

## MIXED EDUCATION AT A PEDAGOGICAL UNIVERSITY. THE ESSENCE AND WAYS OF IMPLEMENTATION

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### ABSTRACT

One of the trends in modern education is the creation of a digital educational environment. This article reveals the relevance of this trend for the pedagogical institute. One of the components of the digital educational environment, web resources, is considered in detail. Their types are described and examples of the most relevant subject resources for the introduction into the educational process are presented.

**Keywords:** education, digital environment, digital resource, web technologies, digital competence, digital literacy.

### INTRODUCTION

Blended learning at a pedagogical university is a modern pedagogical practice that combines elements of traditional and distance learning using information and communication technologies. This method of teaching allows you to combine the advantages of traditional classroom classes and the opportunity to study the material independently outside the educational institution.

The modern world is increasingly becoming digital. Currently, digitalization has entered our lives. It confidently covers all areas of human activity. And this means that the education process must also be digital.

The need to study the process of competence formation among future teachers is also due to the trend of increasing integration and globalization of the world economy; the implementation of the main provisions of the concept of modernization of education until 2030 in Uzbekistan; the decisions of the Bologna process and new educational standards of the third generation.

The Law of the Republic of Uzbekistan "On Education" No. ZRU-637 dated September 9, 2020 defines the concept of "education" as a systematic process aimed at providing students with deep theoretical knowledge, skills and practical skills, as well as the formation of general and professional knowledge, skills and abilities, and the development of abilities. In the context of digitalization, the professional competence of a teacher is also changing. Therefore, educational institutions should pay considerable attention to the formation of professional competence among future specialists from their student years.

The ability to work and integrate digital, cloud technologies, modern methods (blended learning) and models in educational processes is the main task in becoming a specialist. It is becoming relevant to consider the features of the Internet as an information and educational environment, the use of web technologies in the educational process [1].

The relevance of the research is due to the tasks of digitalization of education and the focus on the development of all types of digital activities of future teachers of the Russian language and literature, as well as the improvement of digital literacy of the future teacher.

In the works of modern researchers, it is noted that mixed technologies and e-learning as a new pedagogical environment require new skills from teachers-digital literacy. In this regard, the educational environment of an educational organization can be supplemented with subject-based electronic educational resources, which are created by teachers according to the author's idea within the framework of the taught academic subject.

### **MATERIALS AND METHODS**

In the theory of pedagogy, there are different points of view regarding the concept of "competence". Thus, according to V.N. Vvedensky, the competence of a teacher integrates cognitive, operational and axiological aspects [2]. However, we adhere to the opinion of A.V. Khutorsky, who considers the theory of competence within the framework of a conceptual system of personality-oriented learning, when the actions of subjects with objects and actions with themselves differ, that is, intra-subjectively [3]. By the competence of a teacher, we understand a dynamically developing process that is responsive to modern challenges of society. In this regard, the most urgent problem in the system of vocational education is the process of forming the digital competence of a teacher as an integral component of the professional competence of a modern teacher.

The importance of training future teaching staff in the context of educational transformation is indicated by the works of M.P. Larchik [4], formation of digital competence of a teacher in the field of digital technologies - S.M. Gushchina [5], and on the need for the formation of skills for creating an electronic textbook - N.P. Yachina [6].

The research of A.A. Vasilyeva, N.V. Guremina, T.D. Lavrinenko, V.P. Ignatieva, N.P. Tabachuk and other scientists is also devoted to the topic of the formation of digital competencies among future teachers [7]. In the works of modern researchers, it is noted that e-learning as a new pedagogical environment requires new skills from teachers - digital competencies.

### **RESULTS**

The essence of blended learning is that students receive initial assignments and skills in lectures and practical classes, and then consolidate and deepen them with the help of online resources, video lectures, interactive assignments and tests.

Thus, students have the opportunity to study more effectively, individually adjusting the pace of learning to their needs.

For the successful implementation of blended learning at a pedagogical university, it is necessary to create appropriate conditions. Teachers should be ready to work with new technologies and teaching methods. Training programs should be designed taking into account the mixed learning and use of the Internet.

Digitalization is the process of introducing digital technologies and methods into various aspects of society, business or government in order to improve the efficiency, accessibility and quality of services.

It is relevant to improve digital competencies and digital literacy in undergraduate students in the context of the transformation of education and the introduction of a mixed form of education.

