



THE USE OF ICT AND INTERACTIVE METHODS OF TEACHING IN EDUCATION

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ABSTRACT

Information and communication technologies (ICT) are a set of methods, production processes and software and hardware integrated for the purpose of collecting, processing, storing, distributing, displaying and using information in the interests of its users.

The modern stage of society's development is characterized by the formation of fundamentally new priorities in the educational sphere, the most important of which is to improve the quality of education. The concept of modernization of education defines the creation of conditions for improving the quality of general education as one of the main objectives of educational policy.

One of the priority directions of modernization of education is the informatization of the educational process, which includes a number of such important tasks as: [7, p.23]

- provision of educational institutions with computer equipment and means of communication;
- providing schools with electronic learning tools;
- automation of school administration management activities;
- introduction of information technologies into the educational process of schools;
- training and advanced training of teachers on the use of ICT in the educational process.

In accordance with the state program of informatization of education, schools should be equipped with computer equipment and specialized software with Internet connection. Computer training courses should be organized for teachers of general education subjects as part of professional development at the district and regional levels. This is necessary because electronic textbooks on general education subjects, electronic encyclopedias, virtual laboratories, simulators, test shells, etc. have now appeared.



The presence of the above conditions makes it possible to transfer the educational process to a qualitatively new level, as new opportunities arise for building a teacher's work system for organizing the educational process both in the classroom (explaining new material, consolidating, controlling knowledge) and outside of school hours (working off missed material, preparing for lessons, handing over debts, etc.).

As noted by E.I. Vishtynetsky and A.O. Krivosheev, the use of ICT used in the field of education should aim at the implementation of the following tasks, such as: [11, p.10]

- support and development of systematic thinking of the student;
- support of all types of cognitive activity of the student in the acquisition of knowledge, development and consolidation of skills and abilities;
- implementation of the principle of individualization of the educational process while maintaining its integrity.

The advantages of using ICT in teaching are undeniable: this is the possibility of operational control of knowledge, and the introduction of an element of entertainment that increases interest in learning, creating conditions for individual work, the formation of self-control skills, self-esteem in younger schoolchildren.

Today, when information becomes a strategic resource for the development of society, and knowledge is a relative and unreliable subject, as it quickly becomes obsolete and requires constant updating in the information society, it becomes obvious that modern education is a continuous process. For primary school, this means a change of priorities in the alignment of educational goals: one of the results of training and education at the first stage school should be the readiness of children to master modern computer technologies and the ability to update the information obtained with their help for further self-education. The attractiveness of information technologies also lies in the fact that their effective development does not require many years of additional training. Therefore, in order to achieve these goals, there is a need to apply different strategies of teaching younger schoolchildren in the practice of primary school teachers and, first of all, the use of information and communication technologies in the educational process. The use of ICT in various lessons in education makes it possible to move from an explanatory and illustrated way of teaching to an activity-based one, in which a younger student becomes an active subject of educational activity. This contributes to the conscious assimilation of students' knowledge. This contributes to a significant improvement in the quality of education, which leads to the solution of the main task of educational policy. [4, p.18]

As electronic educational resources, the following equipment is offered today: a document camera (a special video camera on a sliding or flexible tripod, connected to a TV, projector, computer; convenient for demonstrating small objects, experiments), a graphic tablet (up to 15 tablets are connected to a computer; feedback is provided to students, answers are projected onto a computer teachers); testing and voting module (radio stations; messages are transmitted to the teacher's monitor); multimedia projectors; interactive whiteboard (a combination of a whiteboard, projector, computer). Unfortunately, not every educational institution can afford such equipment. Most often, the school has only a computer class, a multimedia class.



With the increase in the number of computers in schools, their role as an effective means of improving the effectiveness of learning increases. The use of a computer allows you to increase the intellectual level of teaching and facilitates the solution of practical tasks. It can be used as an information system that helps to solve technological, design, economic, environmental issues, presenting the material in a more visual, perceptible form. It serves as a source of information for the development of creative projects, as well as operational control over the assimilation of knowledge and skills by students, providing a differentiated approach to teaching students with different levels of readiness to perceive the material. The above advantages make it possible to effectively solve the problem of student motivation, because lessons using colorful illustrations and various multimedia objects (sound, video), etc. will attract the attention of even the most indifferent student. [7, p.16]

One of the indicators of a teacher's successful work is his ability to "keep up with the times", i.e., to use modern teaching methods and tools in his work, which today include information technology. The teacher should know the basics of computer literacy, have an idea of the most common Windows operating system at the moment.

