THE IMPORTANCE OF DIGITAL TECHNOLOGIES IN ORGANIZING MODERN EDUCATION

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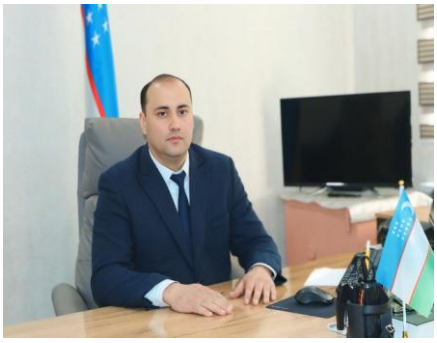

Abstract:
The integration of digital technologies into modern education has fundamentally transformed teaching and learning processes. This paper explores the significance of digital tools in enhancing accessibility, promoting personalized learning, improving communication and collaboration, facilitating efficient educational management, supporting lifelong learning, enabling data-driven decision-making, and preparing students for the digital economy. As educational institutions evolve to meet the demands of the 21st century, digital technologies have become essential for delivering equitable, effective, and future-ready education.

Introduction

Digital technologies have increasingly become a central element in the development of modern education systems. With the rapid expansion of internet connectivity, mobile devices, and educational software, teaching and learning are no longer confined to traditional classrooms. The COVID-19 pandemic further accelerated this shift, demonstrating both the potential and necessity of integrating digital tools into education (Dhawan, 2020). This paper examines the importance of digital technologies in organizing modern education, focusing on how they improve access, efficiency, personalization, and skill development.

The main source of active use of digital technologies in the educational system is its digitization. This is caused by the penetration of digital technologies and telecommunication systems into human life, which help not only to register, process, transfer, but also to create knowledge, to form skills in the form of "artificial intelligence". The leader in the use of artificial intelligence systems is the United States, which exceeds $ 6.4 billion [6]. As a result, most of the new solutions in the educational system are implemented through educational services based on e-learning technologies. Along with the traditional auditory education system, a new transnational e-learning market is developing. It can quickly replace many elements of traditional education systems and introduce new standards. A new design model for the development of educational services in the next twenty years is a cloud of interactive structural educational solutions that will allow to perform the tasks of a hybrid educational system based on the extensive use of "live" and "artificial" intelligence. can cause it to appear.

Enhancing Accessibility and Inclusivity

One of the most transformative impacts of digital technologies is their ability to expand access to education. Online platforms allow learners in remote or underserved regions to participate in educational opportunities that were once geographically or financially inaccessible. Furthermore, assistive technologies support students with disabilities, offering tailored solutions such as screen readers, text-to-speech tools, and customized learning

interfaces (Al-Azawei, Serenelli, & Lundqvist, 2016). As a result, education has become more inclusive and equitable.

Supporting Personalized Learning

Traditional classroom models often struggle to meet the diverse needs of students. Digital technologies, particularly adaptive learning systems, use data analytics to create personalized learning paths based on a learner's performance and preferences. These systems enable students to progress at their own pace and receive instant feedback, which has been shown to improve learning outcomes (Pane, Steiner, Baird, & Hamilton, 2017).

Facilitating Collaboration and Communication

Digital tools have redefined collaboration in educational settings. Platforms such as Google Workspace, Microsoft Teams, and Zoom enable synchronous and asynchronous communication, making it easier for students and educators to interact, share resources, and work on group projects. These tools support the development of critical 21st-century skills such as teamwork, communication, and problem-solving (OECD, 2019).

Improving Educational Management

Digital technologies also streamline the administrative aspects of education. Learning Management Systems (LMS) such as Moodle and Blackboard help institutions manage curriculum delivery, student progress tracking, assessment, and reporting. These systems enhance organizational efficiency and allow educators to focus more on pedagogical strategies rather than administrative tasks (Watson & Watson, 2007).

Promoting Lifelong Learning

The rise of Massive Open Online Courses (MOOCs) and online certification platforms has democratized access to knowledge. Platforms like Coursera, edX, and Udemy allow individuals to continue learning beyond formal education. This supports lifelong learning and skill development, which are essential in a rapidly evolving job market (Yuan & Powell, 2013).

