



APPLICATION OF DIGITAL EDUCATION TECHNOLOGIES IN THE EDUCATIONAL PROCESS

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ANNOTATION

This article describes the different digital learning technologies and their potential in the educational process. When a lesson is organized using digital learning technologies and computer support, it can be planned to be the most effective, relevant, and fun for students and teachers. The most common forms of organizing learning activities using digital learning technologies can be used simultaneously in both individual and frontal forms of learning.

Keywords: digital educational technologies, computer, information technologies, e-learning technologies, multimedia, information, software, distance learning.

INTRODUCTION

The use of digital learning technologies at different stages of the learning process is a modern requirement.

In this regard, the Resolution of the President of the Republic of Uzbekistan Shavkat Mirziyoyev "On measures to further develop the field of pedagogical education" dated February 27, 2020 No PP-4623, the introduction of digital technologies in higher pedagogical education, Ensuring the strong integration of modern information and communication and educational technologies, the continuous development of professional skills of teachers, methods of education and training, information and communication technologies and modern pedagogical technologies in the educational process. Training of professional pedagogical staff with skills and improvement of curricula and programs in the field of pedagogical education in the field of education and specialties on the basis of advanced foreign experience, innovative educational and regulatory and The creation and implementation of educational technologies is a priority. Therefore, it is important to introduce new approaches to the application of digital learning technologies in the system of continuing education.

From the point of view of many users, the Internet is a digital means of information exchange. Foreign experience in the use of digital learning technologies in computer science education is of great importance.





Modern socio-economic conditions and information and communication technologies place new demands on the conditions that determine the need for a new generation of qualified teachers and their methodologies.

One of the priorities of the national project "Education" is the development of modern methods of teaching and education based on IT, providing the necessary electronic educational resources, increasing the information capacity of teachers.

However, researchers in this field have not been able to come to a consensus on the conditional direction of the practical and psychological impact of digital education technologies and Internet technologies on young people.

In this regard, according to N. S. Kozlova, we know that the virtual world can not automatically have a positive impact on young people. In fact, the Internet does not have any negative effects on the individual. However, the consequences of using the Internet and social networks depend on the socio-psychological characteristics of the people involved in the network, their upbringing in the family and the environment.

M. I. Bocharov and I.V.Simonova said the opposite. According to them, "There is an aggressive information environment in the process of using digital educational technologies and the Internet, and immoral images, advertisements and some information in it have a negative impact on the spirituality, culture and upbringing of young people. leads to a breach of moral depravity and personal involvement".

However, many researchers point out that digital education technologies and Internet technologies have both pros and cons. The advantages of digital education technologies include affordable and convenient distance learning, access to a variety of services, alternative income, and free communication. Disadvantages include problems with IT (information technology) addiction and the growing number of young people being deceived.

In this regard, the research of domestic scientists shows that the use of digital educational technologies in independent learning activities is desirable for the development of information competence of students.

During his research, R.U.Madaminov expressed the following views: "The use of multimedia technologies in the organization of the educational process on the basis of e-learning technologies increases the interest of students in learning, based on the interactive nature of education develops and increases the effectiveness of learning materials".

According to X.X.Muratov: "E-learning resources (ELR) – are defined in the state educational standard and science program, which provides for the formation of knowledge, skills, qualifications and competences, obtaining guaranteed results of the design of the educational process with the help of electronic means, obtaining and





controlling independent knowledge, developing creative abilities - these include methodological resources, didactic tools and materials, multimedia e-learning resources”

The topic of digital educational technology used in the educational process is being discussed very sharply. As these technologies interact with young people and facilitate the educational process, they demonstrate the simplicity of interaction in the sphere familiar to young people. This, in turn, opens up new opportunities for in-depth study of various materials, participation in online projects, the educational process is facilitated by the possibility of checking the level of their knowledge and studying different spheres of people and professions.

Today, almost all educational institutions have a set of computers and e-learning technologies. After computers, digital learning technologies have emerged to improve the learning process.

The introduction of digital learning technologies in the educational process will lead to the use of new methods of educational process, improving the pedagogical skills of teachers.

