

ENVIRONMENT OF DIGITAL TECHNOLOGIES (EDT) AND ITS PEDAGOGICAL POSSIBILITIES

Karshibayev Sirojiddin Sharobiddin o'gli

The Yangiyer branch of the Tashkent institute of chemical technology

<https://doi.org/10.5281/zenodo.10895082>

Abstract. *This article provides insights into the digital technology environment and its pedagogical capabilities. This shows the scientific research of scientists and the author's personal opinions on the attention and work carried out in different countries and its application in different areas of education to digital technologies.*

Keywords: *digital technology, digital technology in education, educational system, applications of digital technology in the fields. advantages, disadvantages, options, threats.*

INTRODUCTION

Within the framework of the fundamental reforms carried out in the educational system of our country, practical work is being carried out on the application of advanced digital technologies in the higher education system and the widespread and effective use of communicative means. At the same time, the approval of the decree of the head of state on the strategy “digital Uzbekistan - 2030”[1] and measures for its effective implementation testifies to the relevance of the emphasis on digital technologies. Today, the role of digital technology in education is significantly known. The use of the pedagogical capabilities of digital technologies within the framework of various fields serves in the more effective acquisition of knowledge of mankind. Therefore, at the initial stage of the educational stage, special attention is paid to the scientific study on creating opportunities for educators to master digital skills by providing digital technologies, developing analytical and critical thinking, giving knowledge and skills to young people in the conditions of large-scale digital transformation, which will be necessary in the future.

THEMATIC LITERATURE ANALYSIS

Today, comprehensive measures are being implemented in our country for the active development of the digital economy, the widespread introduction of modern information and communication technologies in all sectors and sectors, above all in public administration, education, health and agriculture [1]. On the development of digital education in particular, since January 1, 2021, a system has been introduced by citizens to cover up to 50% of the cost of obtaining international IT certificates in the areas of system management, database and “Cloud” Platform Management, Information Security and other areas of high demand.

By September 1, 2021, digital technology training centers were opened in each district and City on the basis of existing infrastructure facilities for large segments of the population, especially young people and women.

By the end of 2023, specialized schools for in-depth training of more than 200 Informatics and information technologies were organized in stages on the basis of existing educational institutions for students to learn the basics of creative development and computer programming in all districts and cities. All this is a focus on education in the environment of digital technologies in our country.

In addition, on the basis of the digital technology training centers in the regions of IT Park, Republican-wide concourses were held to ensure the education of young people on the basis of cybersecurity, as well as to identify cyberattacks among students and students every year [2].

“Further improvement of the system of continuing education, improvement of the capabilities of quality educational services, training of highly qualified personnel in accordance with the modern needs of the labor market“, “...Informatics... other important and in-demand disciplines, such as deepening study”, “education of a highly educated and intellectually developed generation, creation of a reserve of competently qualified scientific and pedagogical personnel in higher education institutions”[2] such priority tasks are belied in the strategy of action, As a result of the decree”on the development strategy of the new Uzbekistan for 2022-2026”, the pedagogical possibility of improving the professional training of future teachers and the widespread use of digital technologies will be expanded in the conditions of digitized education.

RESEARCH METHODOLOGY

At the world level, various scientists are contributing to the development of education in the environment of digital technologies. Digital transformation is one of the main processes of modernization of education today. The spread of digital technologies made it possible to automate the solution of a number of regular pedagogical tasks, such as augmented reality, updating the content of large data analysis, analyzing Educational Statistics, test control, automated feedback, etc. Traditional educational tasks are also changing: in a digital society, the tasks of memorizing, searching and storing information are taken over by technical devices.

In particular, Bobylev was able to show the place of digital technologies in military higher educational institutions even in the scientific research work of Andrei Vladimirovich on the topic “development of self-education of cadets of a military higher educational institution in an environment of digitization of Education”[3].

We can see that digital technologists were used effectively for educational purposes, even in the topic of Doctor of Pedagogical Sciences Kitaigorodsky Mikhail Dmitrievich “methodical system for improving the skills of a technology teacher in the field of modern digital technologies”[4].

Another candidate of Pedagogical Sciences Alekseeva, Tamara Valentinovna's scientific research work on the topic “methodology for teaching resource design based on audio and video technologies for future Foreign Language teachers”[5] also effectively used the digital educational environment.

