

Problems of Development of Teaching of Mathematics in Elementary Schools

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Abstract: The lessons of mathematics in the primary grades are strikingly different from the same lessons in the older grades of the school. The article deals with the problems of teaching mathematics in primary school.

Key words: primary classes, mathematics, teacher, students, method, method, psychology, tasks, education.

Introduction

Mathematics is one of the most important disciplines that can be very necessary in the life of every person. In principle, it is impossible to do without mathematics, given the time in which we all live. Mathematics as an academic subject contains the necessary prerequisites for the development of students' cognitive abilities, it forms and corrects such forms of thinking as synthesis, comparison, analysis develops the ability to generalize to concretization, creates conditions for the correction of memory, attention and other mental functions. In this process, the development of children's speech is observed, it is enriched with special mathematical terms and expressions. When explaining the solution to a particular problem, the student acquires the skills of rational explanation of his actions, to do it accurately and concisely, without adding unnecessary words or expressions.

Main part

A mathematics teacher in primary grades should, like other teachers at this stage, have the skills of a psychologist and educator, in addition to their main responsibilities.

Because training during this period implies not only the presentation of knowledge in various academic disciplines, but also its upbringing in the psychological and personal terms. Like other subjects, mathematics involves mastering the following knowledge and skills:

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

To achieve the above goals in mathematics lessons, various methods are used that are aimed at the most complete transfer of educational material to students. Teaching methodology is a means of joint activities of a teacher and students, with the help of which the teacher transfers knowledge and skills to the student.

Such methods come in many varieties. The teacher chooses which of them will be appropriate to apply at this particular stage of training. Some of them are creative, others are called traditional. If

new teaching methods have not yet been mastered by many teachers, traditional methods have long been used in the classroom and have managed to show their effectiveness.

More often in other elementary grades, when explaining materials in various academic disciplines, including mathematics, the story method is used; when applied to mathematics, it is called the method of presenting knowledge. Along with it, they use the method of conversation.

In the course of the conversation, the teacher sets tasks for the students, in the solution of which the latter will have to use the already existing knowledge.

The methodology of teaching mathematics is closely related to other sciences, primarily with pedagogy, developmental psychology, ethics, native language and literature. Recently, the use of modeling methods has been increasingly noticed. Teaching mathematics in secondary general education schools, including in primary grades, contributes to the formation of such personality traits as accuracy, punctuality, perseverance and strong will.

Also math can help educational purposes. This subject teaches students to think rationally. If the lessons of the native language and literature help to reveal the child's creative abilities, gives him a field for improvisation, mathematics teaches us to firmly assess a particular situation, draw the right conclusions and make the most correct, acceptable decision in a given situation.

Mathematics forms in students such forms of thinking as comparison, analysis, and the ability to generalize conclusions. Also, solving a math problem, the student gets the opportunity to improve memory correction, sharpen attention concentration skills, and develop observation skills.

In the elementary grades of secondary school, children very often perceive mathematics as a boring and monotonous subject, perceiving classes in this discipline as the most monotonous. Guilty in this state of affairs can be called the teachers themselves, who for the most part do not seek to bring something new into the lesson process, they are not interested in how interesting their teaching abilities are to the students. It is important to remember that a teacher whose teaching methods are considered to be interesting for students to perceive wins among them.

Indisputable authority and, as a result, in the lessons of such a teacher, they are engaged more diligently trying to get his praise. It is easier for such a teacher to convey to the students the educational material provided for this particular lesson. Why do some teachers manage to gain confidence in children, while others, with all his undoubted pedagogical knowledge, do not succeed? Because, as noted above, they must first of all be psychologists, which implies the ability to find an approach to each child. It is very easy to work with children who have the ability for mathematics - they grasp the teacher's explanation on the fly, easily perform mathematical actions and solve problems of different levels of complexity. But, as a rule, there are few such children in the primary grades. In the course of the research, it was found that a child who experienced difficulties with addition and subtraction in preschool age also has them in primary grades, which undoubtedly interferes with the assimilation of mathematical material. As the math problems get more difficult over time, the problems of these children get worse. It is all the more important that the teacher can find out the number of such children in a given class and build a lesson plan taking into account this detail. Primary school teachers deal with this problem in different ways. Some practice dividing children into groups depending on their level of knowledge and ability in mathematics. In such cases, stronger or slightly weaker groups are formed. The teacher gives these groups tasks based on their abilities - the strong group solves more difficult problems, the weak ones are not so difficult. The teacher gradually complicates the tasks of the lagging group, step by step bringing such students closer to the level of children from the strong group. It should be noted that this method has a number of its advantages, but it is also not without its disadvantages. Its advantage can be considered the fact that children in lagging groups have the opportunity to catch

up with their classmates from a strong group, to strengthen their problem-solving skills to eliminate their shortcomings. But it should be borne in mind that this method can lead to stratification of students, dividing them into leaders and outsiders. Since children in elementary grades are not yet very confident in themselves and in their abilities, such a division can hurt his pride, and especially for impressionable children, even traumatize the psyche.

Therefore, the teacher who decides to apply this method should be as attentive as possible to the psychological climate of the class, not to allow the arrogant attitude of students from a strong group in relation to children from a weaker group.

Another way of teaching mathematics is also known - the teacher transplants a strong student in mathematics to a weak student during the lesson, giving them one task for two. In such cases, small teams are created from the students, which for two carry out a common task. This way of learning to teach children to work in a team, a lagging child, who is often timid in relations with a teacher, feels more relaxed next to a peer and, using a living example, to see how problems are solved, a classmate can reveal the essence of the problem of a given problem in a language that is understandable for him. and explain the ways to solve it. But this method gives a result only in the case when a friendly relationship is established between two such students. Otherwise, such work can turn into torture for both sides and can cause nothing but mutual irritation.

And this again means that the teacher must be a subtle psychologist and connoisseur of children's characters. Because in such teams there is always a leader and a follower. If the leading student learns well the slave can improve his problem solving skills he will actually learn to solve arithmetic examples. But if the leader in terms of character is stronger, but learns worse, this method will not give anything good, since he will dominate in the pair and a student who is strong in his studies but weak in character will do all the work for him. In such cases, the lagging student will not learn anything, all his activities in the team will only lead to cheating the problems solved by the other student.

Conclusion

As you can see, teaching mathematics can be carried out using various methods and methods in order to use the time allotted for the lesson in the most rational way, in terms of conveying educational material to the consciousness of students. Although mathematics is an exact science, nevertheless, teachers can experiment, apply, various 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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