A modern lesson is impossible without the use of information and telecommunication technologies. The introduction of information and communication technologies (ICT) follows the path of increasing methodological material by each teacher within the framework of his subject. The use of computer technology in the classroom is no longer a matter of the future, but of the present. The computer does not dictate the methods and content of teaching to the teacher, it is adequately and effectively included in the training programs, ensuring the full organization of educational activities. For a particular student, the use of computers in the classroom and in extracurricular activities can create a unique information environment and contribute to successful advancement along an individual educational trajectory. [9, p.14]

In some sources, the expression "computer technology" is found. However, a teacher using ICT in the classroom should not forget that pedagogical technologies are at the heart of any educational process. Information educational resources should not replace them but help to be more effective. They are designed to optimize the labor costs of teachers so that the educational process becomes more efficient. Information technologies are designed to relieve the teacher and help him focus on individual and most creative work - to answer the "tricky" questions of active students, and vice versa, to try to "stir up", "pull up" the weakest and most passive. [2, p.12]

Multimedia tools make it possible to ensure the best implementation of the principle of visibility in comparison with other technical means of training, to a greater extent contribute to the strengthening of knowledge and skills in practical classes. In addition, multimedia is assigned the task of providing effective support for the game forms of the lesson, an active dialogue "student-computer". The analysis of the available experience shows that conditionally the system of using a computer in the classroom can be divided into three stages (stages): [6, p.9]

The first is computer support for lessons. Here, the computer is used only by the teacher as a means of visualizing the lesson materials. To work in the classroom, it is enough for the teacher and students to be able to work in the Microsoft Office software package. At the lesson, as a rule, performances of teachers or students are practiced using a computer, a



projector, sound speakers, and recently an interactive whiteboard has been added to them. Most often, Microsoft PowerPoint is used for presentations as a software shell in which a multimedia presentation is created, less often a program such as Macromedia Flash is used. Most often, presentations are linear in nature, which is a normal phenomenon, since most speeches imply a linear nature of the presentation of the material. Depending on the presentation, the teacher or student may include text or graphic fragments, animation, videos, as well as musical or voice accompaniment in their presentation (multimedia project). The presentation can be constructed in such a way as to optimally solve the tasks set in the lesson.

To solve the learning task in the lesson, a presentation is used that makes the teacher's story more saturated, illustrative. The presentation allows the teacher not just to give a lecture, but to have a conversation with students, asking questions on the topic and thereby forcing students to update the knowledge previously acquired in other subjects, make assumptions, analyze the information received, compare, generalize, draw conclusions, thereby developing students' thinking, activating their cognitive activity. Conversation activates students, develops their memory and speech, makes students' knowledge open, has great educational power, is a good diagnostic tool.

It is important that all students are interested in each lesson. Then many of them will develop their initial interest in the subject into a deep and persistent interest in science. A variety of entertaining forms of learning in the classroom (exercise games, competitions, contests, signal cards, a lively, imaginative description of events, an episode, a story-task, travel games, charades, riddles, curiosities, jokes, a contest for quickly finding mistakes, etc.) creates a positive emotional background of activity, disposes to the implementation of those tasks that are considered difficult and even insurmountable.

The second is computer support of lessons. At this stage, in addition to the teacher using a computer as an effective means of providing or illustrating lesson materials, the computer can be used by students as a means of repeating previously studied material. Here, the computer can be entrusted with the current control of students' knowledge. Since students are allowed to work with a computer, the teacher must know and follow the rules for organizing the safe work of students with computer equipment, and the workplace equipped with a computer must be organized accordingly.

The third stage is the stage of using modern computer programs in training. The peculiarity of this stage is to conduct lessons with the work of all students on computers under the guidance of a teacher.

