International Conference on Developments in Education
Hosted from Bursa, Turkey
https: econferencezone.org
June 20th 2023

DIGITAL LEARNING IN THE SYSTEM OF HIGHER EDUCATION

Sultanova Dilfuza Tillayevna

Senior teacher, «English language» department, Tashkent State University of Economics

Senior teacher, Moscow State University named after M.V. Lomonosov Tashkent Branch

E-mail: sultanova_dilfuz@mail.ru

Digital technologies have changed the entire educational climate in educational institutions, improving teaching and learning, research and management. There is a great need for an innovative infrastructure, fast Internet connection, modern digital equipment, a secure platform, and people who are competent in the application of digital technologies. In Uzbekistan, higher education institutions are demonstrating the increasing use of ICT, artificial intelligence, robotics and virtual reality in everyday practice, which increases competence and helps to increase the connection between learning and reality. This article presents issues related to the implementation of the digitalization process in higher education institutions.

Digital technologies have improved the quality of education by supporting teachers in teaching by computers. The teacher helps students in the study of various information resources on the topic under study for their innovative and collaborative learning. In modern universities, there is a need for theoretical and practical classes using digital technologies. Learning in the "smart classroom" has become a new paradigm in higher education [1].

Distance learning in different courses at different levels has improved the quality of the educational process. These days, all students need to be good at computers to avoid problems in the future. The introduction of digital innovations is now necessary for every educational institution. For the systematic digitalization of educational institutions, a change in the data management system in those organizations is required.

Innovations in science and technology have reduced the size of digital tools and increased the speed of data processing. Digital tools are used in accordance with the student's choice, learning environment and learning settings. Teachers should choose digital tools, taking into account the knowledge levels of students. This requires that digital tools and software be available for interactive learning using a computer and an Internet connection. Recording lectures on various topics with the inclusion of music or video content in podcasts is widely used today, and students can download lectures to their device for later listening. Multimedia modeling of pedagogical practices can help overcome teachers' isolation [2].

Links to websites and multimedia help you recognize accent patterns, rhythms, and intonation better. The interactive whiteboard allows teachers to conduct a specific lesson with the touch of a finger. Icons are clicked to show video clips to explain concepts. ICTs are very effective in promoting development language skills that include listening comprehension, such as pronunciation problems for non-native speakers. Tools are designed for transcription services

International Conference on Developments in Education
Hosted from Bursa, Turkey
https: econferencezone.org
June 20ᵗʰ 2023

help students with hearing impairments easily understand the entire lecture. Students and teachers can access and interact with their work from anywhere and at any time using a learning management system such as Moodle, Blackboard, Piazza, etc. Visme, Google class, and Zoom- interactive online learning tools are available. Skype is also a video conferencing tool for effective communication and learning. Slideware is a tool that is used to create slides for presentations. An online discussion forum is an auxiliary tool for interactive learning [3]. Many new cutting-edge technologies are driving digital intellectual learning environment in higher education institutions. We will consider some of them. For example, cloud computing is a new network computing technology. Cloud computing is the provision of various services over the Internet, including storage and databases, networks, and software. Cloud storage allows you to store files in a remote database and retrieve them on demand. All types of information are stored in the cloud, including files, email, and can be shared with multiple people at the same time. Cloud computing technologies create digital storage and provide access to multimedia content over the Internet. The cloud keeps data safe with online backup. The cloud service provider has full control over it.

In cloud computing, you can better realize a convenient and secure learning environment, as well as real-time collaboration. Cloud computing is cost effective because it does not require physical hardware. However, the implementation of cloud technologies comes with a security risk due to the transfer of confidential information to the service provider [4]. Cloud computing in higher education is expected to grow by 28% by 2030.

The Internet of Things is a wireless network between multiple hardware devices to exchange information. The Internet of Things is the concept of connecting any device to the internet and other connected devices. It is a huge database in which, smart devices exchange information using sensors, electronics, system network and hardware. Communication between devices can occur between different physical objects, such as in educational institutions. Some examples of devices with IT integration are lighting fixtures, smoke alarms, basically devices that users can connect to any other device or directly to the Internet. Each connected device can be damaged if errors are found in any one device. Turning on and off the power supply, for example, in an educational institution can be carried out automatically using this wireless network. The Internet of Things helps in attendance and CCTV recording in an institution. Sensors based on this wireless network are used to pinpoint the location of a short circuit and trigger an alarm in the event of any fire at an institute or university.

