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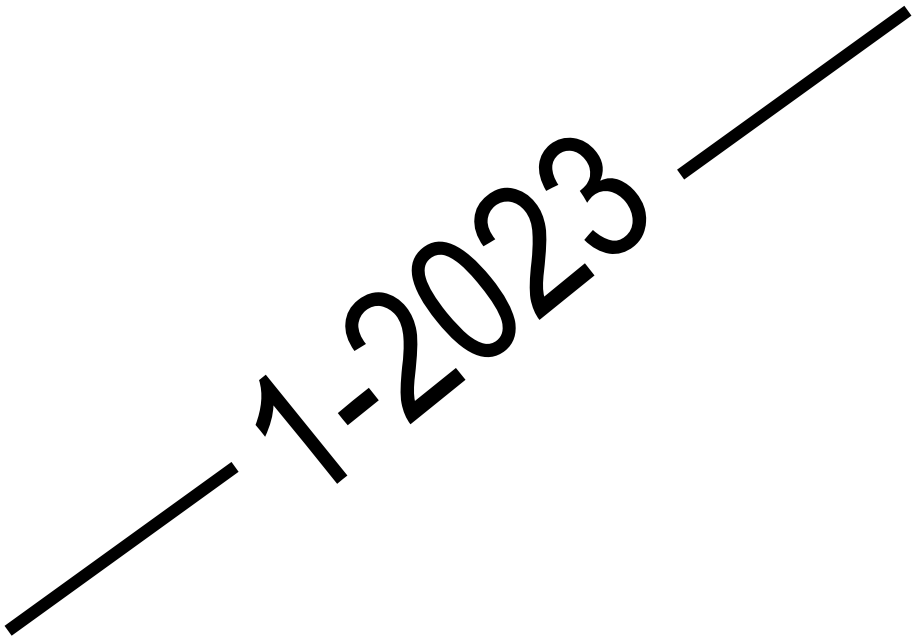

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TA'LIM KLASTERI SHAROITIDA TA'LIM JARAYONINI RAQAMLI TEXNOLOGIYALAR ASOSIDA TASHKIL QILISH VA RIVOJLANTIRISHNING ILMIY TAHLILI

НАУЧНЫЙ АНАЛИЗ ОРГАНИЗАЦИИ И РАЗВИТИЯ ОБРАЗОВАТЕЛЬНОГО ПРОЦЕССА НА ОСНОВЕ ЦИФРОВЫХ ТЕХНОЛОГИЙ В УСЛОВИЯХ ОБРАЗОВАТЕЛЬНОГО КЛАСТЕРА

SCIENTIFIC ANALYSIS OF THE ORGANIZATION AND DEVELOPMENT OF THE EDUCATIONAL PROCESS BASED ON DIGITAL TECHNOLOGIES IN THE CONDITIONS OF EDUCATIONAL CLUSTER

Madina Fayzullaeva Abdumumin kizi[1]

[1]**Madina Fayzullaeva Abdumumin kizi** – Pedagogy of Chirchik State of Pedagogical University master's student in the field of "Management of educational institutions" in the faculty

Annotatsiya

Ushbu maqolada rivojlangan mamlakatlarning raqamli texnologiyalar asosida o‘quv jarayonini tashkil etish va rivojlantirish bo‘yicha ilg‘or pedagogik tajribalari yoritilgan. Shuningdek, rivojlangan mamlakatlarda raqamli texnologiyalar asosida o‘quv jarayonini tashkil etish va rivojlantirish bo‘yicha olib borilayotgan tadqiqotlarning xususiyatlari, jihatlari va belgilari haqida so‘z boradi. Ushbu maqolada Alexey Polovinkin, Michael Treasure, Sang Min Lee va Higgins kabi xorijiy tarjibalarga boy insonlar fikri va tajribasi bilan ham tanishishingiz mumkin.

