



Usage of Digital Educational Tools in A Digital Society

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Submitted: 12-Sep, 2024

Accepted: 21-Jan, 2025

Published: 31-Jan, 2025

Vol. 2, No. 1, 2025. Sociometrics.us

Sociometrics: Journal of Social
Measurement and Analysis

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Abstract

The rise of the digital society has significantly transformed education systems globally, compelling educators and policymakers to rethink traditional teaching and learning models. In Uzbekistan, recent reforms and strategic initiatives, such as the “Digital Uzbekistan–2030” strategy, underscore the need to integrate digital technologies into all levels of education to enhance effectiveness, accessibility, and alignment with global standards. While digital tools are increasingly recognized as essential to education, there is still limited empirical analysis regarding their practical implementation, effectiveness, and challenges within national educational contexts. This study aims to examine the current usage, potential, and implications of digital educational tools in shaping modern pedagogical processes and improving the professional competencies of future educators in Uzbekistan. The research highlights that digital technologies—ranging from online platforms and blended learning to flipped classrooms and webinars—have begun transforming teaching methodologies, promoting independent learning, and fostering information literacy. However, the effective integration of these tools remains dependent on infrastructure, teacher preparedness, and student engagement. By synthesizing international best practices with national reforms, this study offers a contextualized understanding of how digital technologies influence educational outcomes in a developing digital society. The findings emphasize the need for expanded teacher training, curriculum modernization, and investment in digital infrastructure to ensure the sustainable development of digital education. Enhancing digital competencies in both educators and students will contribute to preparing a workforce capable of thriving in the digital economy and addressing the socio-economic challenges of the 21st century.

Keywords: digital society, education, upbringing, digital education, pedagogical processes, technological development, digital technology, informatization of education, modern methods.

Introduction

Educating the younger generation to become well-rounded individuals is one of the vital tasks for our country[1]. The prosperity of any society, its social, political, and economic well-being depends on the intellectual and moral abilities of its citizens and their high-level spiritual development. In fact, addressing the problems related to educating the younger generation as perfect individuals, ensuring the effectiveness of education and upbringing based on the demands of the time, and bringing it up to the global standards, as well as shaping and improving the essence

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and content of education and upbringing, are urgent issues of today[2].

In the current conditions, the use of modern teaching methods in the process of shaping the professional skills of future teachers leads to high results in education. It is important to choose teaching methods based on the educational and developmental goals of each lesson. Digital technologies provide educational resources in the form of graphics, text, speech, music, video, audio, photos, and other forms of information. Electronic educational resources are stored on optional electronic carriers and can be published on computer screens and networks[3].

Materials and Methods

The “Concept of Development of Higher Education System in the Republic of Uzbekistan until 2030” includes a section on the introduction of digital technologies and modern methods into the educational process. It aims to ensure the strong integration of modern information-communication technologies and educational technologies, creating additional conditions for the continuous development of the professional skills of pedagogical personnel. It also emphasizes the personalization of educational processes based on digital technologies, the development of distance learning services, and the wide introduction of webinars, online platforms, “blended learning,” and “flipped classroom” technologies into practice[4].

One of the main directions of the complex development program of the higher education system is the automation of university management and the introduction of information-communication technologies into the educational process[5]. The experience of countries such as South Korea, the United Kingdom, Finland, Denmark, and Russia has been used in this regard, with a transition to an information-based system aimed at saving time on repetitive tasks in higher education institutions and improving educational quality through automation[6].

In the context of a digital economy, the implementation of innovative approaches to education has contributed to the improvement of social life, the integration of science, technology, and production, and the rapid growth of the country's development. At the same time, it has raised the task of ensuring the development of innovative curricula that make extensive use of digital technologies, which requires educators to adopt modern approaches to their disciplines and design independent learning processes both in and outside the classroom based on the analysis of students' needs[7].

A digital society reflects the results of the integration and adoption of information-communication technologies at home, in work, education, and leisure. The concept of digitalization is associated with American scholar Nicholas Negroponte from the Massachusetts Institute of Technology, who in 1995 in his book *Life* described the emerging “digital world”. The concept of digital society is supported by research programs and management practices in the most developed countries [8].