RTT – means "digital learning technology" and is a separate object that is presented in the form of digital, electronic, "computer", designed for educational purposes.

A digital data set used for DET learning. The learning materials used to demonstrate and use electronic devices are called e-learning technologies (ELT). In the most general case, ELT training videos and recordings include a home recorder or CD player sufficient to play them. The most modern and effective ELT for education is displayed on a computer. Sometimes, to describe this small set of ELTs, they are called digital learning technologies (DET), which means that the computer uses digital recording methods.

With the rapidly evolving information technology, many teachers are effectively complementing the traditional tools for the educational process as they become more and more ready for their methodological system. The use of digital learning technologies offers new opportunities to increase the effectiveness of the learning process. DET is a tool for speed in the learning process, helping to develop students' practical skills, organizing and conducting surveys and controls, as well as monitoring and evaluating homework, working with drawings, tables, and graphs. A distinctive feature of programmed learning is the step-by-step nature of students' independent activity, which helps to activate the learning process, as well as the availability of quick feedback that can personalize and differentiate learning.

When basic learning effects and control are transferred to a computer, the teacher demonstrates the qualities of students in teaching, such as understanding the purpose





of the search, actively replicating previously learned knowledge, interest in filling in missing knowledge from ready sources, independent search will have opportunities. This allows the teacher to design their own management activities and gradually develop students' creative attitudes towards learning. Provide standards for reviewing learning sessions (through study assignments or computer programs), self-monitoring, and learning activities that should be used in each lesson to help students analyze the causes of errors. 'riff activity allows for gradual mastery for self-education. Digital Learning Technologies (DET) is a source of information that includes graphics, text, digital, speech, music, video, photography and other information aimed at achieving the goals and objectives of modern education. In single-digit learning technologies, information (or data) sources, information creation and processing tools, and controls can be separated. DET is necessary for students to work independently. Because they are:

- Makes it easier to understand the material being studied, as opposed to printed textbooks, delivery methods: it affects auditory and emotional memory, and others;
- Allows to adapt to the needs of the student, the level of preparation, intellectual abilities and ambitions;
- Get rid of awkward calculations and transformations, focus on the essence of the topic, consider more examples and solve more problems;
- Provides ample opportunities for self-testing at all stages of the work;
- Allows you to effectively organize the lesson and submit it to the teacher in the form of a file or in print;
- Serves as an infinitely patient coach, giving an almost unlimited amount of explanations, repetitions, tips and more.

digital learning technologies are useful for hands-on activities in private classrooms because they:

- Save time to solve more problems and allow the computer to help, analyze the solutions obtained and analyze their graphical interpretation;
- Allows the teacher to teach on a computer in the form of independent work, which acts as a leader and consultant;
- Allows the teacher to quickly and effectively monitor students' knowledge using a computer, to determine the content and level of difficulty of the control activity.

The following main pedagogical objectives of the use of det can be identified:

- Accelerate all levels of the educational process through the use of modern information technology tools (increase the efficiency and quality of the educational





process, deepen the interaction, search for the necessary information, increase the volume, optimization and activity of educational activities);

- Development of the student's personality, preparation of the individual for a modern, informed life in the information society (development of different thinking, communication skills, aesthetic education through the use of computer graphics, multimedia technology, the formation of information culture, information processing skills).

The quality indicators that distinguish digital learning technologies from other educational tools can be divided into two parts: multimedia and interactivity.

Multimedia-Providing different information formats on the same media source. These formats can be text, audio, photos, and video.

Interactivity is the principle of organizing a system achieved through the exchange of information of the elements of this system.

The different types of digital learning technologies and the materials needed to develop them can be grouped into four main groups depending on the level of demand in education:

- The first group includes sources of information of a declarative type - electronic copies of printed publications, audio and video recordings. Such resources usually include theoretical material on the topic in the form of textbooks and graphic illustrations, recommendations for teachers and students, and sets of tasks. Lecture notes are provided using digital audio and video graphics. The need for such sources of information may arise during the initial acquaintance with the learning materials and its perceptions;
- The second group of information sources also applies to declarative-type educational tools. The second group includes e-textbooks, virtual classrooms, monitoring and evaluation systems. They occur when necessary to understand, reinforce, and control the knowledge required;
- The third group of information sources includes virtual trainers, virtual training labs, remote access labs, and so on.

