

Tasks of Mathematics Teaching JDPU

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Abstract: In this article, special methods of teaching mathematics in elementary grades and the tasks of teaching mathematics aimed at increasing the skills of conscious calculation in performing actions are presented.

Keywords: mathematics, numbers, operations, Arithmetic, problems, examples, equalities, elementary school, children.

In order to successfully teach mathematics to elementary school students, a teacher who starts work must master the developed system of teaching mathematics, i.e., the methodology of teaching mathematics in elementary grades, and on this basis, independently create should start working. "Method" is a Greek word, and "method" means way. Mathematical methodology is a branch of pedagogic science that is part of the system of pedagogic sciences and studies the laws of mathematics at a certain stage of the development of mathematics in accordance with the educational goals set by society. The subject of the methodology of primary education in mathematics consists of the following:

1. Justification of the intended goals of teaching mathematics. (why is it taught).
2. Scientific development of the content of mathematics teaching (that is, which material from mathematics is studied in primary grades, why this particular material is chosen, at what level of generalization each individual issue of the course is studied in primary grades, in what order the topics are studied, is shown to be the most rational).
3. Scientific development of teaching methods. (how to teach, that is, what should be the methodology of educational work so that students acquire the knowledge, skills, skills and mental abilities that are needed today? For example, how to learn to add and subtract numbers in 10 'need to learn, including how to reveal the substitution property of addition in this topic?.
4. Development of teaching tools - textbooks, didactic materials, instruction manuals and technical tools. must!
5. Scientific development of educational organization, how to conduct lessons and extracurricular forms of education? What organizational methods should be used to conduct educational work? How to effectively solve educational and educational issues in the educational process?

Thus, the goals, content, methods, means and forms of teaching are the main components of the methodical system. The purpose of teaching mathematics. As with any other educational subject, the basic course of mathematics is determined by the following three factors:

1. The general educational purpose of mathematics education.
2. The educational purpose of teaching mathematics.
3. The practical purpose of teaching mathematics.

The general educational goal of teaching mathematics sets the following tasks:

- a) Providing students with mathematical knowledge based on a specific program. This knowledge should provide students with sufficient information about mathematics and prepare them to study higher branches of mathematics. In addition, on the basis of the program, students should learn to check the reliability of the knowledge they have received during their studies, master the main control methods.
- b) It is necessary to develop the oral and written mathematical knowledge of students. Studying mathematics should help students to master the skills of correcting speech culture in their mother tongue, expressing their thoughts clearly, clearly and succinctly.
- c) To teach students to know real facts based on mathematical laws. By imparting such knowledge, students' spatial imagination is formed and their logical thinking develops further.

In our country, teaching mathematics in elementary grades is generally considered as the first step in mastering the school mathematics course. Therefore, when working in primary classes, it is necessary to take into account the general issues involved in teaching mathematics in secondary school and correctly assess the importance of primary education in solving these issues.

Many of the issues related to the high school mathematics program should be mastered in the elementary grades to such an extent that they remain in the student's mind for a lifetime, while other issues should be prepared in the early stages of instruction for detailed consideration in later grades. It is introduced only for the purpose of learning, or it is introduced to have the opportunity to increase the level of thinking ability in the process of forming certain skills and abilities.

The above considerations should be taken into account when it comes to children's conscious and solid acquisition of a certain amount of knowledge, studies and skills provided for in the program in the field of mathematics in the elementary grades of the school. One of the important issues of primary education was and remains the formation of students' conscious and solid numeracy skills. The mathematics course involves summarizing educational materials to the extent that students can, understanding the general principles and laws underlying the studied mathematical facts, and understanding the connections between the observed phenomena. This mainly refers to the study of the properties of words, existing connections between them, mathematical relationships and connections that are the basis of practical learning and skills that are formed in children. It is one of the main tools that helps the teacher not only to acquire theoretical and practical training and skills, but also to establish mathematical relations between the issues of theory and practice, to increase the effectiveness of mathematics teaching.

