

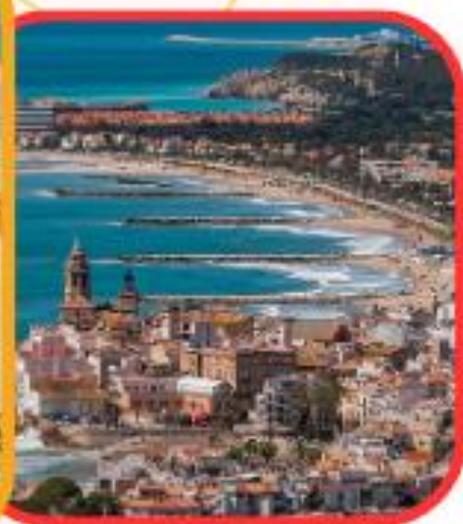


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The significance of innovations and digital transformation in achieving educational quality and effectiveness

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Abstract. This article analyzes the theoretical foundations and contemporary approaches of innovations and digital transformation in the education system, their psychological-pedagogical factors, and the current state of digitization in Uzbekistan’s education system. The effectiveness of digital educational technologies and the prospects of such areas as artificial intelligence, AR/VR systems, distance-learning platforms, and learning analytics are elucidated on the basis of scholarly sources.

Keywords: innovation, digital transformation, educational technologies, artificial intelligence, AR/VR, digital competence, distance education.

Аннотация: В данной статье анализируются теоретические основы и современные подходы к инновациям и цифровой трансформации в системе образования, их психолого-педагогические факторы, а также текущее состояние цифровизации в системе образования Узбекистана. На основе научных источников освещается эффективность цифровых образовательных технологий и перспективы таких областей, как искусственный интеллект, AR/VR-системы, платформы дистанционного обучения и обучающая аналитика.

Ключевые слова: инновации, цифровая трансформация, образовательные технологии, искусственный интеллект, AR/VR, цифровая компетентность, дистанционное образование.

Introduction. When the issue of increasing educational effectiveness is discussed, first of all, classical scholars and pedagogues have, since ancient times, expressed their opinions on this matter. Among them are the great thinkers A. Beruniy, Ibn Sino, Al-Xorazmiy, Farobiy, Imom Buxoriy, Imom at-Termiziy, Yusuf Hos Hojib, A. Navoiy, A. G’ijduvoni, Baxouddin Naqshbandiy, A. Temur, and hundreds of other world-renowned scholars. The epigraph taken from our great ancestor Alisher Navoiy’s epic *Xayrat ul Abror* in the treatise is not accidental. The very fact that Alisher Navoiy, through his *Khamsa*, was able to teach the common people three languages—Turkic, Arabic, and Persian—turn them away from religious sectarianism and madhhab disputes, and instill a spirit of patriotism testifies that he possessed high pedagogical mastery. In the Decree of our Head of State dated April 29, 2019, No. PF-5712, “On the Concept for the Development of the Public Education System until 2030,” tasks were set such as the step-by-step

introduction of principles of individualization into the teaching-learning process, improvement of teaching methodologies, enhancement of the quality of educational services for children with disabilities, and measures aimed at ensuring the right of every child of this category to inclusive education. Likewise, in 2019 the President of the Republic of Uzbekistan approved the Concept for the Development of the Public Education System until 2030. In addition to improving and expanding educational infrastructure and refining teaching methodologies, the concept sets as a goal that, according to the international assessment of student achievement (PISA), Uzbekistan should enter the ranks of the world's top 30 leading countries by 2030.

Main part. If we approach the task of improving the effectiveness and quality of education from the perspective of contemporary education, the effectiveness of digital education is directly linked to teachers' digital pedagogical competencies. In many developing countries, although teachers' level of technological literacy is high, from the standpoint of pedagogical approaches the qualifications are insufficient; thus, training teachers in digital didactics is of strategic importance. The use of artificial intelligence in education makes possible personalized learning (adaptive learning), automated assessment, and analysis of the learning process. At the same time, achieving educational quality and effectiveness depends on several factors. Teachers' visitation of one another's classes and discussion of the strengths and shortcomings of conducted lessons is regarded as one of the most effective strategies for improving lesson quality. To ensure educational effectiveness, we can note several additional factors: thorough mastery of subjects; the efficient use of modern information and communication technologies; and the application of advanced practices. Alongside these, beyond knowledge, patience, and skills, it is also important that the teacher have the mastery to organize lessons in an engaging form using instructional methods and possess the ability to employ modern pedagogical technologies.

In today's rapidly developing era, the progress of science and technology and the ever-increasing flow of information require that processes carried out in the field of education be implemented even more rapidly. One of the principal factors in reforming the sphere of teaching and upbringing is the significance of introducing modern information and communications into the educational process. Therefore, the use of modern tools such as AR/VR systems and such contemporary technologies as Google Classroom makes it possible to conduct complex experiments safely and interactively. The field of Learning Analytics, for its part, enables real-time monitoring of students' learning dynamics on the basis of big data.

Conclusion. The processes of innovation and digital transformation in education play an important role in increasing the intellectual potential of modern society. Digital technologies make it possible to render the

educational process efficient, open, interactive, and individualized. The experience of Uzbekistan shows that, in order to develop digital education, the modernization of infrastructure, the enhancement of teachers' digital competencies, and the creation of high-quality electronic content are among the top priorities. Recent scientific studies demonstrate that enriching education with innovative approaches sharply increases effectiveness. We can observe that the digitization policy being pursued in Uzbekistan serves to modernize the education system in line with global standards.

References

1. "Digital Uzbekistan – 2030" Strategy of the Republic of Uzbekistan.
2. Ministry of Public Education (2022). Annual Report on Digital Education.
3. Decree of the President of the Republic of Uzbekistan No. PF-6079 (2020).
4. UNESCO (2021). *Future of Education Report*.
5. OECD (2020). *Digital Education Outlook*.
6. Holmes, W., & Luckin, R. (2019). *Artificial Intelligence in Education*.
7. .O'zbekiston Respublikasi "Raqamli O'zbekiston – 2030" strategiyasi.
8. .Xalq ta'limi vazirligi (2022). *Raqamli ta'lim bo'yicha yillik hisobot*.
9. .O'zbekiston Respublikasi Prezidentining PF-6079-son Farmoni (2020).