From this it can be seen that the pedagogical capabilities of digital technologies are very wide and effective and are considered as a necessary tool for representatives of any field.

Mirzahmedova Nargiza Dilmurodovna, in her paper application of digital technologies in education [6], put forward a number of views on the role of digital technologies in education.

In particular, the scientist is a modern form of economic development of digital technology. It is served by a large set of data in digital form and the process of their processing as the main factor of production and management. The use of the results obtained in practice, on the other hand, allows you to achieve much greater efficiency compared to traditional forms of enema. The rise of the digital education system is greatly served by the opening of Wi-Fi zones IT parks. The opportunity arises for educators to grow their ability to work with digital technologies and to organize various open courses through the internet. This in turn promoted the idea that it would

make educators work more on themselves and serve to further increase the quality of education due to competition.

J.Olimov in the scientific research work on the topic actual aspects and importance of the use of digital technologies in education” [19-7], the htayevs pointed out that as the main reason for the popularization of the use of digital technologies in the educational system, there are aspects that are convenient not only for educators, but also for students.

For example, students will be able to receive education at any point and whenever they want. In addition, through the use of digital technologies in education, we have the following:

first of all, education of students in online or distance form even in regions where there is a shortage of pedagogical personnel;

secondly, to extract, search, disseminate and use the teacher and students ' internet network of information regarding the subject they want;

thirdly, on the basis of the use of digital technologies in the system, improving educational efficiency, reducing time and expenditure of funds;

fourth, through the application of digital technologies to the educational process, we get opportunities not only for students to master the subjects, but also for the extent to which they are mastering knowledge and are ready for problem situations, and for the formation of critical thinking in them, as well as the orientation of students to develop their ability to independently work on themselves.

Madiyarova Mukhlisa Abdulla's daughter says that the current state of the educational system in her scientific research work on the topic” vacationing digital technologies in the educational process”[8] is characterized by an increasing role of non-traditional educational technologies. The acquisition of knowledge by the educator with their help is much faster than traditional technologies. These technologies change the nature of the development, acquisition and dissemination of knowledge, make it possible to deepen and expand the content of the studied subjects, quickly update it, apply more effective teaching methods, and also significantly expand the possibility of education for everyone.

ANALYSIS AND RESULTS

The progress of the comprehensive reforms carried out in our Republic also has a positive impact on the education system directly. Therefore, the implementation of comprehensive reforms in the field, the introduction of international experiments and innovative technologies in order to achieve greater efficiency in all branches of education is becoming more important in the conditions of today's New Uzbekistan. Because, the development of each sphere is determined precisely by the knowledge, perception, thinking and qualifications of Representatives or specialists of this sphere, as well as how much they have mastered the advanced experiences of developed foreign countries in this direction.

The current state of the educational system is characterized by the increasing role of non-traditional educational technologies. The acquisition of knowledge by the educator with their help is much faster than traditional technologies. These technologies change the nature of the development, acquisition and dissemination of knowledge, make it possible to deepen and expand the content of the studied subjects, quickly update it, apply more effective teaching methods, and also significantly expand the possibility of education for everyone. Nowadays, there is an opportunity for this for anyone who wants to get an education. Even without leaving home, it was

able to show significantly that education is possible when the environment of digital technologies enters the field of Education.

It is difficult to imagine our daily life without information and communication technologies, computers and the Internet in the era when today's globalization process is taking place. That is why today, digital technologies are gradually entering all areas of our daily life and becoming an integral part of social life. It is also a sign that digital technologies are of great importance not only in such areas as economics, politics, but also in the education system, where more than 10 techniques and digital technologies are added to the activities of higher educational institutions, which are prepared by specialists in the field of Education. [19-7]

There are a number of advantages to using the digital technology environment in education. The role of educational system tools, in which digital technologies are introduced, is performed by such tools as multimedias, codescopes, computers, laptops, internet tools, smart whiteboards and projectors. Today, the rearmament of the educational system with them ensures that students receive a high-quality teaching of classes. The conditions of the past pandemic have proven that the use of digital technologies in the educational system has a good effect. Online lessons given through television can be perceived as a small step towards digital education. This process proved that the student could be educated without leaving home. Considering other advantages of switching to digital education (online education), it is appropriate to include the following in them.

