



CREATING AND UTILIZING DIGITAL TECHNOLOGY PLATFORMS TO IMPROVE THE QUALITY OF TEACHING IN EDUCATIONAL INSTITUTIONS

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Annotation: *This article analyzes the potential for developing and utilizing digital technology platforms to enhance the quality of education. It examines the impact of digital platforms on the teaching process, their practical application, technical and pedagogical aspects, and evaluates their effectiveness based on national experience.*

Keywords: *Digital technologies, educational platform, quality of teaching, digital education, interactive learning, artificial intelligence, LMS systems.*

In modern society, the quality of education is one of the main indicators of social development. The rapid advancement of digital technologies is driving a transformative shift in pedagogical processes. In particular, the role of digital platforms is growing in enhancing teaching quality, promoting individualized approaches, and ensuring open access to educational resources.

The integration of digital technologies into education not only increases interactivity but also expands opportunities for adaptation, monitoring, and assessment of the learning process. In this regard, several key areas stand out.

Effectively integrating digital technologies into the educational process has become one of the priorities of contemporary pedagogy. In

particular, when developing a digital platform, its functional capabilities, pedagogical relevance, and technical stability are of critical importance. Firstly, **functional capabilities** must allow the platform to comprehensively cover the learning process, enable real-time management, monitoring and analysis, and offer a user-friendly interface. For example, Learning Management Systems (LMS) such as Moodle, Google Classroom, and Blackboard enable course creation, assignment evaluation, student activity tracking, and automated result generation.

Secondly, **pedagogical alignment** implies the methodological integration of the platform into the educational process. It must support adaptability for users, promote active learning, and contribute to the development of cognitive and metacognitive skills. These features should be based on constructivist didactic principles, where the learner independently discovers knowledge and develops structured thinking. Thirdly, **technical stability** refers to uninterrupted operation, high load tolerance, multi-device compatibility, and ensured information security. In this regard, cloud-based platforms (e.g., Microsoft Teams, Edmodo) offer wide user coverage, adaptability to rapid changes, and robust data protection.

Another crucial aspect is the **integration of artificial intelligence (AI) and AR/VR technologies** into educational platforms. AI-based tools can recommend personalized learning paths, adapt assignments to a student's knowledge level, provide automatic assessments, and even generate educational feedback. AR/VR technologies enable interactive experiential learning, which is particularly effective in subjects like biology, chemistry, or history.

Digital learning platforms not only improve teaching efficiency but also increase the adaptability and personalization of the learning process. Their functionality is strategically important not only for teachers but also for students, school administrators, and the entire educational system.

First, digital platforms enable management of the learning process through interactive devices. Activities such as content presentation, Q&A sessions, testing, group work, and discussions can all be conducted in real time via tablets, interactive whiteboards, smartphones, and laptops. This shift facilitates a move from passive teaching to active learning. Additionally, teachers can centrally monitor classroom activities and provide instant feedback.

Second, platforms provide a convenient environment for reinforcing knowledge both online and offline. This feature is particularly important in the context of lifelong learning and distance education. Online lessons can be conducted via video conferencing or interactive platforms, while offline access allows students to work on assignments, tests, and educational materials without needing an internet connection. This is especially beneficial in areas experiencing the "digital divide" by ensuring stable access to education.

Third, digital platforms enable the creation of **personalized learning trajectories** for each student. Based on their academic level, interests, and learning pace, the platform can design individualized study plans. For instance, AI can analyze test results and suggest targeted courses, video lessons, or exercises to strengthen weak areas—thus replacing the "one-size-fits-all" approach with personalized learning.

Fourth, the implementation of AI-driven recommendations and testing systems **automates the learning process** and boosts efficiency. AI-assist tools continuously monitor student progress and automatically suggest subsequent materials or additional exercises based on their performance. Automated test systems also ensure quick, objective assessment, minimizing human bias.

Overall, the use of digital platforms lays a solid foundation for modernizing the education system, enhancing teaching quality, and unlocking each student's full potential. The broad implementation of these platforms not only represents a technological innovation but also drives pedagogical reform.

In recent years, the development of digital education infrastructure has become a **priority direction of state policy** in Uzbekistan. Several large-scale digital projects have been implemented, positively impacting both the content and quality of the learning process.

“Bilimlar Platformasi” (Knowledge Platform), introduced step-by-step since 2020, is a national online education portal aimed at secondary education. It provides online educational resources for teachers, students, and parents. The platform hosts video lessons, interactive tests, assignments, and methodological guides for all general education subjects. Statistics show that this platform has increased students' learning achievements and interest in subjects. During the pandemic, it became a primary tool for distance education.

“EduMarket” is a marketplace for digital educational products and services, allowing teachers to publish, sell, or distribute their teaching materials. This project nurtures teachers' creativity, promotes digital content creation culture, and facilitates the economic exchange of

educational resources. Through EduMarket, hundreds of digital textbooks, infographics, AR models, and interactive exercises have been distributed.

Other projects such as “UzEdu”, “ZiyoNET”, “Kitob.uz”, “Onlayn-maktab” (Online School), and “My.edu.uz” also play an important role in the digital transformation of education. For example, during the pandemic, the “Online School” platform broadcasted video lessons for all grades, including via television. These experiences have proven that digital platforms can function as effective tools for ensuring continuous education.

Conclusion:

The integration of digital technologies into the education system has become an essential factor for improving teaching quality in today’s global and information era. Digital platforms introduced in Uzbekistan—such as “Bilimlar Platformasi”, “EduMarket”, “ZiyoNET”, and other innovative initiatives—are playing a critical role in organizing effective pedagogical processes, raising students’ academic performance, fostering individualized learning, and expanding distance education opportunities.

Recommendations:

1. Strengthen digital pedagogical training:

Organize regular professional development courses and methodological seminars for teachers on effectively using digital education platforms.

2. Improve technical infrastructure:

Equip rural schools with modern technologies (computers, tablets, interactive whiteboards) and develop stable internet access infrastructure through public-private partnerships.

3. Wider implementation of AI and adaptive technologies:

Develop and pilot AI-assist systems that continuously assess students' progress and automatically recommend personalized learning paths.

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