PEDAGOGICAL AND PSYCHOLOGICAL CHARACTERISTICS OF DEVELOPING INFORMATION COMPETENCE IN STUDENTS USING DIGITAL EDUCATIONAL TECHNOLOGIES

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https://doi.org/10.5281/zenodo.10803494

Annotation: This article describes the pedagogical and psychological features of using digital educational technologies in the development of students' information competence in the process of higher education.

Key words: concept, educational system, digital educational technologies, information competence, professional activity.

Introduction.

According to the concept of the state information policy, the achievement of the goals of this policy requires the development and improvement of the universal education and personnel training system, which ensures the full life and effective activity of a person in the information society of the 21st century; informatization of education means not only the use of software and technical tools, it should lead to a fundamental change in the organization and nature of the processes of training and development of a person to form a creative personality.

The introduction of new information technologies in the field of education leads to a change in the role of students in the educational process, its pedagogical views and methodological approaches, readiness to convey knowledge and experience at new theoretical and practical levels. As O. M. Korchazhkina noted, the teacher ceases to be the only source of information for students. The teacher should organize the educational process in such a way that the traditional educational environment meets the requirements of the high-tech, modern, information society.

The state's need for teachers who are able to take a humane position in relation to students makes the problem of improving their professional skills more urgent, which increases the demands placed on universities in addition to digital educational technologies in the process of teaching students, such regulation of cognitive activity. Encourages them to independently ask questions and try to find answers to them with the help of new information technologies. At the same time, the cognitive activity of students should be organized taking into account the specific characteristics of the development of mental processes that act as the main regulators of human behavior, in which knowledge, skills, abilities and methods of activity are formed. The teaching process with the help of digital educational technologies should be based on the age and socio-psychological characteristics of the audience. According to the existing age classification in science, students of higher education institutions are usually between 18 and 22 years old and belong to the youth with their intellectual characteristics. Forming and studying the problem of students as a special socio-psychological and age group belongs to B. G. Ananyev mDigital educational technologies, the results of experiments and theoretical generalizations on this problem are presented in his works.

Based on the results of these studies, the student can be characterized as a special subject of educational activity from three positions:

- psychological, this is a unity of mental processes, situations and personality traits;
- social, which reflects the attitude and qualities of a person due to the student's belonging to a certain socio-professional group;
- biological, related to the type of higher nervous activity, the development of reflexes and instincts, physical development, etc., which are predetermined by heredity and congenital predisposition, and also change under the influence of living conditions.

There are no conceptual differences in the literature in assessing the main characteristics of this age. Scientists describe the biological and social aspects of human development in early adolescence. From the point of view of physiology, the authors' opinions coincide and are defined as the end period of human physical development. The social component is more diverse. In early youth, a person occupies an intermediate position between a child and an adult. On the one hand, it depends on adults who determine the main content and direction of his life. On the other hand, not only the quantitative expansion of the scope of social roles and interests, but also their qualitative change, with the measure of independence and responsibility, the roles of adults are increasing.

The current stage of the development of the science of pedagogy is characterized by various approaches to the study of psychological and pedagogical aspects of the formation of students' information competence. Turning to the history of the question shows that under the influence of computer technology, the problems of thinking, memory, imagination, information processing and perception, changing the emotional sphere were scientifically studied in the 1980s.

E. I. Mashbits identified three groups of psychological and pedagogical problems that must be solved during digitization of the educational process. These are, firstly, problems related to the theoretical foundations of digitization of education; secondly, the development of digital educational technology for education that connects pedagogic sciences with teaching practice; thirdly, designing software that ensures the implementation of teaching technology in the educational process.

Nevertheless, O. K. Tikhomirov announced the need to distinguish between the potential and actual effects of digitization on the educational process. According to him, digitization affects the development of not only cognitive, but also motivational and emotional spheres of a person, his self-awareness. As a means of learning digital educational technologies, it helps to develop the cognitive needs of a person, provides a person with knowledge that he could not get without his help, and can give a strong impetus to the development of external, authoritative motivation. In the mid-1980s, O. K. Tikhomirov emphasized the need for a person to acquire practical skills in the field of new information technologies.

Emphasizing the inconsistency of introducing digital educational technologies into the educational process, he noted that, for example, the strengthening of logical thinking can be accompanied by a slight suppression of the intuitive principle in thinking. A computer can be a tool to fully master the world or a tool to escape from it. Knowing and using information technologies in new life situations - this is how this idea of a scientist sounds today within the competence-based approach.

At the end of the last century, the concept of informatization of education was published, in which it was emphasized that the informatization of education is "*the process of preparing a person for a fulfilling life in the conditions of the information society.*" At the same time, informatization of education is not only a result, but also an impetus for the development of new digital educational technologies, which helps the rapid socio-economic development of the entire society. It was from this moment that the transition from the extensive study of only programming elements to the modern level of the use of information technologies in education was observed in mDigital educational technologies.