A distinctive feature of digital learning technologies is the use of mathematical models of the objects or processes being studied and a special interface that supports students in solving learning problems in a controlled learning mode.

The third group of digital learning technologies is used to study the characteristics of the objects or processes being studied, if necessary, and to shape and develop the unexplored part of knowledge, skills, and competencies;

- The fourth group of information resources is the automation of professional activities in the form of information computer systems or their educational





analogues in the form of software packages. Such digital learning technologies are required by students to solve a variety of tasks on a topic being studied in the process of designing a course or diploma in elementary vocational education.

When this group uses digital learning technologies, the learning process is conducted in a free research mode and is considered close to the professional activity of the specialist.

The following types of digital learning technologies are available:

- Textbooks needed to organize the learning process. These include a set of digital learning technologies that expand digitally presented photographs, videos, static and dynamic models, virtual reality and interactive modeling objects, cartographic materials, records, symbols and business graphics, text documents, and other learning materials;
- Sources of information of a complex structure - digital materials (texts, video images, audio recordings) created with the help of appropriate teaching methods that support students and teachers to work in one or more subjects (sections) of the field of science, photographic images, interactive models, etc.) or provide one or more educational activities in a specific field of science;
- Innovative educational-methodical complexes - a complete set of educational tools necessary for the organization and conduct of the educational process, which is achieved through the active use of modern pedagogical and information and communication technologies. ensure that students achieve the learning outcomes necessary to prepare them for life in the information society:
 - Validity of general secondary education;
 - Ability to learn;
 - Ability to communicate and work in a team;
 - Ability to think and act independently;
 - Ability to solve non-traditional problems using the acquired topic, intellectual and general knowledge and skills;

Digital learning technology packages are designed to best adapt to the existing education system and minimal innovation requirements.

The programmed DET meets the requirements of the "stimulus-response" education system. These resources focus on the student's independent work, reveal the basics and methods of learning, and their attitudes toward professionalism. Specific features of such resources include: the use of mathematical models of the objects or processes being studied and a special interface that supports students in solving learning problems in a controlled research mode; process models; models of natural





phenomena; models of laboratory work; experimental models; interactive practical tasks.

Problem-based DET is used in the implementation of problem-based learning and is aimed at developing logical thinking in students, stimulating the creative component of knowledge perception.

The use of digital educational technologies provides high interactivity and multimedia of the educational process, the use of independent, group, individual and stratified types of work, the use of thematic sections without expanding the relevant sections of the textbook. The main purpose of education is to develop the personality of the student who is able and wants to acquire skills (speech, language, socio-cultural, educational and knowledge).

In addition, students who take online courses through digital learning technologies can access the school library (theses, presentations, self-study, homework preparation, etc.), the teacher (lessons and to prepare control work).

It can provide computer files large enough when you place multimedia information on the Internet. It can be difficult to fully utilize such information resources in the learning process due to the availability of interactive tools, the inability to connect audio and video graphics, high-resolution graphics, etc., and the reliability of available communication channels. The introduction of new information and communication technologies in the modern educational process will help to improve the quality of teaching students. That's why it's important for a teacher to create an DET. The active role of DET in education is that they not only serve as tools used to solve specific pedagogical tasks, but also encourage the development of didactics and techniques, help to create new forms of teaching and learning, which helps students. Significantly improves the quality of learning.

In addition, as mentioned above, separate objects, presented in the form of digital, electronic, "computer", designed for educational purposes - are called DET, and when they are used in the classroom, students often use a computer. corresponds to their use. When using a computer, students have the ability to memorize, imagine, work independently, and develop hand motor skills while using a mouse and keyboard, and students become more active and enthusiastic.

