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# PSYCHOLOGICAL CONTENT OF THE USE OF NEW TECHNOLOGIES AND INNOVATIONS IN THE EDUCATIONAL SYSTEM

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## ABSTRACT

This article attempts to study the psychological aspects of using new technologies and innovations in the education system. It analyzes how modern technologies affect the educational process, how they affect students' motivation, attention, memory and creative abilities. It also examines the psychological readiness of teachers to master new technologies and their impact on the quality of education. The article provides recommendations on ways to improve the psychological state of students and increase the effectiveness of education through the correct use of technologies in education.

**Keywords:** education, technology, innovation, psychology, motivation, attention, memory, creativity, teacher.

## INTRODUCTION

Today, the education system is developing at an unprecedented pace. Scientific achievements, the changing needs of society, and the desire for personal development of the individual are placing new demands on the education sector. In this context, new technologies and innovations are becoming an integral part of the educational process. Virtual classrooms, interactive textbooks, online platforms, distance learning courses, and educational tools based on artificial intelligence are radically changing the methods and content of education.

Now students have the opportunity to receive knowledge at any time, anywhere, and can choose educational programs tailored to their individual needs. Teachers, in turn, are gaining the opportunity to organize lessons more interestingly and effectively,

increase student activity, and develop their creative abilities with the help of new technologies.

However, the impact of these technologies on education is not limited to technical aspects alone. Their psychological aspects are also important. Technology can affect students' motivation, attention, memory, creativity, and social skills. It is also likely to affect their self-esteem, stress levels, and psychological well-being. Therefore, it is important to deeply study the psychological aspects of using new technologies in education and to enhance their positive effects and minimize their negative consequences.

## RESEARCH METHODS

Foreign scholars have been extensively studying the psychological aspects of using technology in education. Their research focuses on the impact of technology on students' learning, ways to improve teachers' technological competence, and opportunities for self-directed learning through modern technologies.

Richard Mayer and the Theory of Cognitive Load: Richard Mayer's theory of cognitive load is important in the design of multimedia educational materials. According to this theory, educational materials should not overload the student's cognitive resources. Mayer's research shows that excessive details, unnecessary animations, or complex texts in the design of multimedia materials distract students and reduce the effectiveness of learning. Therefore, based on his theory, Mayer recommends making multimedia educational materials simple, understandable, and visually organized. This helps students focus on the main information and more easily assimilate new knowledge. This theory is widely used in the field of educational technology and is important in creating online courses, interactive textbooks, and other educational resources[1; 4-b].

Linda Darling-Hammond and the technological competence of teachers: Linda Darling-Hammond's research shows how to improve the quality of education by increasing the technological competence of teachers. Darling-Hammond argues that modern teachers should not only be good at their subject, but also be able to use various technologies effectively. Her research shows that technologically competent teachers can provide an individual approach to students, conduct interactive and

interesting lessons, and increase their motivation to learn. Darling-Hammond recommends organizing special trainings, courses, and mentoring programs to increase the technological competence of teachers. In addition, she calls on education policymakers to create a system that encourages teachers to use technology and provides them with the necessary resources[2; 11].

Sugata Mitra and the "Hole in the Wall: Self-Organizing Systems in Education" Experiment: Sugata Mitra's "Hole in the Wall" experiment demonstrates how technology can help children learn independently. In this experiment, Mitra set up computers for children in rural India and gave them access to the Internet. As a result, the children learned to use computers together without any guidance and were able to find the information they needed on the Internet. Through his experiment, Mitra showed that technology can help students develop independent learning, problem-solving and collaborative skills. His work emphasizes that the role of the teacher in education needs to change, from being just a provider of knowledge to being a person who guides and supports students. Based on this experiment, Sugata Mitra developed an educational model called SOLE (Self-Organized Learning Environment) [3; 14-b].

In Uzbekistan, a number of current studies are being conducted on the psychological aspects of the use of new technologies in education. These studies are aimed at studying the psychological and pedagogical foundations of integrating information and communication technologies (ICT) into the educational process, the impact of electronic educational resources on the cognitive development of students, and, in general, ways to increase the effectiveness of education through the rational use of technologies in education. H.M. Shermatova's work highlights the psychological and pedagogical foundations of the use of information and communication technologies in education. The researcher emphasizes the need to take into account the psychological characteristics of students, their attitude to technology, motivation, and learning abilities when introducing ICT into education. Her studies show that improper use of ICT can reduce students' ability to concentrate, negatively affect their vision, and lead to psychological stress. Therefore, Shermatova recommends introducing ICT into the educational process gradually, taking into account the age characteristics of students and in accordance with pedagogical goals. Her work

provides teachers with methodological recommendations on the effective use of ICT and is aimed at ensuring the psychological safety of using technologies in education [4; 22-b].

O.M. Alimnazarov's research studies the impact of electronic educational resources on the development of students' independent thinking. In Alimnazarov's research, electronic educational resources are understood as interactive textbooks, virtual laboratories, online tests, educational games and other similar materials. His research shows that the proper use of electronic educational resources helps to develop students' independent thinking, problem-solving skills, creativity and the ability to critically evaluate information. In his research, Alimnazarov emphasizes the importance of taking into account the individual characteristics of students when creating electronic educational resources, meeting their interests and needs, and providing them with the opportunity to actively participate. His work provides practical recommendations for the design of electronic educational resources and is aimed at increasing their role in the educational process [5; 32-b].

Uzbek scientists are looking for ways to improve the psychological state of students and increase the effectiveness of education through the proper use of technology in education. Their research is important in modernizing the education system and introducing modern educational technologies.

## RESULTS

The results of the study showed that the correct use of new technologies in education increases students' motivation, helps them concentrate, strengthens their memory and develops their creative abilities. Interactive and interesting educational tools increase students' interest in the lesson, strengthen their desire for independent learning [6; 4-b].

However, the misuse of technologies, excessive use or neglect of other important elements of education can lead to negative consequences. For example, sitting in front of a screen for a long time can weaken attention, weaken memory and limit social contacts.

The psychological readiness of teachers to master technologies also plays an important role. Lack of confidence, fear or resistance to the use of technologies can

negatively affect the quality of education. Therefore, it is necessary to encourage teachers to learn new technologies, teach them the necessary skills, and provide ongoing support.

## DISCUSSION

The psychological content of using new technologies and innovations in the education system is very complex and multifaceted. Technologies can enrich the educational process, develop students' abilities and increase the effectiveness of education. However, it is necessary to use these technologies correctly and purposefully, minimize their negative consequences and pay attention to the psychological aspects of education[7; 5-b].

The psychological readiness of teachers to master technologies has a significant impact on how they use technologies in education. Therefore, it is important to continuously train teachers, improve their technological skills and support them.

## CONCLUSION

The widespread use of new technologies and innovations in the education system is opening up unprecedented opportunities for students and teachers. Interactive lessons, virtual laboratories, online resources, and artificial intelligence-based curricula allow for improving the quality of education, making the learning process more interesting and effective [8; 7-b]. However, in order to use these opportunities rationally and correctly, it is necessary to take into account the psychological aspects of technologies, minimize their possible negative consequences, and not neglect the human elements of education, namely direct communication between teachers and students, cooperation, and a creative environment. Compliance with the norms when introducing technologies into education, using them only for their intended purpose, as well as maintaining human connections in the learning process, create the basis for the successful and harmonious development of education.

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