In turn, artificial intelligence has simplified learning methodology and created a personalized learning experience through improvements in online and adaptive learning technologies. The role of artificial intelligence in higher education is about speech recognition, problem solving and planning, and automating administrative tasks. Artificial intelligence algorithms correct errors in real time. Artificial intelligence can be used to develop decent learning materials, accurately grade work, and quickly release student results. Artificial intelligence can also

evaluate the performance of students in the classroom using facial recognition. It is necessary to focus on the correct understanding of artificial intelligence for research and development models, for explaining complex phenomena, since a large amount of computing resources are required to complete the work. It will take some more time for artificial intelligence methods to be fully implemented in a higher education institution due to insufficient technical support. Blockchain technology is an open source platform where digital records are stored in the form of a ledger. It is a database of several blocks that contain information. If one block is filled with information, then it is automatically connected to another block, and this process continues. Blockchain technology ensures the security of data management mechanisms, increases the efficiency and technological improvement of higher education. The introduction of this technology will ensure transparency and eliminate corruption. All records at the time of the establishment and operation of the educational institution will be kept securely, since it is not under the control of one person. It is not possible to change the information stored in the block chain. The blockchain system maintains records of transactions on multiple computers and allows decentralization of open data [5]. Blockchain technology is used to exchange student degree and diploma certificates between institutions.

From the above examples, we can conclude that the benefits of digitalization in higher education are great. However, not all educational institutions in our country, at the moment, can switch to the digitalization of their educational processes. Due to the lack of modern monoblocks and their peripherals, the threat of virus attacks, lack of educational software and insufficient broadband access to the Internet are a big obstacle to the successful adoption of digital technologies. These days, most educational institutions are facing a growing demand for IT professionals. Data security is a major problem in higher education. For example, the use of unlicensed software, the use of other people's work as one's own - all this refers to the problems of digital media. Plagiarism leads to lowering the educational standard. With the use of digital technologies and advanced devices, students study the subject on their own, without interactive discussion with the teacher [6].

Summarizing all of the above, we can state that digital technologies individualize the educational process, diversify, develop students' independence. Thus, the quality of education increases, and it is not only about the full and high-quality fulfillment of the requirements of the curriculum: classes begin to meet the personal interests and needs of students. As one of the conclusions of this study, it should be noted that the main task of modern higher education in the Republic of Uzbekistan is to ensure the quality of education based on the preservation its fundamentality and compliance with the current and future needs of the individual, society and the state, through the effective use of advanced pedagogical and digital technologies [7].

Exactly digitalization is an effective tool for improving the quality of higher education. In this regard, the government of our country is developing strategies to increase intellectual capital by financing the development of innovative technological infrastructure in all educational

International Conference on Developments in Education
Hosted from Bursa, Turkey
https: econferencezone.org   **June 20th 2023**

institutions of our Republic. In the modern national policy of the Republic of Uzbekistan, in the field of higher education, its digitalization is one of the main priorities.

References

1. Bocconi S., Lightfoot M. Scaling up and integrating the selfie tool for schools' digital capacity in education and training systems: Methodology and lessons learnt. European Training Foundation. 2022.

2. Selwyn N., Nemorin S., Johnson N. High-tech, hard work: An investigation of teachers' work in the digital age. Learning, Media and Technology. 2017. 42(4), C. 390-405.

3. Sims C. Disruptive fixation: school reform and the pitfalls of techno-idealism. Princeton University Press. 2017.

4. Tawfik A., Reeves T., Stich A. Intended and unintended consequences of educational technology on social inequality. Tech Trends. 2016. 60(6): C.598-605.

5. Wagner D. Technology for education in low-income countries: Supporting the UN sustainable development goals. ICT-Supported Innovations in Small Countries and Developing Regions. 2018. C.51-74.

6. Blasko Z., Costa P. D., Schnepf S. V. Learning losses and educational inequalities in Europe: Mapping the potential consequences of the COVID-19 crisis. Journal of European Social Policy. 2022. 32(4), 361–375.

7. Brooks D.C., McCormack M. Driving Digital Transformation in Higher Education. Retrieved 30 June 2022 from: https://library.educause.edu/