The use of digital educational technologies in the educational process can increase the share of independent educational activities, improve the student's personal qualities in his education, self-study, self-education, self-education. the idea that it helps to develop by developing self-awareness was strengthened.

According to L. Pleukhova, the main task of informatization of education is to create the need to increase the level of education in every member of the society. The task of the teacher is to teach young people to learn independently, so it is necessary to pay attention to the development of individual characteristics of each of them, including individual characteristics of motivation. S. V. Panyukova emphasized that digital educational technologies influence the formation of students' creative and theoretical, modular-reflective thinking. The scientist said that computer visualization of educational information has a significant impact on the formation of ideas that occupy a central place in figurative thinking, and the image of images of certain events and processes in the student's memory improves the perception of educational material. enriches, contributes to his scientific understanding.

In the course of education, scientific research on the impact of new information technologies on the development of cognitive activity has appeared. Regarding the network education system, V. I. Soldatkin emphasizes the following positive aspects of using computer technologies in education:

- increase the creative component of the educational process by using interactive lesson forms;
- creating more favorable conditions for the student to express himself compared to traditional, emotional and psychological conditions;
- students demonstrate the products of their educational activities, overcome psychological obstacles and problems during communication, etc.

A. O. Prokubovskaya considered the issue of digital modeling as a means of developing independent knowledge of students during the educational process. According to the researcher, the active cognitive activity of students that occurs in the use of new information and telecommunication technologies in education depends on pedagogical conditions related to the content, forms and methods of education, in particular, the implementation of approaches based on activity and competence, students' computer It can occur and continue with the formation and implementation of a reflective position based on the psychological characteristics of the perception of technologies. According to the researchers, the main mental processes of a person related to the perception and processing of information: intuition, perception, representation, memory, imagination, thinking, speech, attention.

Thanks to emotions, a person receives various information about the outside world. Currently, there are several classifications of sensations that allow reflecting the entire volume of information received by a person. A classification based on sensory modality, which

reflects the characteristics of the main sensory organs, is often used. Therefore, it is customary to talk about visual sensations, hearing, taste, smell, touch, etc. A. A. Rean claims that human emotions are sufficiently developed to effectively organize educational activities. Please note that the use of new information technologies in the educational process allows not only the full use of students' sensory (visual, auditory, tactile), but also their perceptive abilities, which is the basis for the formation of information competence.

Perception and memory play an important role in the learning process. Perception is a direct emotional reflection of objects and events as a result of understanding their identification features in an integrated form, understanding the objects, events, situations studied in educational activities, understanding them in a certain way. related to classification, type, class. This is especially important when working with information technology, because it allows you to formalize the acquired knowledge and use it in practice.

Scientists have proven that visual analyzers have a much higher bandwidth than auditory ones. The eye can perceive millions of bits per second, and the ear can perceive tens of thousands of bits. Visually received information is more meaningful, better stored in memory. Therefore, they express the opinion that the teacher should expand the arsenal of visual and audio-visual means of presenting information.

Today, the main source of information is the speech of the teacher, which influences auditory analyzers during the educational process. At the same time, L. V. Strikeleva, when working with digital educational technologies, the mental activity of students decreases inversely proportional to the volume of learned educational information: perception - 6%, memorization - 10%. The researcher found that when using digital educational technologies, the local fatigue of students' visual analyzer is 2-3 times stronger than in traditional training.

Digital educational technologies play a high role in the formation of knowledge. Their main advantage is that they can introduce listeners to direct thinking, the birth and formation of ideas, as well as the process of strengthening knowledge. But when using them, it should be remembered that the desire of the teacher to increase the amount of information in the digital curriculum leads to the activation of the protective mechanisms of the student's nervous system, and the desire to increase the speed of information flow or the duration of lessons leads to a decrease in the quality of data, an increase in the number of errors, a deterioration in the mood and well-being of the User.

In the process of teaching students, imagination should be taken into account as a process of changing ideas that reflect reality and creating new ideas that are inextricably linked with the development of thinking and memory. The higher the level of development of thinking, the richer the practical experience, the more complex forms of imagination can appear in a person. This trend is manifested, first of all, in the fact that students increasingly turn to creativity. Individual expressive methods of digital educational technologies are aimed directly at the student's imagination, his previous knowledge and experience, and they help to restore the integrity of the presented part. Digital educational technologies are characterized by their dynamism, which is based not only on the movement of the object on the screen, but also on the montage, which helps to emphasize the object, most importantly, the main thing in the object or event.

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