Especially in computer science and information technology classes, students have a great need to work with digital learning technologies, gaining knowledge, skills and abilities, and being able to work with them on an intuitive level.

Digital learning technologies are useful in working with students, have a number of advantages, and can be used in a variety of educational settings.





There are many digital educational resources available to students, and here are some of them.

kundalik.complatform. Advanced technology to automate the learning process, online learning tools and one of the most modern ways to communicate with parents. kundalik.com- the mission of the digital education platform is to make the educational process in Uzbekistan high quality and convenient. We are convinced that in 2020 there will be no barriers to education in Uzbekistan. Our students have proven that they can learn anything in any situation.

kundalik.com – automated educational information system "diary", which combines the possibilities of electronic document circulation for general secondary educational institutions and social networking tools among all participants of the educational process: it serves as an excellent and interesting School for teachers, parents and students.

Important areas of **kundalik.com** activities:

- Modernization of school education;
- Integration of information and communication technologies (ict) in the educational process;
- Develop interactive teacher-student-parent communication;
- Introduction of a single environment for information exchange;
- Creating and maintaining a school ecosystem;
- Creating opportunities for distance learning.

Through this educational platform, we can control the achievements and interests of our children, actively participate in the educational process together, easily find all the necessary tools for creative victories and self-expression for reading and extracurricular work.

Currently, all schoolchildren in Uzbekistan are included in the kundalik.comeducational platform. Parents have the opportunity to monitor their children's attendance and grades at school.

Another convenience for schoolchildren is the – **Edu Market** online education system. Through this system, it is possible to study many subjects, evaluate, monitor and analyze mass statistics in schools.

Advantages of **Edu Market**. Exercises developed by experts will increase the amount of skills acquired due to more complex issues. The child will be rewarded for each correct answer and effort, as well as the items needed to create their own virtual school for each lesson. **Edu Market** is an online learning system that allows you to gain new knowledge in the sciences.





Edu Market options:

- Search by various books, magazines, textbooks, navigation aids and categories;
- Use of online education and science;
- Access to a large catalog of teaching materials on a variety of topics 24 hours a day, 7 days a week around the world;
- Virtual library;
- The pedagogical process, the educational institution in which students are taught through gadgets;
- Online statistics of a child's scientific activity;
- Have an idea about a virtual city, a virtual home;
- The world created by technical means is transmitted to man through his emotions;
- Online points - points that can be exchanged for coins (domestic currency) and various bonuses for successful completion of tasks;
- Access to teaching materials in various disciplines;
- Receive various bonuses for successful submission of tasks;
- Get points that can be exchanged for coin (domestic currency);
- Improved socialization (communication with other classes and schoolchildren);
- Play more useful games with gadgets;
- Motivate to read.

Edu Market Objectives:

- Make learning and the learning process easier and more fun;
- Create a transparent system for parents and teachers to monitor the child's academic performance;
- Create the right education system for every age;
- Is a tool for kids to make the gadget not only fun but also a complete educational tool.

The STEAM generation is the most popular generation in the modern world. STEAM education is not just a way of learning, but also a way of thinking, assimilating materials, incorporating practical exercises into the learning process. By focusing on practical skills, students develop their willpower, creative potential, flexibility, and learn to collaborate with others.





Parenting options:

- Working more closely with their children;
- Understand the child's interests and hobbies;
- Communicate directly with teachers;
- Real-time statistics.

In short, the use of digital learning technologies in the classroom is a requirement of the times. Today, when a lesson is organized using a computer, it can be planned to be the most effective, convenient, and fun for students and teachers.

Using such a set of teaching aids, the interaction with the student is carried out only through information channels (sight, hearing, etc.). This will increase the effectiveness of education. When using information and communication technologies in education, the problem of restoring the forms of organization of students' learning activities should be addressed in a new way. If the most common forms of organizing learning activities in a traditional educational setting are individual and frontal forms, then both can be used simultaneously using information and communication technologies.

The introduction of DET into the educational process will lead to a change in the role of the educator, which means that the educator will become more of a researcher, organizer, consultant and programmer than a teacher.

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