

Methods of Teaching Mathematics to Primary School Students

Egamberdieva Diyora Akbarjon qizi

Doctoral student at the Andijan State Pedagogical Institute

Abstract. *In this article Methods of teaching mathematics in elementary grades. Mathematics in elementary school should prepare students well for further mathematical education in secondary school, this gives students possession of a certain amount of mathematical knowledge and skills that will give them the opportunity to successfully study mathematical disciplines further at a more complex level.*

Key words: *mathematics, elementary grade, students, education.*

Methods of Teaching Mathematics (MTM) is a science whose subject is teaching mathematics, in a broad sense: teaching mathematics at all levels, from preschool institutions to higher education. MTM is developed on the basis of a certain psychological theory of learning, i.e. MTM is a “technology” for applying psychological and pedagogical theories to primary teaching of mathematics. In addition, MTM should reflect the specifics of the subject of study - mathematics.

Goals of primary teaching mathematics: general educational (mastery by students of a certain volume of mathematical knowledge, skills and abilities in accordance with the program), educational (development of worldview, the most important moral qualities, readiness for work), developmental (development of logical structures and mathematical style of thinking), practical (development of the ability to apply mathematical knowledge in specific situations, when solving practical problems). The relationship between teacher and student occurs in the form of information transfer in two opposite directions: from teacher to student (direct), from learning to teacher (reverse).

Principles of constructing mathematics in elementary school (L.V. Zankov): 1) learning at a high level of difficulty; 2) fast-paced learning; 3) the leading role of theory; 4) awareness of the learning process; 5) purposeful and systematic work. The learning task is the key point. On the one hand, it reflects the general goals of learning, concretizes cognitive motives. On the other hand, it allows making the process of performing learning actions meaningful.

Stages of the theory of step-by-step formation of mental actions (P.Ya. Galperin): 1) preliminary familiarization with the goal of the action; 2) drawing up an approximate basis for the action; 3) performing the action in material form; 4) pronouncing the action; 5) automation of the action; 6) performing an action in the mental plane. Methods of enlarging didactic units (P.M. Erdniev): 1) simultaneous study of similar concepts; 2) simultaneous study of reciprocal actions; 3) transformation of mathematical exercises; 4) composition of problems by students; 5) deformed examples. Quantitative natural numbers.

As they solve these problems, students will realize the universality of mathematical methods of understanding the world, acquire basic mathematical knowledge, the connections between mathematics and the surrounding world and other school subjects. Due to the age characteristics of younger students, visualization of the educational process is necessary. The use of information and communication technologies will ensure speed, maneuverability, efficiency, the ability to view and

listen to fragments and other multimedia functions, and the effect of presence "I saw it!" will be created - students will have a sense of the reality of events, interest, a desire to learn and see more.

Like other subjects, mathematics requires mastering the following knowledge and skills:

- a) gives the concept of a natural number, zero, a natural series of numbers, their properties, the concept of ordinary decimal fractions;
- b) forms in the minds of students clear ideas about basic quantities (length of a segment, cost, mass of objects, area of various geometric figures, capacity and volume of bodies, time), units of measurement, various quantities and their relationships;
- c) gives the concept of the metric system of measures, measures of time;
- d) the ability to perform four basic arithmetic operations (addition, subtraction, multiplication and division) with multi-digit numbers and fractions;
- e) develops in students the ability to solve simple and compound problems.

To achieve the above goals, various methods are used in mathematics lessons, which are aimed at the most complete transfer of educational material to students.

Teaching methods are the methods of joint activity of the teacher and students, with the help of which the teacher transfers knowledge and skills to the student. Such methods have many varieties. The teacher chooses which of them will be appropriate to use at a particular stage of training. Some of them are creative, others are usually called traditional. If new teaching methods have not yet been mastered by many teachers, traditional methods have long been used in lessons and have proven their effectiveness. More often in other elementary grades, when explaining materials on various academic subjects, including mathematics, the storytelling method is used, when applied to mathematics it is called the method of presenting knowledge. Along with it, the conversation method is used. During the conversation, the teacher sets tasks for students, in solving which the latter will have to use their existing knowledge. The methodology of teaching mathematics is closely related to other sciences, primarily pedagogy, developmental psychology, ethics, native language and literature.

Mathematics can also help with educational purposes. This subject teaches students rational thinking. If lessons in the native language and literature help to reveal the child's creative abilities, give him a field for improvisation, mathematics teaches to firmly assess a particular situation, draw the right conclusions and make the most correct, acceptable decision in a given situation. Mathematics also forms such forms of thinking in students as comparison, analysis and the ability to generalize conclusions. Also, when solving a mathematical problem, a student gets the opportunity to strengthen, correct memory, sharpen concentration skills, and develop observation. In the primary grades of secondary school, children very often perceive mathematics as a boring and monotonous subject, perceiving classes in this discipline as the most monotonous.

The teachers themselves can be called guilty of this state of affairs, who for the most part do not strive to bring something new to the lesson process, they are not interested in how interesting their teaching abilities are considered by students.

Another method of teaching mathematics is known - the teacher seats a student who is strong in mathematics with a weak one during the lesson, giving them one task for both. In such cases, small teams are created from the students, who perform a common task for both. This method of teaching teaches children to work in a team, a lagging child, who is often timid in relations with the teacher, feels more relaxed next to a peer and sees a living example of how problems are solved, a classmate can reveal the essence of the problem of the given task in a language accessible to his understanding and explain ways to solve it. But this method gives results only if friendly relations are established between two such students. Otherwise, such work can turn into torture for both parties and cannot cause anything but mutual irritation. And this again means that the teacher must be a subtle psychologist and an expert in children's characters. Because in such teams there is always a leader and a follower. If the leading student studies well, the follower can improve his problem-solving skills, he will really learn to solve arithmetic examples. But if the leading student is stronger in terms

of character, but studies worse, this method will not give anything good, since he will dominate the pair and all the work for him will be done by the strong in studies, but weak in character student. In such cases, the lagging student will not learn anything, all his activities in the team will only lead to copying the problems solved by the other student. As we see, teaching mathematics can be carried out using various methods and ways in order to most rationally, in terms of conveying the educational material to the consciousness of students, use the time allotted for the lesson. Although mathematics is an exact science, teachers can still experiment, use various teaching aids, music, movement, everything that can show children all the beauty and power, as well as the importance of this discipline in everyday life.

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