Enabling Data-Driven Decision Making

With the adoption of digital technologies, educational institutions can collect and analyze large volumes of data. This data provides insights into student behavior, learning patterns, and instructional effectiveness, enabling evidence-based decision-making. Such analytics help educators design more targeted interventions and policies (Ifenthaler & Yau, 2020).

Preparing Students for the Digital Economy

Integrating digital technologies into the curriculum equips students with essential digital literacy skills, including the use of productivity tools, digital communication, online research, and basic coding. These competencies are increasingly required in modern workplaces, making digital education critical for workforce readiness (Voogt, Fisser, Good, Mishra, & Yadav, 2015).

Conclusion

In conclusion, the role of digital learning technologies in modern education is important and far-reaching. It has the potential to transform the way we teach and learn, making education more accessible, engaging and interactive. However, it is important to address the challenges associated with digital technology in education, such as the potential for digital divide and distraction. In this way, we can ensure that technology is used effectively to improve learning and successfully prepare students for the digital age. Today's classrooms are very different from a decade ago, and classrooms are equipped with computers, iPads, tablets, smart boards, and other types of educational technology. As in other parts of the world, the seven-

screen generation of the digital generation -TV, computer, tablet, tablet, phablet, smartphone and smartwatch -is emerging in Uzbekistan. As a result of having such a dense digital environment and constantly interacting with it, the thinking and information processing processes of today's students are fundamentally different from the thinking and information processing of the past. The digital generation cannot and should not be taught the way our parents learned. It is not possible to use blackboard and white chalk in teaching this generation. Changing the blackboard to white and the chalk to a marker doesn't change anything, it's not the way to motivate today's students to learn and develop the skills to succeed in the job market. It is necessary to adapt the educational system to the digital generation through mass and effective use of innovative educational technologies and didactic models based on modern information and communication technologies. At the same time, it is necessary to actively use the research-based approach in the educational process, and with this, it is possible to develop the skills of students in scientific research and to form their creative abilities and creative thinking based on IT competence. Information and communication technologies are not a solution to all problems in the education system, but a tool for making lectures and seminars informative and interactive for the digital generation. It should also be emphasized that teachers retain the main role in the interactive learning process, which is focused on the needs of students. The reputation of the teacher and the effectiveness of his activities depend not only on the level of knowledge of the course content and his pedagogical ability, but also on the level of the teacher's use of modern information and communication technologies in the collection, processing and teaching of specific educational material. In other words, education in the digital age must be rethought and the educational paradigm changed, because students no longer want to learn in the traditional way, and teachers do not need to continue teaching in such a conventional way.

References:

1. Al-Azawei, A., Serenelli, F., & Lundqvist, K. (2016). Universal Design for Learning (UDL): A content analysis of peer-reviewed journal papers from 2012 to 2015. Journal of the Scholarship of Teaching and Learning, 16(3), 39–56. https://doi.org/10.14434/josotl.v16i3.19295
2. Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. Journal of Educational Technology Systems, 49(1), 5–22. https://doi.org/10.1177/0047239520934018
3. Ifenthaler, D., & Yau, J. Y.-K. (2020). Utilising learning analytics to support study success in higher education: A systematic review. Educational Technology Research and Development, 68(4), 1961–1990. https://doi.org/10.1007/s11423-020-09788-z
4. OECD. (2019). Trends Shaping Education 2019. OECD Publishing. https://doi.org/10.1787/trends_edu-2019-en
5. Pane, J. F., Steiner, E. D., Baird, M. D., & Hamilton, L. S. (2017). Informing Progress: Insights on Personalized Learning Implementation and Effects. RAND Corporation.
6. Voogt, J., Fisser, P., Good, J., Mishra, P., & Yadav, A. (2015). Computational thinking in compulsory education: Towards an agenda for research and practice. Education and Information Technologies, 20(4), 715–728.

7. Watson, W. R., & Watson, S. L. (2007). An Argument for Clarity: What are Learning Management Systems, What are They Not, and What Should They Become? TechTrends, 51(2), 28–34.
8. Yuan, L., & Powell, S. (2013). MOOCs and Open Education: Implications for Higher Education. JISC CETIS.