

# Methods of using interactive methods in the formation of computational skills in elementary school students

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**Abstract.** The article describes the methods and importance of using interactive educational methods in the formation of calculation skills of elementary school students in mathematics classes.

**Key words:** Mathematics, interactive method, calculation skills, activation

One of the most important requirements for the organization of modern education is to achieve high results in a short time without excessive mental and physical effort. Providing students with specific theoretical knowledge in a short time, the formation of skills and competencies in specific activities, as well as monitoring the activities of students, assessing the level of knowledge, skills and competencies acquired by them from a teacher requires high pedagogical skills and a new approach to the educational process. Today, a number of developed countries have extensive experience in this area, and the methods underlying this experiment are called interactive methods. Modern pedagogical technologies, interactive methods, which are an integral part of the process of reforming education, unconsciously enter the educational process with interest. Experience has shown that modern interactive strategies effectively absorb existing knowledge. Because the students who fill the classrooms today are happy, innocent, and sometimes dreamy children.

Interactive mathematics education strategies based on modern pedagogical technologies are designed to facilitate the learning process, identify, reach a wide range of people, make the teacher only a guiding leader, teach freely and without obligation, and most importantly, can provide extraordinary interest and effectiveness for students. Our main task is to develop ways to make the proposed mathematical information system as simple, interesting, versatile and efficient as possible. The use of interactive strategies turns the obligatory process of a math lesson into an involuntary psychological game or competition, even if the passive students mentioned above are little but indifferent to the general public, to class debates in general. It encourages active participation.

An interactive method ("inter" is mutual, "act" is to act) means to interact, to be in a conversation mode, a dialogue with someone or something. Interactive methods and techniques are focused on the wide interaction of students not only with the teacher and with each other, but also with a computer, interactive whiteboard and other interactive tools.

The term "interactive methods" is associated, as a rule, with two groups of interrelated methods: the first group is training based on communication with a computer and through a computer, and the second group is computer-free - specially organized educational interaction between students.

Interactive activity in the classroom involves the organization and development of dialogue communication, which leads to mutual understanding, interaction, to the joint solution of common, but significant tasks for each participant. Interactive methods exclude the dominance of either one speaker or one opinion over another. During interactive learning, students learn to think critically, solve complex problems based on the analysis of circumstances and relevant information, weigh alternative opinions, make thoughtful decisions, participate in discussions, communicate with other people. To do this, individual, pair and group work is organized in the lessons, research projects, role-playing games are used, work is underway with documents and various sources of information,

and creative work is used. The place of the teacher in interactive lessons is reduced to the direction of students' activities to achieve the goals of the lesson.

Signs of the use of interactive learning are also the following methods and techniques:

- Polyphony. This is an opportunity for each participant in the pedagogical process to have their own individual point of view on any issue under consideration.

- Dialog. The dialogical nature of communication between the teacher and students implies their ability to listen and hear each other, to be attentive to each other, to assist in the formation of their vision of the problem, their own way of solving the problem.

- Thinking activity. It consists in organizing the active mental activity of the teacher and students. Not the teacher's translation of ready-made knowledge into the minds of students, but the organization of their independent cognitive activity.

- Meaningfulness. This is the process of conscious creation by students and the teacher of new meanings for themselves on the problem under study. This is an expression of one's individual attitude to the phenomena and objects of life.

- Freedom of choice.

- Creating a situation of success. The leading conditions for creating a situation of success are positive and optimistic assessment of students.

- Reflection. This is self-analysis, self-assessment by the participants of the pedagogical process of their activities, interaction.

- Creative tasks.

The inclusion of methods and techniques of interactive learning in the composition of mathematics lessons helps to switch students' attention to the right moments, redirect their activities in a different direction, and focus students' attention on general relevant conclusions.

Primary mathematical education, along with mastering certain knowledge and skills in children, instills in them such qualities as free, independent thinking, a conscious attitude to the surrounding reality, courage and social activity, observation, perception, it also involves the scientific development of creative abilities. imagination, attention, memory and thinking.

In the primary grades, mathematics involves the generalization of educational material to the extent that students can do it, an understanding of the general principles and patterns underlying the studied mathematical facts, and an understanding of the connections between observed phenomena. Basically, this refers to the study of the properties of actions, the existing connections between them, mathematical relationships and connections that underlie practical learning and skills that are formed in children.

The use of various interactive methods aimed at activating students in learning helps to effectively achieve educational goals.

There are 4 main types of cooperative learning based on interactive methods:

- cognitive methods
- games, experimental activities  
business games, modeling
- learning by doing, direct activity.

All such methods provide for the cooperation of the teacher and the student, the active action of the student in the educational process.

In the methods "Wheel of the Mind", "Cluster", "Brainstorming" the skills of logical thinking of students are developed, the skills of fast and accurate counting are formed. The methods used in mathematics lessons help the subject to remain in the student's memory for a long time.

**"Brainstorming"** encourages students to think broadly and comprehensively about a particular problem, while inviting them to creative work and interaction. At the same time, neither the teacher nor other persons are allowed to interfere with the answers of students, to express any opinions, and the results are not evaluated, points are not set. After the formation of ideas for solving the problem, they are summarized for the last time and a clear idea is achieved. After that, students compare their sentences, understand right and wrong ideas, and evaluate themselves.

**Small group work** - When a teacher works in small groups, the teacher has the right to play an active role in the lesson, learn from each other and appreciate different points of view.

**Method "6x6x6"**. Using the "6x6x6" method, involving 36 students in a specific activity at the same time, it is possible to solve a specific task or problem, as well as determine the capabilities of each member of the groups, learn their views. In a training organized on the basis of this method, 6 groups of 6 participants each discuss the problem raised by the teacher. After the specified time, the teacher will reorganize 6 groups. Each of the newly formed groups will have one representative from the previous 6 groups. Members of the newly formed group present to their teammates the conclusion presented by their group as a solution to the problem and discuss these solutions together.

We know that teaching mathematics in primary grades is important for today's school teachers. Therefore, the article shows how to use interactive methods that are useful and effective in teaching mathematics. Their effectiveness was noted, as well as the use of interactive methods depending on the topic.

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