We adhere to the approach [11], considering digital literacy as a set of five components, the assessment of which shows the objective level of its proficiency:

- 1) working with information or digital content, as the ability to create, search, analyze, systematize, classify information, work with it competently (information literacy);
- 2) working with a computer as a means or tool, the ability to technically perform various operations, understanding the computer device, operating systems and software (computer literacy);
- 3) working with media material, such as the ability to create, search and evaluate media content (texts, sounds, pictures, videos, etc.), navigate the media environment (media literacy);
- 4) communication in the digital environment, as a skill and ethics of communication in the digital space, social networks and environments (communicative literacy);
- 5) attitude and attitudes towards technological innovations – the use of various technologies, services and tools for working in a digital environment in life and professional activity (technological literacy).

Thus, it can be stated that digital literacy is the foundation for the development of professional information and communication competencies, which makes it possible to solve educational, every day, and professional tasks.

In education, textbooks, textbooks, problem books, anthologies are the information core of the educational process. The main advantage of the book, of course, is its autonomy. There is no need to have any technical devices for use; reading books is a familiar and comfortable activity for a person, not associated with severe eye fatigue. The construction (apparatus) of the textbook has been worked out for years and effectively contributes to the development of the content. Today, the requirements for educational printed publications are changing in line with changes in education.

Pedagogical publications define the following functions of a modern educational book: informational (a source of mandatory information for assimilation); transformational (organization of content in accordance with current educational standards); systematizing; motivational; orientation of students to certain ways of cognitive activity; development of cognitive capabilities.

Currently, the most effective innovative form of activation of educational activities is the development and implementation of electronic educational resources in the educational process, which make it possible to maximize the personal potential of each student.

Electronic educational resources (EOR) are scientific, pedagogical, educational and methodological materials presented in the form of electronic educational tools that implement the didactic capabilities of ICT (Robert I.V., Lavina T.A., Mironova L. I., etc.) [8].

The relevance of information technology support in modern higher education based on e-learning technologies is becoming more obvious every year. In this regard, the use of electronic textbooks and electronic subject resources in the educational process is becoming increasingly relevant.

We have developed and implemented them in the educational process:

electronic resource "Russian Folklore" (Certificate of official registration of the program for electronic computers" No. DGU 29590 of the Ministry of Justice of the Republic of Uzbekistan dated November 21, 2023);

Russian Oral Folk Art electronic textbook intended for students of the bachelor's degree program "60111700 – Russian in foreign language groups" (Certificate of official registration of the program for electronic computers" No. DGU 33537 of the Ministry of Justice of the Republic of Uzbekistan dated January 15, 2024).

Russians Oral Folk Art" author's printed textbook and electronic application were developed on the basis of the Standard curriculum "Russian oral folk art" for the direction 60111700 – Russian in foreign language groups, approved by Tashkent State University named after Nizami on 30.08.2022, designed for classroom classes under the guidance of a teacher and for self-study. We consider it as a set of educational subject resources.

An electronic interactive textbook has a number of advantages over a printed publication. Each chapter and paragraph has applications that you can watch, listen to, download. There are also control questions and tasks: tests, interactive exercises and simulators, virtual excursions.

In the 2022-2023 academic year, the electronic interactive textbook "Russian Oral Folk Art" was tested and introduced into the educational process. This resource was recommended to first-year students.

Thus, an educational complex has been formed, consisting of electronic author's resources of the teacher and a textbook on the subject.

Initially, we conducted a survey among students about their attitude to the digitalization of education. As part of the study, 120 first-year students were offered a questionnaire with the questions "What is digitalization in general?", "What, in your opinion, are the advantages and disadvantages of digitalization in the education system?". Respondents were asked to rate their attitude to digitalization on a 5-point scale from "digitalization is absolutely necessary" (5 points) and "attitude is categorically negative" (0 points). As a result of the analysis of the questionnaires, it was found that 39% of respondents have a positive attitude towards digitalization, 21%-rather positively, but 12.5% of respondents noted a negative attitude.

The analysis of the answers showed that the students demonstrate good knowledge of the safe use of the Internet, responsible behavior when using digital technologies. They are familiar with the basics of Internet security. 29.82% of the respondents always apply the rules and norms of safe and responsible behavior in the online environment. 28.81% adhere to these rules, 21.93% know that they should be careful about publishing and sharing personal information on the Internet. And only 2.63% replied that it did not concern them.

Thus, the analysis of the research results showed that students have increased the level of information and communication competence and the formation of digital literacy (See Fig.1), as one of the main modern pedagogical competencies.



Figure 1. Diagram of the digital literacy index

Therefore, making a comparative characteristic based on the results of the control study, we concluded that students who were trained using digital educational technologies showed a result above the average level, thereby confirming the effectiveness of experimental work on the formation of information and communication competence and digital literacy. (see Fig.2.) Also, as a result of the control experiment, there is not only an improvement in the indicators of competence formation, but also the depth of their development.

