

# “DIGITAL ENVIRONMENT IN TRAINING FUTURE TEACHERS: ADVANTAGES AND OPPORTUNITIES”

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## Abstract

This article discusses the impact of digital technologies on teacher-student activities in educational processes. The author provides an analysis of the main advantages of the digital environment, such as expanding the boundaries of education, individualizing education and developing communication skills. It also discusses the opportunities that the digital environment presents for future teachers and calls for the development of digital literacy and competencies in education. The article emphasizes the importance of using digital technologies to improve the quality of education and to adapt educational fields to modern requirements.

**Keywords:** digital technologies, education, future teachers, digital literacy, individualization, communication skills, advantages, opportunities, educational environment, digital learning, competencies, learning technologies, modern education.

## Introduction

### «ЦИФРОВАЯ СРЕДА В ПОДГОТОВКЕ БУДУЩИХ УЧИТЕЛЕЙ: ПРЕИМУЩЕСТВА И ВОЗМОЖНОСТИ»

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## Annotatsiya:

Ushbu maqolada ta'lim jarayonlarida raqamli texnologiyalarning pedagog-talaba faoliyatiga ta'siri to'g'risida fikr yurgiziladi. Muallif, raqamli muhitning ta'lim chegaralarini kengaytirish, ta'limni individuallashtirish va muloqot ko'nikmalarini rivojlantirish kabi asosiy afzalliklari tahlilini keltiradi. Shuningdek, raqamli muhit bo'lajak o'qituvchilar uchun taqdim etayotgan imkoniyatlarni muhokama qiladi va ta'limda raqamli savodxonlik va kompetensiyalarni rivojlantirishga chaqiradi. Maqolada ta'lim sifatini oshirish va zamonaviy talablarga ta'lim sohalarining moslashtirish uchun raqamli texnologiyalardan foydalanishning muhimligini ta'kidlaydi.

**Kalit so'zlar:** raqamli texnologiyalar, bo'lajak o'qituvchilar, raqamli savodxonlik, individuallashtirish, muloqot ko'nikmalari, afzalliklar, imkoniyatlar, ta'lim muhiti, raqamli ta'lim, kompetensiyalar, ta'lim texnologiyalari, zamonaviy ta'lim.



**Аннотация:**

В данной статье рассматривается влияние цифровых технологий на деятельность педагог-студента в образовательном процессе. Автор приводит анализ основных преимуществ цифровой среды, таких как расширение границ образования, индивидуализация обучения и развитие коммуникативных навыков. Также обсуждаются возможности, которые цифровая среда представляет для будущих учителей, и призывают к развитию цифровой грамотности и компетенций в образовании. В статье подчеркивается важность использования цифровых технологий для повышения качества образования и адаптации образовательных сфер к современным требованиям.

**Ключевые слова:** цифровые технологии, будущие учителя, цифровая грамотность, индивидуализация, коммуникативные навыки, преимущества, возможности, образовательная среда, цифровое обучение, компетенции, обучающие технологии, современное образование.

**Introduction**

Currently, the digital environment is becoming an increasingly important tool in education, including in the training of future teachers. Improving the creation and use of the digital environment plays a key role in developing the professional competence of future teachers. One of the main aspects of improving the digital environment is providing access to modern technologies and learning resources. Future teachers must be equipped not only with basic computer skills, but also be able to effectively use various educational programs, online resources and interactive tools to teach and interact with students.

Another important aspect is the development of digital literacy among future teachers. This includes the ability to critically evaluate information from the Internet, distinguish fake news from reliable news, and ethically use online data in the educational process. It is also important to teach future teachers to use digital tools to assess student progress, provide feedback, and personalize instruction. The creation of a digital environment contributes to the development of creative and innovative abilities of future teachers. The use of digital technologies allows you to create interactive lessons, a variety of educational materials and conduct online consultations with students. This helps teachers be more flexible, adaptive and effective in their work.

