

# **Innovative Methods of Forming Students' Digital Learning Skills**

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*Abstract:* In this article, the innovative methods of forming digital learning skills in the educational process, teaching based on modern methods of digital teaching, and the analysis of the formation of skills and competencies in students are discussed.

*Keywords:* Digital teaching, digital education, creative thinking, individual education, mobile education, digital resources, electronic library, cooperative education, cooperative structure, gamification, online platform.

Today, digital technologies and concepts of digitization have entered and are widely used in practice in almost all fields. In particular, the use of digital technologies and various multimedia tools in the educational system serves as a guarantee of organizing a high-quality and meaningful lesson, focusing the interests and attention of students. The use of social and mobile tools in the educational process helps learners learn knowledge quickly and conveniently, and also ensures that the subject being studied is interesting. In the current era of information exchange and globalization, digital learning is an effective way to further involve students in the educational process, certain requirements are imposed on both parties, i.e. the teacher and the students. There are certain boundaries and requirements between individual learning and group learning. Teaching students in traditional pedagogical methods is becoming more and more ineffective in school activities. Modern technologies of the digital age, social networks, Internet providers are becoming the daily needs of learners. Learners are also intensifying the process of learning and receiving smart lessons organized on the basis of digital technologies.

Modern methods of digital teaching are widely used in the educational process. The use of modern methods of digital teaching in the course of the lesson helps to achieve high efficiency in the teaching system and further increase the level of knowledge of students. When choosing educational methods, it is appropriate to choose based on the didactic task of each lesson.

While preserving the traditional form of the lesson, enriching it with methods that activate the activities of various learners will lead to an increase in the level of learning of learners. For this purpose, the lesson process should be organized rationally, the teacher should increase the interest of the students and encourage their activity in the educational process, divide the educational material into small parts and use digital tools and resources to open their content. orientation to learning, use of visual materials in the course of the lesson, and enriching the imagination of learners, as well as motivates them to independently perform practical exercises.

In today's educational environment, the method of working with digital mechanisms and digital information, based on the environment of an individual approach, has a positive effect in organizing the teaching process that can meet the modern, creative and international standards of students. Individual approach forms in students personal development, solving problems based on correct analysis, as well as free and critical thinking skills. This approach helps students to come out on the basis of a creative and logical approach without psychological processes, in accordance with the situation.

In forming digital learning skills of students on the basis of an individual approach, it is

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necessary to first interest students in digital learning and create motivation in them. This can be done by expressing the topics that students struggle with in an easier way, as well as in the form of problems or numbers. In order for students to understand the relationship with numbers, interdisciplinary integration should be carried out, and for this, different examples from the point of view of each subject should be given. In this way, it is necessary to diagnose the knowledge acquired by students during the period of interdisciplinary integration. As a result of diagnostics, it is desirable to analyze and evaluate the integrated knowledge of students, to obtain statistical data. The use of digital games and different comparison methods has a progressive effect in order to further develop students' connection with digital learning. Through this, practical trainings are organized with students. In these trainings, digital skills are formed in the field of science. It serves to form students' abilities and skills such as planning, analysis, and logical thinking by giving students the task of creating digital graphs of the knowledge they have acquired in the field of science.

Digital teaching in the educational process, teaching through digital education means the organization of educational activities based on technologies. This provides new opportunities for students and forms the basis for the formation of new skills, and it is also quite different from the traditional one. Digital education requires targeted use of the Internet. Learning through various sites, mobile applications, online classes, interactive platforms, and electronic resources are tools that increase students' motivation to learn in the educational process. These learning platforms empower students to analyze, synthesize, process, and interact with data in a comprehensive manner. Through this method, it is possible to learn together with learners from any distance, either individually or in a group.

Digital learning process has several important advantages for learners. Through these educational methods, students can learn and master at any place and at a time convenient for them. Students can freely acquire the necessary topics and information materials through Internet sources. As a result, personal development, person-oriented individuality appears. The student can easily choose the knowledge that is necessary and interesting for him individually based on his personal approach.

Another advantage of digital education is that students can learn from a distance, in a comfortable place and at a comfortable time, using digital resources. Through this, the student gets to know new technologies directly, uses them freely and purposefully, and improves his knowledge.