The Microsoft Office package, which has a wide range of tools for transmitting, storing and processing information, makes it possible to develop students' communication skills. To begin with, the Word processor, the Paint graphic raster editor and a Calculator are used, and with the growth of children, other programs are also used: Excel, PowerPoint, Adobe PhotoShop, FrontPage, Publisher. With these types of work, such skills and abilities are formed as to express thoughts in writing, present information in the form of a graph, diagram, drawing, write a summary, report, arrange the text rationally on paper, format the text of an electronic document correctly, arouse the interest of listeners, read clearly, quickly, meaningfully. The information found and processed in the lesson must be listened to, viewed, analyzed, compared and evaluated. Students can exchange opinions, information, ask



questions to each other and the teacher. At the same time, students gain the skills of public speaking, participation in discussions, the ability to establish and maintain contacts, cooperate and work in a team, which involves taking into account different points of view, the ability to analyze their bases. Non-standard lessons can contribute to this. Communication of students in such lessons forms the ability to listen carefully, without interrupting, understand the meaning of gestures, poses, correctly perceive facial expressions, intonation, convey information with gestures, pose, maintain eye contact, choose the right communication position, choose an interesting topic of communication, set the right tone of communication. [3, p.10]

Information and communication technologies create wide opportunities for the development of modern education, primarily in the direction of individualization, create conditions for the realization of the creative potential of teachers and students. The use of ICT is all the more relevant in our time, since schools, as a rule, lack or are obsolete the necessary sets: diagrams, tables, illustrations, photographs, reproductions. To prepare and conduct a lesson, previously, the teacher had to spend a lot of time searching for didactic and methodological materials, additional literature, and preparing a blackboard. It was extremely uncomfortable. [3, p.13]

The place of using ICT in the lesson. At any time: at the beginning, in the middle or at the end of the lesson when summarizing the results of the work, that is, you can supplement the lecture, the story, the demonstration of techniques for performing a practical task - in fragments. It is enough to think in detail about the sequence of feeding images to the screen so that the training effect is as large as possible.

In the field of organizing independent creative work of students, ICT plays a serious role as a tool for supporting innovative technologies, including in extracurricular work. First of all, they become the basis for the method of projects, for independent educational, research, and gaming activities. Today, schools are massively implementing subject, interdisciplinary and subject projects based on information technologies that contribute to the realization of students' creative potential, activation of their cognitive activity, orientation in modern problems of science, culture, and social life.

Information and communication technologies play a serious role in changing the system of control of students' knowledge. New knowledge control systems based on ICT (test programs "MyTest X", "Rich Test", "Test Designer" tests in PowerPoint and others) are characterized by efficiency, regularity, create ample opportunities for differentiation (creation of individual tasks that differ in the level of complexity, the pace of execution), generalization of results and accumulation of materials that allow you to evaluate personal dynamics of the student. In addition, they allow you to combine control and training procedures. Another important point is related to the possibilities of shifting the emphasis from external assessment to self-assessment and self-control of the student. The ICT-based knowledge control system is psychologically more comfortable for both the teacher and the student. For a student, it is largely stress-free, since it creates the opportunity to work in an individual mode, alone with a computer, which largely eliminates the anxiety factor associated with direct interaction with the teacher. And she saves the teacher from routine work, thereby saving his strength and freeing up time for creative activity. [2, p.19]



Traditional approaches are successfully used in the formation of ICT competence: verbal teaching methods (story, explanation, lecture, conversation, work with a textbook and a book); visual methods (observation, illustration, demonstration of visual aids, presentations); practical methods (oral and written exercises, practical computer work). Within the framework of a personality-oriented approach to learning, a special role is played by the project method, multi-level training, and the "Student Portfolio", which ensure the sufficiently successful formation of critical and creative thinking, skills so necessary for modern society.

Thus, ICT competence is a school-wide skill and its formation should take place in all lessons. The introduction of ICT in the educational process requires the development of a completely new methodology for teaching technology, which is largely related to research and design technologies. At the same time, the teacher should be able to form an information and educational environment in which the pupil could express and teach himself at the same time.

The advantages of using ICT in teaching are undeniable: this is the possibility of operational control of knowledge, and the introduction of an element of entertainment that increases interest in learning, creating conditions for individual work, the formation of self-control skills, self-esteem in younger schoolchildren.

We also considered information and communication technologies in primary school as a means of improving the quality of education.

The use of information technology can transform the teaching of traditional academic subjects, optimizing the processes of understanding and memorizing educational material, and most importantly, raising pupils' interest in learning to a consistently higher level.

We considered the pedagogical conditions for the use of information and communication technologies as a means of improving the quality of education.

One of the indicators of a teacher's successful work is his ability to "keep up with the times", i.e., to use modern teaching methods and tools in his work, which today include information technology.

Information and communication technologies create wide opportunities for the development of modern education, primarily in the direction of individualization, create conditions for the realization of the creative potential of teachers and students.

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