

## PEDAGOGICAL AND PSYCHOLOGICAL FEATURES OF TEACHING STUDENTS TO THINK LOGICALLY

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**Abstract:** In this article, opinions are presented about the special relevance of teaching students to think logically, since logical thinking is a concept that means thinking about the existence, reality or impressions that a person sees, hears, knows, feels, and understands in a way that is comprehensible to others.

**Key words:** Logical thinking, skill, ability, thinking, perception, intelligence, imagination, feeling, memory, speech.

Logical thinking is an important ability of a person. At the same time, logical thinking is also a means of encouraging a person to mature. With the help of logical thinking, a person will have the opportunity to express himself independently and achieve success. Therefore, special attention should be paid to the development of students' mental processes at the stage of primary education.

The way of thinking of elementary school students and adults, that is, teachers, is significantly different from each other. Teachers think based on their life experience and theoretical knowledge of the profession. The ways of thinking of elementary school students rely on visual aids, imagination, feelings, and perceptions.

From the point of view of teaching students to think logically, teachers should pay special attention to their mental development. Students develop their perception, memory, speech, thinking, and imagination due to their curiosity and desire to know the objective existence. In the course of games, students of junior school age experience certain events, seek to know their causes. They identify simple relationships between things based on causal relationships.

It is known that all cognitive processes are interconnected. It is they who provide various activities for primary school students. The relationship between mental processes remains unchanged in primary school age students. That is why a certain process takes priority at different stages of development. Mental processes of students develop in turn based on the laws of their development.

As students develop, so does their way of thinking. The way of thinking of students in grades 1-2 does not differ much from the period of preschool education. The process of their perception and analysis of information is as follows:

- Demonstration-action; in which the student's way of thinking is directly related to specific actions and objects.

- Demonstrative-figurative; in this process, the primary school student's way of thinking relies on perception and imagination.

Elementary school students describe objects based on their external features. Because they look at the aspects of things that are understandable to them. A new stage of perception and analysis begins in students from the 2nd-3rd grade, that is, at the age of 8-9. 3rd graders have a unique way of thinking, they begin to understand the logical connection between different subjects. From a psychological point of view, this stage in the development of students is evaluated by them as the level of understanding of the relationship between the type and gender of objects. For example, a tree: apple, cherry, apricot, cherry, peach, etc. Bird: nightingale, sparrow, parrot, myna, crow, sparrow. Flowers: basil, rose, marigold, marigold, gulsapsar, chuchmoma. Fish: zogora, lakka, bighead, eel.

At this age, elementary school students acquire an abstract way of thinking. During this period, they get used to thinking through concepts. In this, visuality helps them especially, perception and imagination perform the main task.

The process of abstract thinking in elementary school students takes place in connection with changes in the content of the way of thinking. If it consists of clear ideas and is based on visualization, by this period, the student's way of thinking is realized with the perception of the specific aspects of things and objects. Educational activity takes a special place in the change of students' way of thinking. Educational materials are presented to students in a certain sequence in classes. The educational content for 1st-2nd graders is designed taking into account the imaginative way of thinking of the students. Students of the 3rd-4th grade are presented with scientific concepts step by step. This in turn requires them to think logically. The tasks set before students require them to perform mental operations. In the process, they move away from precision and feel the need for scientific observation.

Students acquire the ability to solve logical tasks and draw conclusions by acquiring the skills of abstract thinking. In this, they rely on the internal characteristics of objects. However, they do not rely on the obvious signs of objects in this process. As a result of gradually acquiring the methods of intellectual activity, the students acquire the experience of mentally solving the tasks set before them. In addition, they analyze their own thought processes. Students' thought processes acquire a fixed character based on a certain consistency. In this process, they master the operations of analysis, generalization, harmonization, comparison, distribution. This situation is especially evident in the process of solving tasks related to mathematics and linguistics. A new

stage in the development of students' thinking becomes the basis for formal-logical thinking. In this way, students gradually master the methods of modeling, comparing objects, and determining the type-genre relationships between them.

One of the important tasks of primary education is to create favorable pedagogical conditions for students to form scientific concepts and understand the relationships between them. Elementary school students should have a general understanding of objects and be able to clearly describe their characteristics. In addition, they should be able to know and interpret the specific signs of objects with specific characteristics. In order for students to master the concepts, it is necessary to present educational materials based on the principle of gradation, that is, consistency. For this, students need to have the ability to distinguish the functional signs of things.

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