

Ways to Use Interactive Methods in Teaching Mathematics in Primary Classes

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Annotation: This article provides information on interactive methods that can be used to teach mathematics in primary classes. Interactive methods are aimed at stimulating educational and cognitive motivation, development of independence and activity, education of analytical and critical thinking, formation of communication skills, self-development of students. With the use of interactive teaching methods in mathematics lessons, the level of motivation to learn by subject increases, and the quality of knowledge among students in all training profiles is significantly improved.

Keywords: teaching, memorization, interactive methods cognitive, motivation, activity, critical thinking, communication skills, mathematics increases

Introduction. The development of science and technology in the world of education is currently increasing rapidly from time to time. A teacher is one of the determining factors in the context of improving the quality of education. Thus, good quality education can be achieved with professional and competent teachers. It is therefore beneficial if mathematics educators can produce instructional strategies that are interesting and stimulating¹. Teaching methods in maths have changed over the years. The relation of mathematical concepts and methods to processes is indicated by the way that memory of muscular action and rhythm are important aspects of mathematical work. A lot of mathematics is concerned with the realization and understanding of the effect of repetitive processes and methods. Guiding children through the maze of mathematical concepts can be a demanding task. Teachers, however, can use several methods to ensure the process is rewarding. The methodology of teaching mathematics in primary classes, first of all, sets the task of teaching and educating younger students in the general system. Interactive learning is understood as learning based on effective feedback, i.e. "Learning immersed in communication."² In the process of modern teaching, the interaction between factors in the teaching process is very important. Looking at some point, it must be seen as a key principle of modern teaching.³

As we know, in the methodology of teaching mathematics in elementary school, effective means of independent and control work, individual written survey of students have been created. Didactics manuals consider the following teaching methods as forms of knowledge presentation and consolidation: observation, teacher's knowledge (narrative, conversation, story, exercise) working with students with textbooks and other books, observation, laboratory work, independent work. In the process of teaching mathematics in elementary grades, these methods can be used in different places, depending on the content of the teaching material and the size of the class. Today

¹ Tolhurst D (1995). Hypertext, hypermedia, multimedia defined? *Educ. Technol.*, 35: 21-26

² E.V. Korotaeva, Magazine. Pedagogical education in Russia 2 (2012) <https://cyberleninka.ru/article/n/interaktivnoe-obuchenie-voprosy-teorii-i-praktiki-obucheniya>

³ Applying Interactive Teaching in Teaching Mathematics at High School in Vietnam Do Thi Hong Minh- *American Journal of Educational Research*. 2018, 6(7), 930-940. DOI: 10.12691/education-6-7- Received June 03, 2018; Revised June 27, 2018; Accepted July 02, 2018

in a number of developed countries there is a great deal of experience in the use of pedagogical technologies that increase the learning and creative activity of students and ensure the effectiveness of the educational process, using interactive methods that form the basis of this experience. We will try to use the methods mentioned above in teaching science.

Observation method in teaching mathematics: A mathematical observation is the detection or assertion of a truth in the context of a mathematical activity. In the process of its application, the problem situation under study is determined based on the study of educational institutions, and the difference between the indicators obtained at the beginning and at the end of the experiment is obtained. Observing math facts with students is important. Observing the properties of natural numbers, the properties of arithmetic operations, the properties of geometric figures and equations will increase the students' abilities. Arithmetic operations and many properties of numbers should be explained by observation in lower classes. For example, 1st graders quickly learn the substitution property of addition by observing it. $5+3=$, $3+5=$, $6+1=$, $1+6=$, $2+7=$, $7+2=$. After solving such examples, the teacher recommends equalizing the solutions of the first row. $5+3=8$ and $3+5=8$. The result leads to the following conclusion. Summary (what the examples are similar to). The same addition is done. 5 and 3 are the same addends. 8 and 8 are the same results. Difference (how are these examples different from each other). The order in which subscribers are added varies. Solving other similar examples, readers will come to the following general conclusion: changing the order of addition of the addends does not change the sum. The use of the observation method is also of great importance in the teacher's presentation of knowledge and in the stages of solving calculation problems.

Conversation method. Learners process thoughts by communicating and synthesizing them into more cohesive ideas⁴. When the teacher uses a method, for example, the conversation method, the cognitive activity of students can be increased in all ways. For example, when teaching numbering within 100, it is necessary to tell students what numbers are called single-digit numbers and what numbers are called double-digit numbers. It is also necessary to state how many numbers represent zero and how many numbers from 1 to 9 and from 10 to 99 there are during the conversation.

