METHODS AND PRINCIPLES OF MATHEMATICS TEACHING IN GENERAL EDUCATION SCHOOLS

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Abstract:
In this article, the introduction of modern information technologies into educational processes is about deepening the knowledge and skills of students.

Keywords: education, Case-technology, information technology, communication, computer, pedagogue, method, electronic, education.

Since information technology is the basis of excellence in education, the employees of the educational system are responsible for the urgent tasks of quality development of the educational content. This, in the era of rapidly developing times, imposes tasks to be performed without delay on the heads of educational institutions along with teachers. The knowledge given to the students has a fundamental basis, and they should have the ability to analyze any information and draw logical correct conclusions. There is no doubt that the rational use of modern technical means for students to acquire such intellectual knowledge will lead to a quality change in the education system. It is especially desirable to effectively use modern technical tools to meaningfully organize the educational process. This means that the use of technology, information, computer, multimedia, Internet and similar information and communication technologies in the course of classes gives its results. At this point, the above technical tools also provide opportunities to increase the student's level of mastery, the level of understanding of the given knowledge, its retention and its application.

Because the organization of each subject in modern education in a new way on the basis of pedagogical technology allows students to master the subject well and think freely and independently. A good mastery of the taught topic by students depends on pedagogical skills. If the pedagogue has deep scientific and methodical knowledge of his subject, makes effective use of applied methods, various innovations, visual and technical tools, and organizes the educational process, it is inevitable that the efficiency of the lesson will be high. The choice of method depends not only on the educational goal, but also on its scope and complexity.

When using each method, it is better to use methods that increase students' activity, encourage discussion and free thinking. Modern teaching technologies not only increase students' outlook, scope of knowledge, interest in science, but also enrich imagination and teach independent thinking.

One of the features of the modern education system is the use of new information technologies in the process of sorting, accumulating, systematizing and transferring knowledge. Arming a person with modern technologies that enhance information processing capabilities is the most important task that requires rapid development of the information industry.

The use of information technologies in education ensures the quality of information, its accuracy, objectivity, speed, and as a result, the opportunity to make management decisions on time increases. So, a number of opportunities are created for the student or student.

Pedagogical technology is a set of general pedagogical skills necessary for a teacher in educational activities.

Effective organization of pedagogical educational processes on the basis of modern information technologies, integration of pedagogues, computer programmers, relevant specialists into the team creating distance learning courses and electronic literature, distribution of tasks among pedagogues, improvement of the organization of the educational process and monitoring of the effectiveness of pedagogical activities requires reaching

The introduction of modern information technologies into educational processes deepens the knowledge and skills of students;

- deep learning of the field of science by modeling the studied phenomena and processes;

- expansion of the field of independent activity, individualization and differentiation of the teaching process based on the introduction of interactive communication opportunities;

- by using the capabilities of the artificial intelligence system, the student acquires the strategy of mastering educational materials;

- formation of information culture in him as a member of the information society;

- presentation of the studied processes and events by means of computer technologies;

- It is important because it increases students' interest and activity in the basics of science.

Information and communication technologies are the teacher's closest assistant at every stage, the most convenient tool in all processes, from the preparation of a qualified pedagogue to a high-quality, interesting and productive lesson. In preparation for the lesson, the teacher can prepare didactic, handouts, visual aids, slides and lesson plans using the computer, and with the help of the Internet, he can enrich them with various additional information, interesting photos, audio, video clips.

Today, automated search tools are widely used in information and communication networks, and with the help of these networks, it is possible to provide users with a quick search service, along with collecting information about the information resources of the global computer network. In this regard, the role and importance of distance education has increased. Distance education video conferencing, online training and special lecture systems are currently widely used in education.

Video materials and special ICT tools allow a large number of students to listen to the lectures of skilled professors, in which it is possible to use the recorded video footage of the lecture at home as well as in special auditoriums.

Another educational tool of ICT is electronic publications. It can be a factor for in-depth study and mastering of individual educational material based on them. In contrast to the traditional book-form educational material, educational-electronic publications transmit the material in a dynamic-graphical form. Case-technology is software that automates the technological process of analysis, design, production and monitoring of complex software systems. The main achievement of Case-technology is the ability to organize specialists working on a local network of computers to work together on a project in cooperation, to be able to export-import an arbitrary fragment of the project, and to be able to manage the project in an organized manner.

