

CHARACTERISTICS AND ADVANTAGES OF MODERN EDUCATIONAL TECHNOLOGIES

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Annotation. This article explores the essential characteristics and advantages of modern educational technologies in the context of contemporary educational reforms. The study examines the pedagogical, technological, and methodological foundations of innovative teaching approaches aimed at improving the effectiveness and quality of education. Particular attention is given to learner-centered instruction, interactivity, flexibility, adaptability, digitalization, and competency-based learning. The article analyzes the role of information and communication technologies, multimedia resources, virtual learning environments, and interactive teaching methods in enhancing students' academic performance and professional development. The findings indicate that modern educational technologies significantly increase learning motivation, facilitate active participation, improve critical and creative thinking skills, and contribute to the formation of lifelong learning competencies. The study concludes that the integration of modern educational technologies is a crucial factor in ensuring sustainable educational development and improving educational outcomes.

Keywords: modern educational technologies, innovative learning, digital education, interactive teaching methods, learner-centered approach, information and communication technologies, educational effectiveness, competency-based education, educational innovation, lifelong learning.

Introduction. Modern educational technologies have become an integral part of the education system in today's globalized, digitized, and information-based society. They help increase the efficiency of the learning process, deepen the level of knowledge assimilation, and develop the student's ability to think independently, take a creative approach, and make the right decisions in problem situations. Modern educational technologies are understood not only as the use of technical means, but also as a set of methods, techniques, and tools aimed at designing the educational process on a scientific basis, systematically organizing the pedagogical process, ensuring interactive cooperation between the teacher and the student, optimizing the

content of education, and ensuring effectiveness. These technologies, by their very nature, differ from traditional education in that they view the student not as a passive listener, but as an active participant, a knowledge-creating subject.

Main part. One of the most important features of modern educational technologies is their individual orientation. While in the traditional education system, students are often taught using the same method, the modern approach requires taking into account the individual abilities, needs, interests, and level of knowledge of each student. This allows for the development of differentiated and individualized education. As a result, each student develops in accordance with his or her own abilities, which leads to an increase in the quality of general education. A personalized approach strengthens students' motivation to understand themselves, assess their abilities, and develop.

Another important feature is interactivity. In modern educational technologies, there is a two-way dialogue between the teacher and the student, where students not only listen, but also ask questions, discuss, express opinions and defend their point of view. Interactive methods, such as "brainstorming", "cluster", "debate", "role-playing" and "case studies", encourage students to think actively. Through these methods, students discover knowledge not in a ready-made form, but in an independent manner, which leads to a stronger assimilation of knowledge. Interactivity also serves to develop social skills, that is, students learn to work in a team, listen to the opinions of others and respect them.

Another characteristic of modern educational technologies is their focus on results. In this approach, the educational process is planned on the basis of clear goals and the expected results are determined at each stage. This allows both the teacher and the student to clearly direct their activities. Result-orientedness also facilitates monitoring and evaluating the quality of education. The assessment process covers not only the final result, but also the student's activity in the learning process, which creates a more fair and objective assessment system.

Integration with digital technologies is one of the integral features of modern education. The use of information and communication technologies makes the learning process more interesting and effective. For example, multimedia tools, interactive whiteboards, online platforms, virtual laboratories and distance learning systems allow students to acquire knowledge in a visual and practical way. Digital technologies allow students to learn anytime, anywhere, and support the principle of lifelong learning. In addition, digital tools allow teachers to monitor, analyze, and improve the learning process.

Adaptability and innovation are also important characteristics of modern educational technologies. These technologies are able to adapt to the demands of a rapidly changing society and incorporate new methods and approaches.

For example, innovative methods such as STEM education, project-based learning, problem-based learning, and competency-based approaches are aimed at developing students' practical skills. This prepares them to solve real-life problems. Modern educational technologies are constantly being updated, which ensures that the education system develops in line with the requirements of the times.

The advantages of modern educational technologies are very wide and multifaceted. First of all, they increase the efficiency of learning. Since students actively absorb knowledge, their level of memorization is high. Studies show that knowledge learned through interactive methods is retained for a much longer period of time than through traditional methods. This leads to an increase in the quality of education.

Another important advantage is the development of students' independent learning skills. Modern educational technologies educate the student not only as a learner, but also as a person who independently shapes his knowledge. This forms important competencies in students, such as self-development, research, and the desire for innovation. Independent learning skills help a person to update their knowledge throughout their life.

Modern educational technologies also contribute significantly to the development of creative thinking in students. Interactive methods, problem situations and project work encourage students to develop new ideas. This develops their ability to think innovatively. Creative thinking is important not only in the educational process, but also in future professional activities.

In addition, modern educational technologies increase student motivation. Interesting and interactive lessons increase students' interest in learning. Since students actively participate in the lesson process, they feel important and needed. This changes their attitude towards learning in a positive way.