Аннотация

В данной статье описывается передовой педагогический опыт развитых стран по организации и развитию образовательного процесса на основе цифровых технологий. Также обсуждаются особенности, аспекты и признаки проводимых исследований организации и развития образовательного процесса на основе цифровых технологий в развитых странах. В этой статье вы можете ознакомиться с мнениями и опытом людей, богатых зарубежным опытом, таких как Алексей Половинкин, Майкл Трежер, Сан Мин Ли и Хиггинс.

Abstract

This article describes the advanced pedagogical experiences of developed countries in organizing and developing the educational process based on digital technologies. Moreover, the features, aspects and signs of the research conducted on the organization and development of the educational process based on digital technologies in developed countries are discussed. In this article, you can get acquainted with the opinions and experiences of people rich in foreign experience, such as Alexey Polovinkin, Michael Treasure, Sang Min Lee and Higgins.

Kalit so‘zlar: *raqamli texnologiyalar, tajriba, raqamlashtirish, rivojlangan mamlakatlarning ta'lim tizimi, Aleksey Polovinkin, "Foxford" onlayn maktabi, raqamli ta'lim, Sang Min Li, Xiggins, Wi-Fi zonalari, IT-parklar, Internet.*

Ключевые слова: *цифровые технологии, опыт, цифровизация, образовательная система развитых стран, Алексей Половинкин, онлайн-школа «Фоксфорд», цифровое образование, Сан Мин Ли, Хиггинс, зоны Wi-Fi, IT-парки, Интернет.*

Key words*: digital technologies, experience, digitization, educational system of developed countries, Alexey Polovinkin, the online school "Foxford", digital education, Sang Min Lee, Higgins, Wi-Fi zones, IT parks, Internet.*

INTRODUCTION

Nowadays, teaching and learning has become one of the most urgent issues in the world. Because it is no secret that quality education plays an important role in saving the world we live in from various global problems. Because of this, all the countries of the world are spending a lot of money on education. Considerable work is being done in this regard in our country. Today, the basis of sustainable development of any country is the widespread introduction of innovative and modern technologies. Along with the development of all sectors of society, the introduction of digital technologies also affects the education system.

RELEVANCE OF THE TOPIC

This makes it easier for the learner to get education by creating modern facilities. Multimedia, computers, laptops, televisions connected to the Internet, telephone lines, smart boards, projectors play the role of mediators of the educational system introduced by digital technologies. Today, equipping the educational system with them ensures that students have quality lessons. The global pandemic conditions have proven that the use of digital technologies in

the education system of our country has a good effect. As a proof of our point, we can find out the role of modern technologies in the school system of foreign countries from people with high experience in the digital education system:

Alexey Polovinkin, the director of the online school "Foxford", expressed his opinion about what digital methods of teaching are currently used by school teachers and which ones they will use in "future schools" as follows:

Of course, the question of how to teach may arise. Our answer to this question is with the help of a game

In my opinion, people and animals learn knowledge and social skills best through play. Lion cubs play hunting, and children play store and hospital games. A person of any age can use his/her imagination, attention and memory to the maximum in a real or virtual game. This gamification is called the trend of digital education.

Military, business, and educators use computer games to help students develop essential skills in a safe environment. Social studies teachers in US schools invite students to open their own law firm in an online game. Thus, children learn the basics of civil society and learn to protect their rights.

In my opinion, the next generation of educational computer games will be created from the combination of technical tools and pedagogical developments. The problem is that smartphones and virtual reality glasses have already appeared. All that remains is to create games for special education in virtual and augmented reality.

We are on the threshold of a new technological revolution. I am sure that in the coming years, virtual and augmented reality will be used in such new ways that even the most fearless futurists have not imagined.

Michael Treasure, a digital learning system developer, comments:

In educational games in schools, students discover America with Columbus and radio with Popov. Students will be able to work in environments they could not otherwise create in the classroom: smashing atoms in a lab, collecting samples from Mars, teaching English to settlers.

Games are the best way to teach complex and boring school subjects without forcing them. It teaches and motivates at the same time. Because players get immediate feedback on their actions, they try to complete tasks set to defeat their opponents, they see an objective assessment of their participation in the overall rating, and receive rewards such as points and tokens.