Teaching students to apply acquired knowledge, skills and skills in different conditions should be considered as a special issue of education. This is the beginning of work aimed at preparing students for polytechnic.

At the same time, the application of knowledge is one of the important means of improving the effectiveness of children's educational work. Psychologists have proven that it is possible to achieve valuable acquisition of knowledge, training and skills only as a result of their independent application in changing conditions. It is on this basis that the difficulties that will necessarily arise when children move from primary to the next grade at school can be eliminated to a large extent. And on the contrary, if the teacher does not pay special attention to comprehensive knowledge and teaches children the same types of questions, tasks, expressions, problems, this will increase the complexity of the transition to teaching subjects in 5th grade. .

This issue is inextricably linked with the more general issue of developing children's cognitive abilities. Already in primary school, children should have done a lot of work to observe and compare, distinguish similarities and differences in the phenomena being compared, analyze, synthesize, generalize, abstract, clarify.

When talking about developmental education, it is a mistake to think that the work is only about the development of cognitive abilities.

Doing mathematics not only shapes memory and thinking, but also becomes a school of labor education for children. It provides material for continuous systematic work on cultivating the habit of working and the need for work, it requires discipline of thinking and clear organization of work, concentration of thoughts, precision.

A lot is required of a teacher in this field. The teacher should direct the work of the students in such a way that their educational activities satisfy each of them, have a pedagogical tact and feel the criteria. For this, first of all, it is necessary to organically cultivate children's independence, and gradually increase the demand for their independent work in the course of education. should be. Solving all of the above-mentioned parables is carried out when the content is effectively selected, its presentation is in a well-thought-out system, and appropriate methods and forms of teaching and teaching tools are selected.

The solution to these issues is not only related to the consideration of the tasks set before education, but also related to the correct assessment of the interrelationships between other elements of education.

The main material of the elementary mathematics course is the mathematics of natural numbers and basic quantities. Algebraic and geometric problems are also included in the course. These basic rules should be taken into account when looking at the main content of the course. During the entire primary education, children are trained to understand natural numbers and arithmetic numbers. From the beginning, this work is carried out in conjunction with the work aimed at mastering some properties of children's numbers, the decimal system, arithmetic operations and calculation methods based on numbers, looking at various ways of practical application of concepts. . As a result of this work, children should consciously and firmly acquire the skills of applying both the theoretical problems included in the program and the studied theoretical problems to solving practical and educational problems, and perform oral and written calculations. In this case, theory and practice should be connected to each other while working on the arithmetic part of the program. Observations of the experience of implementing the program in general school work show that this very important requirement of the program is often violated.

For example, in the formation of verbal calculation skills, teachers often emphasize the need to convey the theoretical basis of the performed actions to the children's minds, when a mistake is made during their calculation, the theory helps students understand the reason for the error and correct it independently. they don't push to return to looking at theoretical issues. In this case, it is conscious mastery that is the basis on which real solid skills of reliable, accurate and fast calculation can be formed. Violation of the requirement to look at theory and practice in the unity of the world is often invisible in mathematics classes when children are given theoretical problems in an abstract form, relevant tariffs, rules, etc. are studied separately from their practical application. In this case, the following situations can also be encountered, students are required to know expressions that are either not provided for in the program at all, or that children should learn much later. For example, a student in the first grade asks "What are numbers called when adding?" This is what happens when students are required to answer the question in full. Knowledge of mathematical terminology in this way is not required at all. The same is true when a teacher asks students in second grade to explain how subtraction can be verified using addition, and so on.