The child meets the problem on the first day of school activities. In order to determine what kind of life experience and knowledge students have, the teacher addresses the student through the simplest question. For example: "You had four pencils, you took one more pencil. How many pencils do you have?" Mathematical problems help students to correctly form mathematical concepts, to understand the environment that surrounds them, and at the same time to develop the child's thinking to solve problems. By solving one of the most important problems, the student learns the four arithmetic operations and their properties. Mathematical language develops. in short, the problem is an important link connecting theory and practice. Suitable simple problems are used to reveal the content of arithmetic operations, connections between operations and operation components, and to get acquainted with connections between various quantities. Simple problems serve as a basis for the formation of knowledge, skills and abilities necessary to solve complex problems. Problems are a useful tool for developing children's thinking skills and usually involve some knowledge. The search for this knowledge requires the problem solver to resort to analysis and synthesis, comparing facts, summarizing, etc. Teaching these ways of knowing is one of the important goals of teaching mathematics.

When solving problems, interest in the subject develops, independence, freedom, demandingness, hard work, and striving for the goal develop. Children get acquainted with the structure of the problem in the second or third activity. They learn that there is a condition and a question in the problem, it is emphasized that the condition of the problem should have at least two numbers. Working on a problem begins with mastering its content. In order to understand the content of the issue well, the students should not only listen to its text, but also read it independently. If the condition of the problem is confusing, it is appropriate to give students one to three minutes to think about the content of the problem independently. If the elementary classes require to learn the properties and methods of arithmetic operations in mathematics classes, the specific laws should be studied in accordance with the operation of

multiplication as the reverse operation, on the other hand, in the analysis of special cases, comparison with the characteristics of operations becomes important. This has a positive effect on the development of students' imagination. We believe that the preparation of problem sets, multimedia and graphic tools for the purpose of using pedagogical technologies used in solving text problems by developing students' calculation skills in solving problems in primary grade mathematics classes will give positive results in increasing the effectiveness of primary mathematical education.

In the elementary grades, it works well to create a game situation or give exercises in the form of a game to offer students mathematical material or to develop a skill. But it is important to take into account the age differences of children. Educational activities are the main, but not the only, in the lives of young students. Play also plays a key role in the life of young students. The peculiarity of the game activity is that learning activities are quickly mastered in it. Through the game, students' behavior changes, their thinking skills develop, students can evaluate themselves, their friendships in the class and collective are strengthened, and their imaginations develop.

Intellectual games organized on the subject of mathematics expand the intellectual development of students. Exercises in intellectual games are versatile. Firstly, with their help, students' intellectual development is stimulated, and secondly, their intellectual development is formed, that is, students develop attention, memory, thinking skills, observation, speech, etc. At the same time, students perform a number of mental operations (for example: comparison, grouping, generalization, interaction) while completing each task. Each task given in the intellectual game is aimed at the development of intellectual qualities of students. When performing intellectual exercises, students' interest in mathematics increases, students achieve more and more positive results when completing tasks, students actively participate in the lesson, correct, logical, proof speech is formed.

Intellectual games consist of the transfer of experience, which practically ensures that students learn the means of moral and work activities through the rules of behavior in various situations. The main goal of intellectual game methods is to increase the effectiveness of the educational process by ensuring that the audience is not only listening, but also directly involved in acquiring knowledge. An intellectual game is the most convenient basis for organizing various problem-solving activities. An intellectual game rule is a law that expresses the content of the game according to its components. The rule of the intellectual game can be cultural, derived from life, or specially invented. In an intellectual game, it is necessary to provide a goal and mutual cooperation. Therefore, the purpose of the game varies depending on the interest of the participants. In an intellectual game, the leader is considered to be the main figure who ensures reasoning, mutual understanding and communication between the participants. In a problem-oriented intellectual game, the task of finding a solution to a problem is set. The found solution is found, processed, and the solution is accepted during the players' gameplay. The activity of

the participants is stimulated by the game complex. Participants analyze the situation during the game. No one will help them for this. They achieve results through self-management and organization. Players get game feedback with the help of other participants, achieve game goals related to complex situations through their own actions, and draw conclusions on their own.

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