantly improved the digital literacy of teachers and their skills in applying innovative pedagogical approaches[1].

Digital educational tools - interactive educational platforms, multimedia resources, virtual laboratories, and online courses allow teachers to strengthen



their theoretical knowledge, develop practical skills, and apply innovative pedagogical technologies. At the same time, educators, effectively using digital tools, can organize interactive and creative activities with children, stimulating the process of their personal development, deep assimilation of social skills and knowledge.

In recent years, the integration of digital technologies in the global education system has been considered as a central factor in the development of professional competencies of teachers. International research shows that multimedia and interactive learning tools allow for the consolidation of the teacher's theoretical knowledge, the development of practical skills, and the visualization of complex tasks. At the same time, AR and VR technologies are an effective tool for the formation of creative and critical thinking skills in teachers.

In the study of Staneviciene et al., it was noted that project-based learning and the use of interactive media in the process of developing the professional competencies of teachers significantly increase the effectiveness of the educational process. At the same time, in her research, Namle emphasized the high effectiveness of interactive online platforms and electronic courses in the development of independent thinking, analytical skills, and creative approaches of teachers.

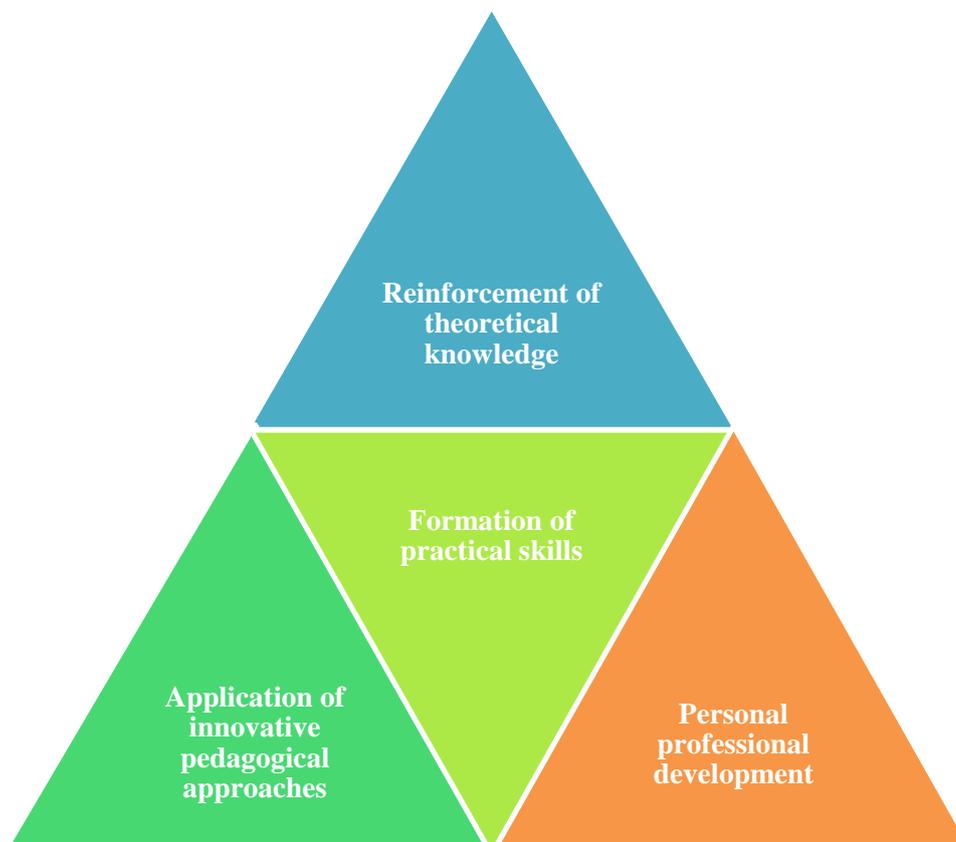
In the context of Uzbekistan, according to the research of Jurayev and Kuchkarov, the use of digital tools in the development of professional competencies of preschool teachers gives a systematic and effective result. Local studies show that it is important to introduce interactive trainings, e-courses, and online seminars to improve teachers' digital literacy and develop their skills in applying innovative pedagogical approaches.

Also, in the Strategy of the Republic of Uzbekistan “Digital Uzbekistan - 2030,” familiarizing teachers with modern digital technologies and improving their professional qualifications is defined as a priority task. This strategy will allow for the development of practical work to improve the digital literacy of teachers in preschool institutions, the effective use of media resources and electronic platforms[3].

Analysis of the literature and modern research shows that digital educational tools are of strategic importance in the development of professional competencies of preschool teachers. In global practice, training teachers using interactive platforms, multimedia resources, artificial intelligence, and AR/VR technologies serves to strengthen their theoretical knowledge, develop practical skills, and form the ability for creative thinking. At the same time, project-based learning and simulation sessions significantly increase teachers' ability to analyze and find solutions to complex tasks[4].

In the context of Uzbekistan, the processes of digital transformation create new opportunities for professional development of preschool teachers. In accordance with the “Digital Uzbekistan – 2030” strategy, providing educators with interactive platforms, electronic textbooks, online courses, and media resources serves to improve their digital literacy and develop skills in applying innovative pedagogical approaches [5,6,7].

The discussion shows that the effective use of digital educational tools in the development of professional competencies of teachers is manifested in the following main aspects (Fig. 1):



**Figure 1. Main aspects of the effective use of educational tools**

**1. Reinforcing theoretical knowledge:** With the help of multimedia and interactive resources, teachers master complex pedagogical theories through visualization, which increases their level of understanding.

**2. Formation of practical skills:** Virtual laboratories, simulations, and project-based training allow teachers to gain safe and effective practical experience.

**3. Application of innovative pedagogical approaches:** Digital tools allow the teacher to organize lessons in an interactive and creative way, develop and implement new methods.



**4. Personal professional development:** Online courses, webinars, and interactive trainings expand opportunities for independent self-development and professional development of teachers.

Analysis of the literature and domestic practice shows that the ability of teachers to effectively use digital tools is the main factor in improving the quality of education, supporting the development of children, and the systematic development of the teacher's professional competence. At the same time, through the use of digital tools, teachers can modernize their activities, apply innovative methods, and constantly improve their professional competencies.

As a result, digital educational tools are important not only as a technological tool, but also as a strategic mechanism for the development of a teacher's professional competencies. It is an important tool for improving the professional qualifications of preschool teachers and effectively supporting the development process of children.

In conclusion, the development of the professional competence of teachers in the preschool education system through digital educational tools is one of the most important conditions for improving the quality and effectiveness of education today. Digital technologies bring a new approach to the activities of teachers, interactive methods, innovative educational resources, and personality-oriented educational opportunities. Studies show that digital literacy, skills in using multimedia educational materials, the use of distance and blended learning methods significantly develop the professional skills of preschool teachers. Therefore, a systematic approach to the use of digital educational tools, continuous professional development, methodological support, and strengthening the motivation of teachers are manifested as the main principles of the formation of digital competencies. The implementation of these principles will increase the effectiveness of the preschool education process, improve the dynamics of children's development, and create new opportunities for the professional growth of teachers.

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