Today, an interactive simulator on a history site or a math app automatically checks the answers to tasks and outputs the results in percentages and points. A smart piano together with a tablet allows you to learn without a teacher in a comfortable environment.

In January 2018, a Japanese company demonstrated a robot that teaches table tennis. Artificial intelligence receives information about the movement of the player and the ball from three cameras and tries to beat the opponent. Smart robots evaluate how well a child technically passes the ball, follows safety rules in chemistry experiments, and draws drawings to fit the problem in geometry.

The computer quickly absorbs a large amount of information about the student: mood, state of health, reaction speed and productivity. Based on this information, artificial intelligence creates a flexible curriculum based on the interests, abilities and difficulties of the student.

Computers take over the main scope of the teacher's daily work: they teach basic knowledge, check their knowledge and give answers to them. A live pedagogue observes the child's dynamics according to machine reports, gives personal advice and discusses the level of development with the student.

Digital education is not just a fad. Applications allow the child to read and solve tasks faster and easier. American researchers studied 2,300 students who studied online for three years. They found that children remember only 5% of the information in regular classes, and three times more through educational sites.

If a child has a specific question or problem, he/she can find the solution on the Internet. If you need to prepare for Olympiads and exams, professional online teachers will help. In interactive courses or classes, children use services and applications not for their name, but for solving educational tasks.

For now, digital education exists outside of school, but that will change in the coming years.[1]

Internet speed is not enough in all regions of our country today. This, in turn, prevents the transition to a digital education system. In order to eliminate this, it is necessary to carry out major works at the government level. The fact that the President's address to the Oliy Majlis gave instructions in this field assures us that there will be significant progress in the field we are thinking about.

The opening of Wi-Fi zones and IT parks in every region and educational institution of our country will serve to improve the digital education system. The introduction of digital education creates the possibility of unemployment among teachers, but it is possible to eliminate it. To do this, teachers can be kept busy by developing their ability to work with digital technologies and organizing various open courses through the Internet. In this way, the competition among the personnel will increase and it will be possible for them to improve their knowledge according to the established procedure. In this way, it will be possible to involve a number of students not only from our country, but also from abroad. This, in turn, makes it possible to find independent funds, and secondly, it helps the teacher to work more on himself and to increase the quality of education due to competition. Currently, it is possible to cite the education carried out through telegram channels as an example. Through these channels, knowledge that takes a long time to acquire is delivered in a short period of time.

In conclusion, it can be said that the introduction of digital technologies into the education system plays a major role in the modernization of the country's education system. It serves to organize modern education and increase the effectiveness of education. At the same time, it ensures that we occupy an important place in the world community.

Moreover, the interrelated, unique, progressive development and technologies of all sciences in the educational process determined the foundations of social development. Today, children and teenagers are growing up enjoying both traditional and modern technologies. While it is known that the increase in the use of traditional technologies such as television and its content has a negative impact on the development and health of young people, studies have shown that digital technologies such as smartphones, tablets, and computers have been developed and are becoming more and more popular. It is not wrong to say that such technologies are useful and, at the same time, their service in making the educational process of young people more qualitative and effective is noticeable.

Digital technology can be considered an important element in the lives of today's youth, as they spend a lot of time using it. The increase in the use of digital media has increased the interest in education in them to a certain extent.

In the decision of the President of the Republic of Uzbekistan dated May 3, 2019 "On additional measures to increase the effectiveness of spiritual and educational work", special attention was paid to the systematic organization of spiritual and educational work in our country. it is noted that attention is being paid. The issues of increasing the effectiveness of the measures implemented in this area, strengthening the ideological immunity and worldview of the population, especially the youth, raising their intellectual potential, consciousness, thinking and worldview, educating them in the spirit of patriotism, love and loyalty to the Motherland, were determined.

