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PEDAGOGICAL AND PSYCHOLOGICAL BASIS OF DEVELOPMENT OF LOGICAL THINKING OF STUDENTS

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Abstract: This article presents ideas about the pedagogical and psychological foundations of formation and development of logical thinking of elementary school students and the role of mathematics in the development of logical thinking.

Key words: mathematics, logical thinking, thinking, reasoning, tasks, example and problem.

The first president of Uzbekistan, I.A. Karimov, wrote in his work "High spirituality - invincible power" that "To raise our children to be perfect people who live consciously and have the ability to think independently and broadly is the main goal and task of the field of education." "must be", he said.

Raising the future generation in a perfect way, increasing its pedagogical-psychological, intellectual potential and raising it to think creatively is one of the main tasks of today. First of all, it is necessary to develop the logical thinking of students in order to educate them according to the needs of the times. The development of logical thinking is considered one of the main components of the pedagogical process, observations show that one of the effective methods of developing logical thinking at school age is solving logical problems. School textbooks include logical questions in different forms according to the age of the student. The student will find answers to these tasks through his own thoughts and judgments, which will allow him to develop not only his logical thinking, but also his self-confidence, initiative, creativity, independence and the ability to demonstrate his abilities.

The contribution of mathematics in the formation and development of logical thinking is great. In the teaching of mathematics in mathematics lessons, one moves from the abstract to the concrete concept. This, in turn, leads to the child's search for logic. In the example of a mathematics lesson, we can see the development of logical thinking in children from simple exercises to gradually more complex exercises, as well as tasks such as comparison, finding similarities and differences.

To develop logical thinking, it is necessary to use a system of unusual tasks, exercises, and games. These develop not only logical thinking but all mental operations. Unusual exercises should be used not only in the classroom, but also at home in the process of preparing lessons together with the child. Today, the videos, games, exercises, assignments in the textbook are given taking into account the age and psychological characteristics of the students. Of these, we can work selectively in the course of the lesson, in extracurricular activities, and in the family circle. However, not taking into account the psychology of youth when giving these assignments to students for the development of logical thinking is an ineffective way to achieve results.

Maths classes and extracurricular activities include a number of tasks that focus on logical thinking, such as the following.

- separation of characters;
- Selecting objects according to the given characteristics;
- Finding important parts of objects;
- Comparison of objects;
- Classifying objects and more.

Game methods are mainly used to develop logical thinking using the above. The use of special assignments and tasks aimed at developing logical thinking in mathematics lessons and extracurricular activities expands the worldview of elementary school students and allows them to use mathematical knowledge more actively in everyday life.

The development of logical thinking affects the child's psychological state and upbringing, develops positive character traits. Increases self-control and self-confidence. All this is very necessary for the future life of children. Sufficient preparation of mental activity relieves the psychological overload of studying and helps to find one's way in the future.

In the process of preparing future teachers for the development of students' logical thinking in higher education institutions, it is necessary to pay attention to the following:

- giving priority to the preparation of future teachers for the development of students' logical thinking;

- special training of future teachers in the methodological bases of developing students' logical thinking;

- follow a consistent and comprehensive approach in preparing future teachers for the development of students' logical thinking;

- analysis of perspective in preparing future teachers for the development of students' logical thinking;

- focusing on updating the content of the process of developing students' logical thinking based on national and universal, cultural-historical, intellectual, spiritual, aesthetic and artistic values;

- such as mastering the theoretical foundations of the development of students' logical thinking by future teachers and paying attention to its implementation in pedagogical practice.

In the course of their professional activity, future teachers should have the experience of how to involve students in learning, diagnose and analyze the results of their activities. At the same time, one of the main tasks is to develop enough communication skills in future teachers. Because this was evident in the students' careful mastering of the theoretical foundations and mechanisms of developing their logical thinking.

In the practice of preparing future teachers for the development of students' logical thinking, it is necessary to adequately cover not only the scientifically-based theoretical-pedagogical, but also the theoretical-practical basis of this process (its characteristics, aspects, goal-orientedness, professional-personal criteria, analysis of results) .

New approaches in pedagogy, innovative methods, methods, tools, new technologies, including the most effective forms of methods of working with students outside the classroom, the search for advanced methods, sufficiently activates the interest in learning.

Future teachers should be sufficiently aware of the priority aspects of education for primary school students today. That they fully know the content of educational programs. In addition,

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sufficient preparation of future teachers for the educational processes implemented in secondary educational institutions. They should have enough knowledge and ideas about the guiding factors, consistency, integrity and interrelationship of educational processes, humanistic style, principles, pedagogical conditions, socio-pedagogical directions.

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