The formation of digital learning skills in students helps to make the educational process more effective and interesting. As a result of the formation of digital education skills, it allows students to come to the new topic that is planned to be studied, that is, aware of the new topic. The quality and effectiveness of the lesson will increase as a result of students coming prepared for the topic planned to be studied. That is, the teacher is busy with controversial and practical tasks related to the topic in the regulations of the lesson distribution, which are allocated to give the student an understanding of the new topic, to familiarize him with theoretical information. We would like to focus on the following as teaching methods organized with the help of digital resources and digital technologies:

Interactive lessons, i.e. digital textbooks, online platforms allow students to be effectively presented with information. Through this, students can directly perform interactive tasks in control systems, learn and perform various virtual and practical exercises.

Organization of online contests and competitions with various prizes to increase students' interest in science and test their knowledge is effective. Through this, students' motivation for science is increased, and self-confidence competence is formed through encouragement.

In order to introduce digital education in educational institutions, it is necessary to organize a digital education laboratory in the institution, as well as educational technoparks for the practical expression of students' knowledge, and provide them with the necessary material and technical

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bases. In this way, the student reprocesses the theoretical knowledge he acquires in science based on modern technologies, creates innovations, various new projects, and increases his experience. In this way, students can create news by individualizing their knowledge.

The terms "digitalization" and "digital education" appeared in connection with the strengthening of information and communication technologies. E.L. Vartanova, M.I. Maksenko, S.S. Smirnov consider this concept to be the translation of information into numbers and, at the same time, the infrastructural, administrative, behavioral and cultural components of education.

Digital education is an educational practice that supports the educational process and leads to tangible results. It serves not only to continue the educational process through digital educational tools, but also to increase the quality and effectiveness of education. In the course of the lesson, digital learning is carried out with the help of technical tools.

Digitization is the process of converting information into a digital format. The result is a digitized object by creating a series of numbers that describe a discrete collection of points or samples.

No one can deny today that our society is moving towards a digital future.

Teaching students through a virtual system on the basis of digital education is an innovative way for them to experience in a virtual way. Through this system, students can take excursions on various subjects and topics, travel to historical places, building objects. Through this, they get virtual education. This makes students more interested in science.

The process of digitization has entered the history of mankind in the form of wired and wireless telephones, television, radio, and now digitization is the main activity in the fields of economy, medicine, tax, insurance, service, trade, education, and production. is performing the function of a tool.

According to A. Murray, "digitalization is a paradigmatic change in our way of thinking, behavior, environment and communication with each other" []. That is, digitization is a change in the paradigm of communication and interaction. According to E.L. Vartanova, M.I. Makseenko, S.S. Smirnov, digitization "is not only information digitization, but also a complex solution of infrastructural, administrative, behavioral, cultural nature" []. That is, we can conclude that the development of the Internet and mobile communication are the main technologies of digitization. Today, information and knowledge are the basis of the development of society, and traditional concepts and models are not applied to it. As L.V. Shmelkova noted [], the most important feature of a person who is compatible with the digital economy is the ownership of digital technologies and their use in professional activities. Digital technologies, on the one hand, help to further increase the volume and efficiency of production, on the other hand, they allow an individual approach in various areas. The concept of digitization is "the digital method of communication, writing, data transmission using digital means."

Students can independently enrich their knowledge using digital content with the help of digital technologies. Learning with the help of digital tools forms the student's creativity.

Innovative methods provide opportunities for students to manage, analyze, think creatively, and get individualized education. These methods, as well as with the help of digital resources, they can organize an effective learning process and provide an opportunity to freely familiarize themselves with digital technologies and news, express their opinions, and use them throughout their lives.

Mobile education, that is, learning through various devices (phone, tablet, computer) is an important proof and basis of the introduction of innovative methods of digital education. Every learner can easily access the required study materials, textbooks and learning tools through their mobile devices. By introducing these methods, it is observed that students develop communication skills and adapt to news.

Innovation methods are the guides, systems and methods used to create innovations and innovations. These methods make it easier to receive news, analyze it, promote it and use it.

In order to improve the quality of lessons, teachers must constantly improve their skills and qualifications in the use of digital technologies. In addition, it will not be useful for teachers to use various scientific and practical methods. They can share their experience with colleagues through conferences, seminar materials, teacher forums, and social networks. Thus, the introduction of digital learning and the use of the Internet to improve the quality of lessons provide the following opportunities:

- 1. Opportunities in the field of professional skills of teachers;
- 2. Increasing students' interest in the lesson;
- 3. Many opportunities for teachers to approach their profession creatively;

The goal of education is to provide the student with the knowledge and skills specified in the state educational standards. Teaching can be considered successful only when the knowledge is received and understood by the learner, or when the learner is able to demonstrate in practice the tasks intended for skill development.