- Students will have the opportunity to receive education wherever and whenever they want;
- Students will have the opportunity to choose subjects and get education from home even in remote villages where there is a shortage of specialists;
- A culture of obtaining information from the internet and its effective use is formed;
- Raises the education system to a new level;
- Dramatically reduces time and spending;

We can observe an increase in the effectiveness of representatives of different industries in the quality of education in education through the environment of digital technologies.

Including the use of digital technologies in the military, the implementation of various combat training through electronic online simulations allowed for increased knowledge and skills of young cadets in the visualization and Prevention of pre-existing combat casualties.

When we see digital technology in the field of medicine, it serves a lot to share knowledge to students, such as identifying various diseases that are developing in the human body during class, showing the stages of its development on the monitor and preventing it. Many American hospitals lack resuscitators who can take duty 24 hours a day and seven days a week, or rather, there are not so many professionals in the country. Therefore, in the United States, the electronic Chamber of intensive care – "eICU" - was introduced. Remote monitoring of severe patients this monitoring center is able to provide one-person services for hundreds of patients within hundreds of kilometers. Monitoring on the patient's bed automatically sends information about his condition to the resuscitator on duty at the center.

Digital technologists have penetrated almost all areas of Education. Another of them is musical education. Currently, the role of digital technologies in the creation and processing of music is taken into account separately. There is even the possibility of performing the functions of several musical instruments through a single computer.

We have seen through the examples above those digital technologies for all areas create a number of reliefs for teachers and students.

Along with the advantages of digital technology, there are also some disadvantages.

Including the human factor when applied to distance education Yani brings disadvantages such as its senses, the behavior of the audience, the lack of social environment in the audience. In this case, violations of attention for reproaches often occur.

The use of digital technologies in the military educational environment suggests that kursands cannot participate in the combat environment with their natural senses, moving away from real reality.

There are also some problematic cases of digital technology on the path of development of the medical field.

At the moment, medical institutions are faced with large-scale data problems that IoT sensors produce, such as constant recruitment of employees to increase the performance, continuous control of climate standards, as well as monitoring the physical performance of patients, and all these problems — the implementation of constant and continuous control and calculation of environmental parameters, the status and condition of technological processes, patients, personnel and other medical equipment, the processing of the result of research from medical data “raw materials” and various sources, and the absence of complex solutions to transfer the necessary information in the form of schemes, graphs, tables, information screens.

The digital technology environment opened the door to opportunities for society. In all areas, digital technology has opportunities such as solving human problems, relieving his life, maintaining his health and controlling his abyss. Through the possibilities of digital technology in the field of sports, it has also made it possible for athletes to systematize their sports training and, as a result, prepare for an adequate Daja within the specified period. Even the pre-results of sports games are guessing with high coefficients.

In the military sphere, however, there is an opportunity to realize how to attack an enemy from a distance without approaching him and achieve a good result through the environment of digital technologies. In this case, these cases can also be used to organize training sessions for young cadets by performing them in an online environment.

Nowadays, the environment of digital technologies is increasingly developing in medicine. The creation of robots that always inform about the health of patients and the help they give to humanity is one of the possibilities of digital technology. Using digital dental facilities, dental prostheses can be created and installed in patients with incomplete teeth.

Despite all the advantages of digital technology, the threats in it are still causing humanity to be cautious.

Because of a single negligence, military ballistic missiles can destroy an entire state. Therefore, digital technologies included in the fields are constantly controlled and controlled by man. It also makes "human affairs" botless; creating high waves of unemployment. In addition to the fear that robots and automation will drive people out of the labor market, the high-tech forces of the blockchain, big data, genetic engineering, biotechnology, machine learning can also become a threat. It affects people's lives and changes their ways of learning, thinking and communicating. It plays a big role in society, and now it is very difficult to imagine life without technology. Both technology and society are interconnected, interconnected, and interrelated.

Technological threat-one of the main types of crises or crisis scenario occurs as a result of the human use of science and technology. Technological accidents inevitably occur when technology is complicated and integrated and something goes wrong in the system as a whole (technological breakdowns).

CONCLUSIONS AND SUGGESTIONS

From our ideas above, the use of the environment of digital technologies in the educational system contributes to the rapid and qualitative development of Education. It is possible to share knowledge to many students at the same time, ask them questions and assignments. We can see that the environment of digital technologies can also be used productively by representatives of other industries. The correct use of digital technologies will help to find solutions to any problems before humanity.

