



IMPORTANCE OF INNOVATIVE TECHNOLOGIES IN MATHEMATICS

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ABSTRACT

In this article, scientific opinions about the importance of innovative technologies in mathematics are presented and their role in improving the methodological work of mathematics education is revealed. Interactive strategies of mathematics education based on modern pedagogical technologies facilitate the educational process, clarify it, and cover a wide community. intended.

KEYWORDS

Mathematics, science, technical means, logic, type, gender, computer, innovative technology.

INTRODUCTION

I have heard many times that mathematics is a land without borders. Despite its banality, the math phrase has very good reasons. Mathematics has a special place in human life.

According to experts, a student who has mastered mathematics well has a high level of analytical and logical thinking. Not only in solving examples and problems, but also in various situations in life, he develops the ability to quickly make decisions, discuss and negotiate, and do things step by step. Also, the thinking characteristic of mathematicians takes him to

the level of predicting the future actions and events happening around him.

Mathematical science plays an important role in developing a person's intelligence and attention, training determination and will to achieve the intended goal, ensuring algorithmic discipline and expanding his thinking.

Mathematics is the basis of knowledge of the universe, and it is important for the development of production, science and technology, revealing the specific laws of events and phenomena. Therefore, mathematical

culture is a component of universal human culture. Relinquishing the theoretical approach to teaching mathematics, achieving the formation and development of the student's ability to apply mathematical knowledge in everyday life, increasing attention to the manifestation and activation of students' independent thinking skills is the demand of the times.

It is important for him to deeply understand that mathematical knowledge will benefit the student not only in questions and exams to get a grade, but also at home, in the work process, in sports and art, in business, in business - in every moment of life. For this, it is necessary for the teacher of this subject to directly connect the subjects he is studying with real life and to teach him how to solve an example or a problem, tasks using simple situations in life.

One of the urgent issues is the use of the achievements of computer science in order to ensure interdisciplinary coherence in the present era, when new technical tools, including computers and other information technologies, are rapidly entering the teaching of mathematics.

Pedagogical, computer and information technologies are expressed in an integrated system, which consists of organizing and preparing the educational process, providing scientific and methodical materials, implementing the educational process, and evaluating the quality of educational results.

Implementation of computer technology in educational institutions opens a wide way to optimize the teaching process. In the following decade, the use of computers in the teaching of mathematics was carried out in several main directions. These include

computer-based knowledge assessment, development and development of various types of educational programs, development of mathematical cognitive games, etc.

A correct understanding of the essence of pedagogical technology, its scientific mastery with comprehensive analysis, and the search for ways of implementation require constant work on oneself. Situations such as the daily expansion of the educational information environment, the low level of mastery of students (they are able to find the right way out of changing conditions, situations) are new from the point of view of the current demand for the educational process. requires looking, looking for effective ways of teaching. Studying and practical application of this technology arose from the demand to improve the quality of education.

The essence of pedagogical technology is a pedagogical process aimed at accelerating the educational process, speeding up students' learning and its results, being able to evaluate their results objectively, objectively, and guaranteeing the achievement of the intended results. In other words, the systematic design of all stages of the teaching process in such a way as to produce the expected results based on a specific goal is understood.

Designing the educational process, applying the designed pedagogical technology to the process of teaching mathematics in elementary grades requires the ability of the teacher to design technology.

In order to meet these requirements, it is recommended to study on the basis of the following program:

1. Technological approaches to education and conditions.

It is required to have an idea about different views of the educational process, technocratic approaches to teaching and technology.

2. Psychological-pedagogical foundations of technologyization of the educational process.

In educational technologies, it is required to know the goal setting, diagnosis, technologicalization of educational content in educational technologies.

3. Authorship educational technologies.

In this, he should know the technology of individual teaching, the technology of team teaching, and the technology of pedagogical skills.

4. Educational process design technology.

The structure of the pedagogical activity of a modern teacher, the independent activity of students, teaching skills and qualifications - a necessary condition for the implementation of educational technologies, stimulating the student's cognitive activity, gaining knowledge about didactic principles necessary.

5. Educational technologies are a means of facilitating the educational process.

It is required that educational technologies adapt to the individual characteristics of students, and have a good understanding of choice situations.

Fulfillment of these requirements requires the following conditions:

- continuous study of pedagogical technologies in schools;

- generalization;

- organization of scientific and practical seminars on implementation;

- the teacher always works on himself and familiarizes himself with new books.

The use of new educational technologies in the process of teaching mathematics creates opportunities for the formation of such qualities as independent thinking, work on oneself, and a creative approach to activities, which serve to ensure personal development. Here we are talking about revealing the internal possibilities in this regard.