Thus, in 2016, the Netherlands Association of Universities brought together 14 university scholars to study the issues arising with the emergence of a digital society as part of the “Digital Society” research initiative. Similar initiatives are being carried out at institutions such as Zurich University and Brown University [9]. Furthermore, the “Emerging Digital Society” program at the Alexander von Humboldt Institute for Internet and Society in Arizona contributed greatly to conceptualizing digital society as a field. In 2016, Japan’s government adopted the “Digital Society 5.0” strategy, which is considered the next stage in societal development, aiming to enhance the

quality of human life by integrating the digital environment with the physical space. Researchers from Russia, including A.I. Ageyev, M.A. Averyanov, S.M. Yevtushenko, E.Yu. Kochetov, V.G. Julego, A.A. Balyakin, M.V. Nurbina, and others, as well as Western scholars such as A. Alsuhaiboniy, B. Aylvard, A. Butopoulu, and K. Kao, have also studied various aspects of building a digital society[10].

Results

The formation of an updated education system in the context of digitalization. Social and economic changes, as well as new technological challenges, have necessitated the development of new approaches to improving the education system. Today, the role of education in shaping individuals is of utmost importance, as education is the primary factor driving social and cultural changes in society. Education must align with the trends of technological development, which is particularly crucial in the era of digitalization [11].

If we focus on the essence of digital education, what is “Digital Education”? - “Digital Education refers to the innovative use of digital tools and technologies in the teaching and learning process.” Digital technologies are a key component of modernizing the education system. Digital technologies are methods of processing information using various technical and software devices. Primarily, these are computers with necessary software and telecommunications devices that store data.

The use of information-communication technologies (ICT) creates a powerful learning environment and transforms the teaching and learning process, making students more independent in utilizing their knowledge[12]. ICT is not only a tool that can complement existing teaching methods but also a crucial means of supporting new teaching and learning approaches. In the 21st century, the term “technology” is applied across many fields, including education. This is because, in many countries, technology has become the primary tool for transmitting knowledge[13].

Digital technologies play a vital role in the modern education system and create new opportunities for improving pedagogical processes. Today, there is an increasing need for students to develop skills in acquiring, analyzing, and effectively utilizing information in the global information space, which is referred to as information literacy. Therefore, effective use of digital education technologies not only simplifies the process of knowledge acquisition but also teaches students to adapt to modern information technologies and use them productively [14].

Modern scientific literature focuses on the introduction of information-communication technologies in education, expanding students' access to information, and changing their approach to information. In particular, scientific works by E.F. Sabzi extensively discuss the role of digital technologies in education and their importance in shaping students' information literacy. According to him, digital tools are an integral part of the educational process, through which students gain skills in managing and effectively utilizing information flows.

Discussion

International research, particularly by scholars like G. Siemens and P. Downes, emphasizes that students should become independent in their learning, information search, and analysis through digital educational technologies. Their theory suggests that the primary task of information-communication technologies is to create an easy and interactive environment for

students during the teaching process, significantly improving the process of information processing and its utilization[15].

In recent years, specific directions for the development and fundamental transformation of education have emerged both globally and in Uzbekistan. These include the democratization of education, the concept of lifelong learning, the shift from preparing specialists to delivering conscious, devoted individuals to society, the globalization of education, and the informatization of education.

The use of digital technologies fosters the development of students' independent thinking abilities and makes the learning process interactive and engaging. . Simultaneously, digital tools provide teachers with ample opportunities to apply new pedagogical approaches and enhance the quality of education. However, selecting the right strategy and pedagogical approach for using digital technologies in education is essential, as their effectiveness depends on the teacher's experience and the students' preparedness. In the future, the expanded integration of digital education technologies into the learning process and the improvement of mechanisms for developing information literacy should be a priority. This, in turn, will help create a higher quality learning process for students and shape their information culture. Ultimately, knowledge gained through digital education technologies will be applied in practice, helping students develop the ability to search for and utilize information effectively.

Conclusion

Today, the main trend in education is digitalization. The goals of the education system in this regard are to support the comprehensive development of students and prepare skilled professionals for the digital economy. The main trend in education is closely related to the digital revolution, which has already led to fundamental changes in the labor market, the emergence of new professions, improved collaboration, increased personal responsibility, and enhanced decision-making abilities. The use of digital technologies in everyday life creates a motivation system for citizens to acquire the necessary competencies and participate in the development of the digital economy.

Moreover, in today's globalized society, particular attention must be paid to the use of digital technologies and the intellectual potential of society in any field to achieve positive results. Various practical research efforts are underway to improve the education system and its effectiveness in our country. These research efforts mainly focus on updating the educational content based on foreign experiences and creating new generations of educational literature, improving the teaching process of academic subjects through computer technologies, and introducing new generation information and communication technologies into the learning process, among others.

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