It is known that the process of getting education (getting information) is a process of systematic development of spiritual and mental abilities, formation of knowledge and concepts, and formation of the ability to use the acquired knowledge. This process can be carried out by the learner himself or with the help of another educator. The educational process is based on different methods. Passing lessons based on different methods not only improves the quality of the lesson, but also increases the interest of the students in the lessons and improves their knowledge. Innovative methods in digital learning are innovations that include the use of innovations and opportunities of information and communication technologies. These methods further develop national learning methods and create convenience for students.

One of the innovative methods is learning through interactive textbooks and programs. In this way, students are provided with materials such as electronic textbooks, video lessons, interactive tests and games. Learning in this form is interesting and effective for students, activates them and increases motivation. These innovative methods simplify the learning process and create convenience for students. They help students learn effectively and adapt to the digital world.

The advantages of the Ministry of Digital Technologies in the education of students can be:

1. Successful learning: digital technologies help students analyze and learn in the best possible way. These technologies make it possible to create a wide range of concepts for students through interactive textbooks, videos, databases and more.

2. Use of other resources: digital technologies provide access to regular information on the Internet, work with books and databases. Using these resources, students can find answers to their questions and learn more about the topic.

3. Learning: through the use of digital technologies, the knowledge of students increases, which allows students to increase and improve their learning. This helps to ensure a simple and effective practice through programs prepared for each student with an individual approach.

4. Communication and collaboration: digital technologies enhance communication between students. Students ask questions, exchange ideas, and collaborate through online forums, webinars, and other interactive tools.

The recommendations of the Ministry of Digital Technologies for the digital education of young people are as follows:

1. It is necessary to ensure that students understand the benefits and requirements of digital education, and to develop the skills to follow them. Students should be informed about the benefits of digital learning, such as interactivity, individuality, monitoring, etc.

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2. It is necessary to show the importance of using digital technologies in the fields for students. It is necessary to demonstrate the importance of learning with digital technologies in today's world.

3. It is necessary to demonstrate the convenience of using digital resources, to demonstrate the availability of freely acquired and personal learning opportunities for students through the Internet, electronic library and other resources.

The Ministry of Digital Technology's recommendations for digital education for young learners, along with the benefits of educating students, may include:

1. Individualization: digital technologies play an important role in supporting individual learning paths for students. These technologies make it possible to prepare lessons adapted to different learning for each student.

2. Convenience and freedom: opportunities for convenience and freedom are created for the learner through digital technologies. Students will be able to participate in classes anytime, anywhere.

3. Educative qualities: digital technologies help to develop educative qualities through easy use. This can be done mainly by using interactive lessons, tests, databases and other online resources.

4. Cooperative learning: digital technologies allow students to develop cooperative learning. Students learn through online platforms with opportunities to collaborate, join communities, and help each other.

5. Introducing the news: digital technologies allow readers to understand the news and give them a faster opinion.

In conclusion, innovative methods of teaching based on digital education form the following pedagogical knowledge, skills and competencies in students:

1. Individualization: in teaching based on digital education, each student is given the opportunity to choose personal educational paths based on the combined information and requirements. Based on this method, the basis is to analyze the data, determine the level of knowledge of students and recommend appropriate textbooks for them.

2. Cooperative structure: in teaching based on digital education, students work in cooperative structures in groups. In this way, students help each other, complete tasks together and exchange ideas.

3. Interactive textbooks: interactive textbooks are used based on digital education. These textbooks will interact with students in an interactive way and will be able to provide them with practice-oriented tasks.

4. Virtual Lab: In digital education, virtual labs provide hands-on opportunities for students. Students will have the opportunity to conduct scientific research, conduct experiments and test data in these laboratories.

5. Use of basic technological tools: innovative methods of teaching based on digital education include the use of basic technological tools, such as computers, the Internet, smartphones and tablets. These tools allow students to search for and access knowledge.

6. Gamification: gamification method is used in digital education. This method is used to make learning more interesting and motivate students through games and news.

7. Online platforms: classes can be organized through online platforms based on digital education. Through these platforms, students can access textbooks, complete assignments, and benefit from education even outside of class.

By using these innovative methods, teaching on the basis of digital education builds students' skills and competencies, develops their acquisition and use abilities, and increases student motivation.

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