Nowadays, the effective use of digital technologies also contributes to the development of education. For example, there is strong evidence that using digital resources can increase the speed and depth of mathematics learning for middle-aged children. There is evidence to suggest that the same can be said for some aspects of literacy, particularly writing and comprehension. Digital technologies appear to be a key tool for improving basic literacy and numeracy skills, particularly in primary settings. Impact measurements are similar to other learning interventions that are generally effective in increasing achievement, but using digital learning has other benefits. Moreover, the degree of impact may be reduced by the degree to which young people are able to effectively use digital learning tools and resources to achieve educational outcomes. Using digital learning more effectively to improve achievement involves identifying and adapting one's approach to how digital tools and resources can be used to achieve learning outcomes for young people, as well as gaining knowledge and understanding of technology. This applies to all educational institutions. When students use digital technologies for formal and informal learning activities at

home and at university, it has a positive impact on their achievement as they spend more time learning. This is especially important for middle-aged people.

Many studies have been conducted on the importance of using digital technologies. For example, a study by **Sang Min Lee** (2009) in the USA analyzed how school behavior and literacy standardized test scores of 15-16 year olds were related to computer use. They were asked how many hours a day they use the computer for schoolwork and other activities. The results showed that students who used a computer an hour a day for both school work and other activities had significantly better reading test scores and positive teacher ratings for classroom behavior than the other groups. This was found when controlling for socioeconomic status, which has been shown to be a predictor of test scores in other studies. [2]

Digital education can be an effective tool for developing young people's collaborative learning and working skills. A meta-analysis of impact studies by **Higgins** and the others found that collaborative use of digital technology (in pairs or small groups) is usually more effective in developing skills around peer interaction and learning than individual use. [2]

Result and analysis. If we think about other advantages of switching to digital education, it is appropriate to include the following:

- students will have the opportunity to study wherever and whenever they want;
- students will have the faith to choose subjects and study from home even in remote villages where there is a shortage of specialists;
- the culture of receiving and using information from the Internet is formed;
- raises the education system to a new level;
- dramatically reduces time and money consumption;
- will have advantages in not getting lost in the "digital world" and finding a good job.

"Pedagogical education innovation cluster" interpreted in today's pedagogy is considered as an important tool for pedagogical activity. This directs the cooperation of educational institutions and various organizations to the effectiveness of education. In order to implement a cluster in the activity of educational centers, it is necessary to pay attention to its work characteristics. After getting acquainted with the opinions of the above experienced experts on digitalization of the education system, we came to the following final conclusion. [3] The expression of the main features of the new modern educational centers in the educational cluster is as follows:

- educational environment formed by new educational technologies;
- public organization of the system, development of education and science developing through mass information channels;
- new educational stages including new educational subjects;
- regardless of birth and social status, talented students who have gained high attention and others;
- new types of knowledge that can have a positive effect on the country's education system;
- constant awareness of new information;
- high attention of the state to talented young people;
- use of educational systems of different countries where many innovations have already been found.

It is already known that the organization and development of the educational process based on digital technologies is a widely used concept, and it is a novelty that ensures the growth of the quality and efficiency of the processes required by the tireless researchers. This is the result of human intellectual activity and imagination. Digital technologies play an important role in scientific research. The implementation of digital technologies in the educational system will improve the quality of education on the basis of a cluster. It should be noted that education is a system of skills acquired by a person in pedagogical activities, and skills are considered a collection of knowledge, which can be achieved in educational institutions or with the help of independent learning.

Today, digital knowledge and modern information technologies are one of the important conditions for progress. Digital technologies not only improve state and community management and create great convenience for people in the social sphere. The transition to the digital education system is undoubtedly one of the projects that require large financial and human resources. For

this reason, it is harmful to introduce not only the government, but also citizens and private entrepreneurs, that is, in educational centers. In a word, the joint implementation of this project will strengthen our unity, as well as significantly contribute to the development of the social life of our citizens, as well as the development of the educational system in Uzbekistan and increase their activity.

CONCLUSION

To sum up, digital technologies today pose the problems of development of human intelligence and personality in a new way, create new methods and forms of organizing scientific research. Therefore, aspects of the development of electronic information technologies deserve attention. Thus, the positive effect of new modern technologies on young people consists in creating favorable conditions for knowledge activities, education, communication, efficient organization of free time, and additional income.

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