The key role of digital technologies lies in the innovative development of higher education, namely in the preparation of future teachers ready to work in the digital educational environment (hereinafter referred to as DES). The implementation of this direction is carried out in accordance with the Strategy "Digital Uzbekistan - 2030" and the rapid introduction of artificial intelligence technologies and their widespread use in our country, ensuring access to digital data and their high quality, it is necessary to create favorable conditions for the training of qualified personnel in this area. Regulatory legal acts are focused on the development of a certain basic model of competencies of a graduate of a pedagogical university, which contribute to the formation of professionally important qualities (hereinafter referred to as PQQ) of future



teachers for working in the CES in modern socio-economic conditions. The formation of the personal training standards of future teachers to work in the educational center at all stages of training in a higher educational institution is an important condition for meeting the requirements for the teaching profession. The level of development of the personal and professional skills of future teachers for work in the educational center is manifested in a positive impact on the effective parameters of professional activity, such as the quality of education. In the psychological and pedagogical literature, various aspects of the problem of forming the personal training skills of a modern specialist are widely covered (Ayupov R.Kh., Mamarajapov M.E., Kakhkharov O., Ananyev B.G., Andreeva L.A., Banaitis N.G., Bobrikov V.N., Zeer E.F., Karpov A.V., Kuzmina N.V.).

Various aspects of the problem of forming the PVC of future teachers are reflected in the studies of Golovin A.A., Dmitrieva E.Yu., Kustova E.I., Litvinenko T.V., Startseva O.G. and etc.

In the context of digitalization of education, the number of studies devoted to the training of personnel within the DSP has increased (Konovalov A.A., Mikhaleva O.V., Obydenkova V.K., Khablieva S.R., Yanitsky M.S.). However, no work was found on training teaching staff to work in the digital educational environment. The formation of a wide range of PVC of future teachers to work in the DSP is necessary as a continuous process throughout the entire training cycle with the support of pedagogical tools and DSP technologies. This formulation of the question actualizes the task of theoretically substantiating the problem of research and finding ways to organize the educational process, within the framework of which a pedagogically effective implementation of the process of forming the educational qualifications of future teachers for work in the DSP is possible.

Based on the analysis of the literature, we can conclude that the current state of the problem of forming the PVC of future teachers to work in the DSP from the point of view of digitalization of education has not been sufficiently studied. There are approaches to structuring and classifying the PVC of a future teacher, which can be combined into the following groups from the point of view:

- integration of individual characteristics;
- life values;
- main types of teaching activities.

The term “digital educational environment” is not defined by law, however, it is used in some Government decrees and other regulations. For example, a priority project in the field of education “Modern digital educational environment in our Republic” was approved as part of the implementation of the Presidential Decree on approval of the concept for the development of the public education system of the Republic of Uzbekistan until 2030 (Presidential Decree No. UP-5712 dated April 29, 2019).

According to the decree, a key role in the innovative development of higher education is given to the development of digital technologies through the creation of organizational, financial and legislative mechanisms for the transition to innovation and the introduction of digital, intelligent production technologies, robotic systems, as well as the commercialization of new scientific developments in the field of higher education.



Providing training for work in the digital educational environment of the education system, when forming the internal training standards of future teachers, it is necessary to take into account the following features of the digital educational environment:

- openness of access to information systems (technical, financial, informational, methodological, software, etc.) for any users;
- access to the Internet environment (part of digital content);
- introduction of on-line training as an equal part of educational programs (online courses, digital libraries, databases for educational purposes, information and reference systems);
- creation of an information resource that provides access to online courses based on the “one window” principle and combines a number of existing platforms.

When preparing a future teacher, it is necessary to take into account the features of the DSP in order to form a number of PVCs for the implementation of projects in the field of digital education (online courses, robotic research, distance learning).

As a consequence of this, “professionally important qualities of future teachers for working in a digital educational environment” is a set of characteristics of a future teacher that are specific to professional pedagogical activities and necessary for working in a digital educational environment.

The concept of “formation of the educational and professional standards of future teachers for work in the central educational system” is defined as the purposeful professional and pedagogical activity of subjects of the educational process, aimed at designing the goals and content of educational and professional activities within the framework of the central educational system and ensuring an increase in the level of development of the personal and cultural standards of future teachers for work in the central educational system.