Another advantage of modern educational technologies is the ability to individualize the learning process. Each student has the opportunity to learn at their own pace and in their own way. This prevents students from falling behind and ensures the full development of each of them. Individualized learning is especially effective when working with students at different levels. Modern educational technologies are also changing the role of the teacher. The teacher is no longer just a teacher of knowledge, but also a guide, consultant and organizer. This requires a high level of pedagogical

skills, creativity and adaptability from the teacher. As a result, the teacher's professional development is also ensured.

Modern educational technologies also help develop social and communicative skills. Through group work, discussion, and exchange of ideas, students acquire the skills to communicate, express their thoughts clearly, and understand others. This helps them to successfully function in society. In conclusion, modern educational technologies serve to fundamentally reform the education system, increase its efficiency, and ensure the all-round development of students. Their unique characteristics - personalization, interactivity, results-orientedness, integration with digital technologies, adaptability, and innovation - make the learning process more effective and modern. Its advantages include deep assimilation of knowledge, development of independent learning skills, formation of creative thinking, increased motivation, and provision of individualized education. For this reason, the introduction and improvement of modern educational technologies is considered one of the most urgent tasks of today's education system.

Conclusion. The conducted research confirms that modern educational technologies represent an essential component of contemporary educational systems and play a significant role in improving the quality and effectiveness of the teaching-learning process. Their distinguishing characteristics, including interactivity, adaptability, flexibility, accessibility, technological integration, and learner-centeredness, create favorable conditions for enhancing students' intellectual and practical competencies.

The study demonstrates that the implementation of modern educational technologies increases students' motivation and engagement, supports independent learning, and promotes the development of critical thinking, creativity, communication, and problem-solving skills. Furthermore, digital tools and innovative instructional methods enable educators to individualize the learning process and address diverse educational needs more effectively.

The advantages of modern educational technologies extend beyond academic achievement by fostering professional competencies and preparing learners for active participation in the information society. Therefore, the systematic integration of innovative educational technologies into teaching practice is a strategic necessity for ensuring educational quality, improving learning outcomes, and developing highly qualified specialists capable of meeting the challenges of the modern world. The successful application of these technologies contributes to the modernization of education and supports the sustainable development of educational institutions in the era of digital transformation.

REFERENCES USED

1. Tolipov O'., Usmonboyeva M. Pedagogik texnologiyalarning tatbiqiy asoslari. – Toshkent: Fan, 2019. – 280 b.
2. Tolipov O'., Sharipov Sh. Umumiy pedagogika. – Toshkent: Iqtisod-Moliya, 2021. – 312 b.
3. Mavlonova R., To'rayeva O., Xoliqberdiyev K. Pedagogika. – Toshkent: O'qituvchi, 2020. – 528 b.
4. Sayidahmedov N. Yangi pedagogik texnologiyalar nazariyasi va amaliyoti. – Toshkent: Fan va texnologiya, 2018. – 172 b.
5. G'ofurov A.T., Fayzullayev S.S. Biologiyani o'qitish metodikasi. – Toshkent: Tafakkur, 2020. – 356 b.
6. Eshonqulov O'. Biologiya ta'limida zamonaviy pedagogik texnologiyalar. – Toshkent: O'qituvchi, 2021. – 198 b.
7. Jo'rayev R.X., Ziyomuhamedov B. Ta'lim menejmenti. – Toshkent: Sharq, 2020. – 240 b.
8. Xaqberdiyeva Sh.T. Kompetensiyaviy yondashuv asosida biologiyani o'qitish metodikasini takomillashtirish (7–8 sinflar misolida): Pedagogika fanlari bo'yicha falsafa doktori (PhD) dissertatsiyasi. – Guliston, 2025. – 156 b.
9. Xaqberdiyeva Sh. T. (2025). Zamonaviy ilg'or xorijiy tajribalar asosida qon aylanish tizimi mavzusini o'qitishning innovatsion pedagogik texnologiyalarni qo'llash imkoniyatlari. «Maktabgacha Va Maktab Ta'limi» Jurnal, 3(12), 16–19. <https://doi.org/10.5281/zenodo.17991257>
10. Haqberdiyeva S. T. The role of pedagogy and psychology in improving the methodology of teaching biology based on a general approach to secondary schools //Texas Journal of Multidisciplinary Studies. – 2022. – T. 6. – C. 115-118.
11. Haqberdiyeva S. T. Improving the Teaching Methods of Biology in General Secondary Schools on the Basis of A Competency-based Approach //Academicia Globe. – 2022. – T. 3. – №. 03. – C. 132-136.
12. Tursunaliyevna H. S., Nozima A. Effectiveness of using innovative technologies in teaching the morphology of bacteria //Journal of Universal Science Research. – 2023. – T. 1. – №. 10.-c. 60-66.