Primary education is distinguished from other educational stages by its commitment to integrative, game-based educational technologies. But the child's transition from kindergarten to school is based on more complex mental and emotional internal processes. During this period, most children are in a deep psychological crisis. It can be called an approach from the point of view of a passionate pedagogue, who can feel the inner world of the child well. Often, the student repeats the activity of the teacher exactly, that is, he accepts the educational content unconsciously, not consciously. In order to prevent this situation, what should be done to involve the 1st grade student in conscious learning activities?

The new technology to be introduced in grades 1-4, first of all, ensures the connection between subjects (integrative), eliminates excessive difficulty, tracks the student's activities correctly, uses time effectively, creates an environment of initiative and creativity. allows you to achieve a number of goals. The success achieved by the developed countries in the world is due to the fact that the education system of this

country is properly established, and advanced pedagogical technologies are consistently adopted in the education system. After our country gained its independence, education became a priority of state policy. The adoption of the National Personnel Training Program based on the Law on Education is an important document requiring a fundamental reform of the education system. The basis of the program is the theoretical-methodological concept. Therefore, learning and implementing it is not just a passing process. The national program requires a unique approach, new methodology and new professional skills.

When talking about pedagogical technology, we express our opinion by adding modern, updated words. Because the pedagogical technology that was once considered new may be outdated today. The updated content of education requires updated methods, methods, and generally advanced pedagogical technologies of teaching. It directly depends on us pedagogues to make today's students free, independent, patriotic and educated.

Proper education - the content of education is an incomparable factor in creating a conscious attitude to learning, human maturity, moral, spiritual and physical development of a person.

The use of new methods and advanced pedagogical technologies in the teaching process of primary classes will further increase students' interest in the lesson. A creative approach to the subject with choosing the right method for the lesson will certainly bear fruit. As our goal is to develop an educated student who has his own opinion, now we need to use modern methods and methods in our classes. With their help, students

will have the opportunity to express their thoughts freely and independently, gain self-confidence.

One of the advanced pedagogical technologies is the brainstorming method. Purposeful use of this method in the course of the lesson is a guarantee for the development of creative, non-standard thinking.

Brainstorming is relatively simple and can be used in the process of changing educational content. First, students are divided into groups and a problem or question is presented to them. Group participants express their opinions about his answer. All the ideas are recorded on the blackboard, the interesting thing is that here you said wrongly, the idea that this is a mistake is not told by the teacher. Whether the collected ideas are correct or incorrect, the student will learn from the topic in the textbook given during the lesson.

The task of the brainstorming method allows to find ways out of difficult situations and to think in a broad framework. The main thing is that during the lesson, the mood of creative cooperation is transferred and the group becomes more cohesive.

Many types of lessons are reflected in the teacher's work. One of them is the organization of a step-by-step teaching process. These steps are:

- Organizational work;
- Call stage;
- Understanding stage;
- Thinking stage;
- Completing the lesson;

In such organized lessons, the teacher can achieve many goals. The step-by-step learning process provides an opportunity to work, think, and acquire knowledge in a wide range.

At this stage, the teacher checks the readiness of the class and determines the attendance. Stage I - Challenge stage.

At this stage, various methods of student activity are implemented. First, at this stage, students demonstrate their preliminary knowledge of a new topic, and this process teaches the student to analyze his knowledge, think about a new topic, and sharpen his memory.

Secondly, students' activity and interest in the lesson starts at the beginning of the lesson and it gives its results.

Thirdly, on a new topic, students use all their abilities and clarify their knowledge on this topic.

In the challenge phase, the teacher's goal is to increase students' interest in the lesson.

Stage II - Stage of understanding.

While students have demonstrated their initial knowledge of the subject at the challenge stage, they receive new knowledge and information at this stage.

The teacher should find out what knowledge the students have on the subject and give updates accordingly. Achieving this goal is done at the stage of awareness. At this stage, methods such as text on a new topic, work with problems, use of exhibitions, distribution of tests can be used.

The purpose of the understanding stage is to increase the activity of students, to increase their interest in a new topic, to make students think independently and clearly express their thoughts and understanding.

Stage III - Thinking stage.

At the thinking stage, students consolidate new knowledge and skills and express their understanding and thoughts. Pupils exchange ideas with each other, applying the acquired knowledge in practice. Debate - organizing a debate will strengthen the knowledge of students.

- Completion of the lesson.

Each lesson ends with the teacher's conclusion. Students who actively participate in the lesson are encouraged and evaluated. Homework is given.

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