In order to avoid similar methodological mistakes that lead to artificial overloading of students, it is necessary to clearly imagine the whole system of working on the arithmetical material of grades I-IV, understanding the importance and place of the elements provided for in the theory's program. it is important to get In the primary mathematics course, the work on numbering and arithmetic operations is organized in a concentric manner. The program envisages a system of gradually expanding the areas of numbers considered with children, in which, in the study of

each of these topics, it is envisaged to cover a new area of numbers, as well as to gradually introduce children's previously acquired knowledge in numbering and operations on numbers. Introducing children to numbers and arithmetical operations and to the combination of two sets of items given in the first lessons of mathematics, to establish compatibility between the elements of two sets and to establish part of the given sets of items was prepared by practical exercises. Children gradually move from performing operations on sets to counting objects, get acquainted with the first ten numbers of the natural series, learn to compare numbers, find their sum and difference. First, these items are made on the basis of counting the elements of the set formed by removing a part of the set as a result of performing the appropriate operations on the sets and combining two sets, and then the operations performed on the numbers are performed using some methods.

In learning to add and subtract in tens, and then in learning to add and subtract in hundreds, children are introduced to the relationship between addition and subtraction based on the use of operations. In this case, as mentioned above, the whole work related to looking at these properties and various methods of calculations is subordinated to the issue of making calculations effective. An important task in the formation of the calculation skills of the first year of teaching is to master the tabular cases of addition and subtraction in tens of children in such a way that they automatically form the skills of adding one-digit numbers and quickly verbal calculation of two-digit numbers. provide computing capabilities.

In the explanatory note to the program, it is emphasized that the table cases of addition and subtraction are memorized by the child as a result of exercises, and therefore it is important to create a timely instruction for children to remember them, and it is also necessary to carry out daily practice work. , without which the desired result cannot be achieved. When looking at numbering in tens and hundreds, special attention is paid to introducing children to the new counting unit ten, to learning the composition of numbers consisting of room additions, to determining the value of numbers in two-digit number writing.

In opening the written methods of adding, subtracting, multiplying and dividing numbers, as in the oral calculation methods, it is envisaged that the students will consciously understand the content of the performed actions, their sequence, and explain them clearly. At the same time, the goal of achieving a certain automatism should always be kept in mind in written calculations. Along with written calculations, some new properties of children's actions themselves and their properties are introduced, the knowledge about the change in the result of an action when one of the components of the existing connections between actions changes is generalized and deepened. All of these operations are used in the program description to make calculations more efficient. Along with the study of numbers and arithmetic operations, work is carried out aimed at shaping the concept of expressions, equalities and inequalities. Numerical expressions, equalities and inequalities are encountered in the early stages of teaching mathematics, and then work on them is carried out regularly in every lesson. In it, the materials envisage gradually increasing the complexity of the types of tasks related to the application of previously acquired knowledge, not only by expanding the area of considered numbers, but also by complicating the structure of the considered expressions.

In addition to the issue of forming the concepts of equality and inequality in expressions, appropriate exercises help to strengthen both calculation skills and the elements of arithmetic theory considered in the study of operations.

CONCLUSION

Thus, it is necessary to consider didactic materials as one of the methods of controlling the level of mastering of educational materials by students. At the same time, a certain method may not be the best method for this class and this teacher. For this reason, didactic materials cannot free the teacher from creating types of control for individual verification that will allow determining the level of knowledge acquisition of students. This is one of the main tasks of general methodology.

2. Preparing students for learning a mathematics course. It depends on their level of preparation

for the mathematics course in solving educational tasks, which is the main task of teaching mathematics in grades I-IV. Therefore, there is a task to determine the knowledge of those who come to the 1st grade, to equalize the knowledge of the students of the class, that is, to transfer the knowledge of the students with low knowledge to the students who know well. The teacher records the students' knowledge in a special notebook in the following order: 1. How long does he know how to count? 2. How many numbers can he add? 3. How many numbers does he know how to subtract? He will learn to perform similar operations.

The main work method in preparing children for teaching should be aimed at forming the skills of performing mental operations such as analysis, synthesis, comparison, generalization, classification. Such activities will greatly help the development of students' oral and written speech, and their interest in acquiring mathematical knowledge will increase.

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