Justification of the importance of forming the PBC of future teachers for work in the DSP as the basis for achieving high results in the professional and pedagogical activities of students determined the need for consistency of DSP technologies with the list of PCP of future teachers during the digitalization of education. For example, proficiency in modern video communication tools is necessary to use video conferencing (webinars) using Skype, Zoom, or possession of ICT competencies in the field of creating and administering websites, to create a website for a teacher (educational organization), etc.

To solve a number of professional problems of an information and telecommunications nature, theoretical and practical preparedness is required within the framework of the DSP through a set of digital literacy qualities.

The fundamental methodological approaches for the formation of the PVC of future teachers to work in the DSP within the framework of modern requirements of society for the training of teaching staff are: competence-based (the main approach of the higher education system) and professional activity, that is, the formation of the personality of a specialist through activities within the DSP.

Taking into account the structural components of the professionally important qualities of future teachers for working in the DSP and taking into account their definitions, criteria and indicators of the level of formation of the PVC of future teachers are highlighted: a motivational-need criterion for the formation of the PVC for the DSP, which determines the





level of motivation for the awareness of teaching activities in the digital educational environment, the degree of understanding of the social significance of the chosen activity within the DSP, the value attitude of students to future teaching activities in the DSP, the desire to increase the level of development of personal training skills for work in the DSP; the criterion for the formation of the PVC, which determines the student's idea of the upcoming professional activity (the image of the profession) within the framework of the DSP, the formation of theoretical knowledge of knowledge, the ability to integrate educational material with practice through the use of digital educational resources, knowledge of the necessary PCT of future teachers to work in the DSP; the operational criterion for the formation of the PVC determines the ability of students to correlate their PVC for working in the DSP with the qualification characteristics of the profession they are receiving (regulatory and legal requirements), the use of PVC in various types of professional activities in the DSP; self-assessment involves future teachers assessing their PVCs for working in the DSP and assessing their preparedness for professional activities in the digital educational environment.

The algorithm for the process of forming the PVC of future teachers to work in the DSP is possible through the developed pedagogical conditions, represented by a set of pedagogical actions according to the nature of the impact on the personality of the future teacher. Under the pedagogical conditions for the formation of the personal and educational qualifications of future teachers for work in the central educational system, we will understand a set of targeted measures of influence that contribute to the organization of educational and professional activities of subjects of the educational process, aimed at increasing the level of formation of professionally important qualities of future teachers for work in the central educational system. Such pedagogical conditions for the formation of professionally important qualities of future teachers for working in the digital educational environment include:

- designing the goals and content of educational and professional activities within the framework of the central educational system for the formation of the PVC of future teachers;
- coordination of the actions of the teacher and the student on the formation of the personal training standards of future teachers for work in the DSP and the restructuring of the functional responsibilities of future teachers during various types of internships based on the use of technologies in the digital educational environment;
- assessing the effectiveness of the formation of the personal training standards of future teachers for work in the CES.

The discipline "Information Technologies in Education" made it possible to develop the skills to organize the educational process with the effective use of ICT tools, which involves conducting trial classes in one's group, organizing classes with students within the educational platform; ability to use the functionality of social networks in the field of education; possession of ICT competencies in the field of website creation and administration - this is the creation of a teacher's website using ready-made website creation platforms Moodle, WordPress, Google class, knowledge of information security skills; knowledge of tools for developing online testing, voting and surveys, in particular the creation of surveys using social networks and cloud technologies; proficiency in modern online documentation tools, such as Google.



The accumulated theoretical and practical material does not exhaust all the problems associated with the formation of the PVC of future teachers to work in the CES and the determination of conditions conducive to their formation.

Conclusion: in general, DSP opens up enormous opportunities for future teachers to develop their professional skills, improve the quality of education and successfully adapt to modern requirements of the educational sphere. Therefore, it is important to continue to improve the digital literacy and competencies of future teachers so that they can effectively use all the benefits of the digital environment in their work. This helps them to be successful, innovative and adapt to an ever-changing educational context.

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