

THE ROLE OF INNOVATIVE INFORMATION TECHNOLOGIES IN THE EDUCATIONAL PROCESS

Farmanov Sardorbek Utkir ugli

Navoi Innovation University, Uzbekistan

e-mail:sardorbekfarmanov@gmail.com

Abstract. This article examines the role of innovative information technologies in the modern educational process. It shows how the digitalization of education contributes to the development of new pedagogical approaches, the development of digital competencies in students, and the improvement of educational efficiency. The importance of distance learning, virtual and augmented reality, and artificial intelligence in improving the quality of educational services is emphasized.

Keywords: innovative technologies, information technologies, education, distance learning, digital transformation, artificial intelligence.

Modern education is undergoing a period of active transformation under the influence of computing and innovative technologies.[1] Information technologies have become an integral part of the educational process, creating new developments in the organization of the educational process, the development of knowledge, and interaction with participants in the educational process.[2] The accelerated development of the global and information society is making innovative technologies a current and sustainable direction in the modernization of education.[3]

The installation of innovative information technologies helps to ensure the interconnection of students and teachers and their own.[4] These include: electronic educational resources, multimedia technologies, learning management systems (LMS), cloud use, virtual and augmented reality, artificial intelligence, and big data.

One of the main advantages of using innovative information technologies is personalized learning. Digital platforms and analytical tools allow you to adapt the learning process to the individual needs of students.[5] Artificial intelligence systems allow you to analyze student activity, offer individual tasks and predict learning outcomes.

Distance and blended learning are also becoming an important component of the educational process. They provide flexibility in education, allowing students to independently determine the pace and time of learning.[6] During the COVID-19 pandemic, information technologies have become the basis for ensuring the continuity of education, demonstrating its high importance and the need for integration into educational practice.

Due to the global COVID-19 problem, the use of digital technologies in distance education of students, even kindergarten students, has developed significantly in our country. In particular, distance education has been provided through electronic learning platforms, social networks, and television channels. This means that it is possible to teach using digital technologies even at home. [7]

Virtual and augmented reality (VR/AR) technologies occupy a special place, creating the opportunity to immerse yourself in the learning process, increase the visibility and practical orientation of teaching. VR/AR can be used to simulate laboratory experiments, historical events, and other learning situations, which makes the learning process more interesting and effective.

In addition, innovative technologies are being actively used to improve teacher training. Modern online platforms, webinars, and digital courses support teachers' professional growth, expand their knowledge of digital pedagogy, and help implement interactive teaching methods.

Thus, innovative information technologies are becoming an integral part of modern education. Their use allows you to create an interactive, flexible and effective educational environment aimed at developing the personality of students, developing their competencies and

preparing them for life in a digital society. The introduction of innovative information technologies requires a systematic approach, state support, and regular training of professors and teachers. Only under such conditions can high-quality education in line with international standards be achieved.

References

1. Alimov A. R., Karimova Sh. T. Innovatsion ta'lim texnologiyalari. – Toshkent: Fan va texnologiya, 2021.
2. Ergashev I. I. Axborot texnologiyalari va ta'lim tizimida ularning qo'llanilishi. – Toshkent: O'qituvchi, 2020.
3. Raxmonov B. M. Zamonaviy ta'limda raqamli texnologiyalar. – Samarqand: SamDU nashriyoti, 2022.
4. Hamidov Q. N., Matkarimova Z. Sh. Innovatsion pedagogik va axborot texnologiyalari. – Toshkent: Iqtisodiyot, 2021.
5. Yuldashev Sh. Q. Axborot-kommunikatsiya texnologiyalari asosida ta'limni rivojlantirish. – Toshkent: Fan va texnologiya, 2019.
6. O'zbekiston Respublikasi Vazirlar Mahkamasi. "Raqamli ta'limni rivojlantirish konsepsiyasi". – Toshkent, 2020.
7. Farmanov.S.U "O'qituvchi pedagoglarning ta'lim berish jarayonida raqamli texnologiyalaridan foydalanishining afzalligi, muammolari va yechimlari". // "Yangi O'zbekistonda sifatli ta'lim: milliy tizim va barqaror rivojlanish maqsadlari" mavzusidagi Xalqaro ilmiy-amaliy anjuman materiallari. – Navoiy, 2025. – B.622. https://journal.niuuz.online/index_uz.html