As a conclusion, it can be said that the introduction of digital technologies into various spheres not only into the educational system plays a huge role in the modernization of the country's educational system. It serves to organize modern education and increase the effectiveness of education.

REFERENCES

1. O'zbekiston Respublikasi Prezidentining 2019 yil "O'zbekiston Respublikasi oliy ta'lim tizimini 2030 yilgacha rivojlantirish kontseptsiyasini tasdiqlash to'g'risida"gi Farmoni, PF-5847-son. [http: www.lex.uz](http://www.lex.uz).
2. O'zbekiston Respublikasi Prezidentining "O'zbekiston Respublikasini yanada rivojlantirish bo'yicha Harakatlar strategiyasi to'g'risida"gi farmoni. PF-4947-son. 2017 yil 7 fevral. – www.lex.uz
3. Epstein R. M., Hundert E. M. Defining and assessing professional competence //Jama. – 2002. – T. 287. – №. 2. – S. 226-235.
4. Kalekeeva T.T. "Ta'limni axborotlashtirish sharoitida bo'lajak informatika o'qituvchilarini tayorlash mazmunini takomillashtirish" Diss.avtoreferat. Toshkent-2017
5. Mannabov J.T. Global ilmiy jarayonda integratsion ta'limni rivojlantirish usullari. Respublika ilmiy-amaliy an'anaviy on-line konferensiya materiallari. – Guliston, Sirdaryo viloyat XTXQTMOHM. 2019. 1121-bet
6. Mingboev U.X. Global ilmiy jarayonda integratsion ta'limni rivojlantirish usullari. Respublika ilmiy-amaliy an'anaviy on-line konferensiya materiallari. – Guliston, Sirdaryo viloyat XTXQTMOHM. 2019. 1267-bet
7. Sharipova B.A. Global ilmiy jarayonda integratsion ta'limni rivojlantirish usullari. Respublika ilmiy-amaliy an'anaviy on-line konferensiya materiallari. – Guliston, Sirdaryo viloyat XTXQTMOHM. 2019. 1172-bet
8. Fayzullayev J.I. va Sattorov A.M. "Axborot va pedagogik texnologiyalar integratsiyasi asosida texnika oliy ta'lim muassasalari talabalarining kasbiy kompetentligini rivojlantirish"// SCIENTIFIC PROGRESS –2021 yil. 2-son. 330-335 b.
9. Xoshimova Sh.S. Kamolova M.A. "Talabalarda axborot bilan ishlash kompetensiyalarini rivojlantirish usullari"// "Экономика и социум" – 2022 yil, № 12(103)-2. 200-203 b.
10. B.B.Abdullayev Talabalarning intellektual tizimlardan foydalanishdagi imkoniyatlari. "O'zbekistonda fanlararo innovatsiyalar va ilmiy tadqiqotlar" jurnali 6-son 20.03.2022 y. 83-85b.

11. O‘zbekiston Respublikasi Prezidentining 2020-yil 5-oktabrdagi PF-6079-sonli “RAQAMLI O‘ZBEKISTON — 2030” strategiyasi. <https://lex.uz/ru/docs/-5030957>
12. O‘zbekiston Respublikasi Prezidentining 2022-yil 28-yanvardagi PF-60-sonli “2022 — 2026-YILLARGA MO‘LJALLANGAN YANGI O‘ZBEKISTONNING TARAQQIYOT STRATEGIYASI” to‘g‘risidagi farmoni <https://lex.uz/ru/docs/-5841063>
13. <https://www.dissercat.com/content/razvitie-uchebnoi-samoorganizatsii-kursantov-voennogo-vuza-v-usloviyakh-tsifrovizatsii-obraz>
14. <https://www.dissercat.com/content/metodicheskaya-sistema-operezhayushchego-obrazovaniya-uchitelya-tehnologii-v-oblasti-sovrem>
15. <https://www.dissercat.com/content/metodika-obucheniya-resursnomu-proektirovaniyu-na-osnove-audio-i-video-tehnologii-budushchi>
16. <https://cyberleninka.ru/article/n/raqamli-texnologiyalarining-ta-lim-sohasida-qo-llanilishi/viewer>
17. <https://doi.org/10.5281/zenodo.7150010>
18. <https://journal.tsue.uz/index.php/archive/article/view/3058/799>