Presentation method. A presentation delivers content through oral, audio and visual channels allowing teacher-learner interaction and making the learning process more attractive. Through presentations, teachers can clearly introduce difficult concepts by illustrating the key principles and by engaging the audience in active discussions. PowerPoint media is effective and practical to encourage student motivation and interest of students in learning activities⁵. This method is divided into two types: a) demonstration. At the same time, the teacher explains the knowledge and demonstrates its validity through examples. b) problem statement. In this, the teacher poses the problem of the material, shows the ways to solve it, justifies and proves it. For example: if the multiplier and the multiplicand are interchanged and multiplied, how does the product change? The teacher uses illustrative demonstrations to explain this question: $3*4=12$ i.e. $3+3+3+3=12$ or $4*3=12$ i.e. $4+4+4=12$. Therefore, the students draw the conclusion that the product does not change when the positions of the multipliers and multipliers are changed, using illustrations.

Exercise method. The peculiarity of teaching mathematics is that getting acquainted with new material and creating relevant knowledge and skills is carried out by students through a system of exercises, that is, by completing certain mathematical tasks. Exercises can be different depending on the content of the material and the mathematical structure: finding the value of the expression,

⁴ Sfard, A. (2008). Thinking as communicating: Human development, the growth of discourses, and mathematizing. Cambridge, UK: Cambridge University Press.

⁵ Anwar Z, Kahar M S, Rawi R D P, Nurjannah N, Suaib H and Rosalina F 2020 Development of interactive video based powerpoint media in mathematics learning J. Educ. Sci. Technol. 6 167.

distribution, solving equations, solving problems, etc. Exercises can be different: taken from the textbook and can be written by the teacher, in a normal or interesting form, in the form of a didactic game, etc. For example, $4+3$, the student takes 4 red circles and 3 red circles and joins them to make 7 circles. He writes $4+3=7$, then separates the circles by color to form $7-4=3$ or $7-3=4$: if one of the addends is subtracted from the sum, the second addend is formed.

Compare and contrast method. There are many similar issues in teaching mathematics. For example, the permutation properties of addition and permutation of multiplication are $4+3=3+4$, $3*4=4*3$. Students will compare these properties, different and similar they separate the sides. To explain the new material, the exercises should be selected in such a way that they distinguish the same and different elements from the exercises solved in the previous lesson. In teaching mathematics, opposite problems are also encountered, for example, addition and subtraction. The correct application of these two quantities leads to the generalization of knowledge and the correct conclusion.

The "intellectual attack" method. This method serves to ensure that primary school students are active in the learning process, directing them to free thinking and learning to overcome ideas such as losing the same inertia of thinking. Today, teachers are required to use advanced pedagogical and new information technologies in the teaching process.

Problem-solving Method. Pupils in Years 1 to 3 usually solve one-step problems mentally. They identify correctly which operation to use, draw upon their knowledge of number bonds and multiplication facts and are able to explain their reasoning clearly. Pupils who record the processes they have gone through invariably use the horizontal format. For example, in Year 3, in response to the question: A spider has 8 legs. How many legs do 5 spiders have? pupils who recorded their thinking wrote $8 \times 5 = 40$.

Based on the above, based on our experiences, we will share our ideas on how to teach using interactive methods in the classroom. Modern learning methods involve students in activities by using concrete materials, simulations and games to explore new Mathematics. We hope that it will help our colleagues to increase the effectiveness of training. It will also be one of their closest assistants to students in fulfilling their responsibilities, such as choosing their direction and developing skills to prepare for independent living. The use of interactive methods and educational games, modern information and communication technologies in primary school helps students to think independently, expand the scope of creative research and logical thinking, as well as connect them with what they learn in class, increase their interest. The quality of the educational process is guaranteed by the fact that teachers effectively use the conditions created in accordance with such modern requirements, and organize lessons on the basis of advanced pedagogical and information and communication technologies.

Conclusion. In conclusion, we can say, that, by teaching mathematics in primary education with the help of these methods, it is ensured that students acquire knowledge and skills about mathematical concepts, properties, forms, methods and algorithms. With the help of these methods, it is possible to understand the importance of mathematics in human development and social development, socio-economic relations, to successfully apply mathematical knowledge and skills in everyday life, and to expand students' logical thinking, thinking, and worldview.

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