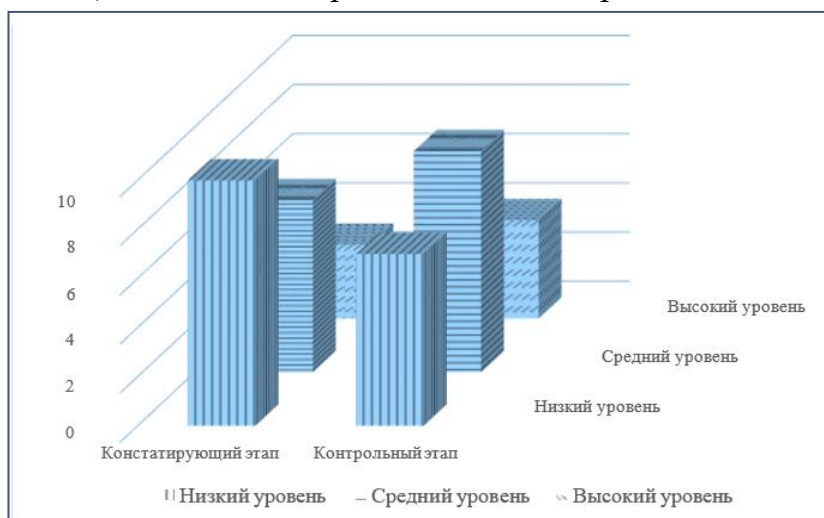


Fig. 2. The level indicator

Speaking about the advantages of an electronic textbook, it should be noted that they include accessibility at any time and place, interactivity, as well as the ability to update content. However, the disadvantages may be dependence on technology, lack of physical interaction, and possible data privacy issues.

The purpose of this study is to summarize well-known approaches to the structure of digital competencies and compile a list of key competencies that affect the success of future teachers' teaching activities, as well as ways to create author's digital content. The experience of recent months has shown that in the current conditions, future teachers need to learn as quickly as possible, master interactions, and implement all effective learning formats into their daily work, that is, the urgent formation of new digital competencies. To be able to navigate new

information and communication technologies and digital tools, teachers need additional knowledge and skills, and in an educational institution, in order to successfully carry out educational activities in a digital educational environment, a teacher must have a wide range of new professional competencies in this area.

The generalized modern model of digital competence, in our opinion, can include five areas of digital competencies:

information competencies – the ability of a teacher to work with information resources (apply, find, store, transform, as well as perform their critical and methodological analysis);

communication competencies – the ability of a teacher to use various forms of communication (e-mail, blogs, chats, forums, social networks) and work with cloud technologies;

media competence is the ability to create information objects using digital resources (creation of audio, video, text, visual) and actively apply them in the educational process;

technological competencies – the ability to effectively and safely use technical and software tools (computer, cloud services);

competencies in the field of information security, the ability to assess risks when working in the digital space, knowledge of measures to ensure the security of personal data, etc.

## CONCLUSIONS

Blended learning is closely linked to the introduction of digital technologies into the educational process. It is effective and innovative at a pedagogical university, allows students to realize themselves, develop independence and critical thinking. Therefore, it is important to develop and improve this method to improve the quality of training of future teachers and thereby develop their digital literacy.

The creation of a digital educational environment in a pedagogical university presupposes the need to train a comprehensively developed specialist with the necessary set of competencies and able to work effectively in the conditions of digitalization in a modern school. This involves the development by university teachers of an electronic educational environment and a set of web tools, the use of which should be systematic and meet the requirements for modern educational standards for the formation of conditions for the implementation of the graduate training program.

Thus, in a mixed learning environment for the formation of digital skills and literacy, it is recommended:

1. Mastering the tools: include office applications, social networks and browsers. work with service tools, for example: Canva, LearningApps.
2. Online security: Emphasize the importance of safe online behavior, including password management and various aspects of cybersecurity.
3. Information research: be able to analyze information from various sources, distinguish facts from opinions, and evaluate the reliability of data.
4. Programming Basics: Implement the basics of programming to understand how digital technologies work.
5. Multimedia Skills: Teach you how to create and edit images, videos, and sound.
6. Working with data: mastering the skills of working with data, including its analysis and visualization.

7. Digital ethics: knowledge of the rules of ethical behavior in the online environment, including respect for other people's data and personal life.
8. Developing critical thinking: Support the development of critical thinking and informed decision-making skills in a digital environment
9. Learning new technologies: Keep up with current technological trends and provide training in new tools and technologies.
10. Practice and self-study: Encourage the practical application of acquired knowledge and encourage self-study.

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