

## Didactic Principles of Developing Logical Thinking in Students

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**Abstract:** This article analyzes the didactic foundations of the development of logical thinking in students, which is one of the important components of the educational process, and its specific aspects, as well as the opinions of many researchers in this regard. At the end of the article, the author made many concluding remarks.

**Key words:** science of logic, logical thinking, logical analysis, didactic process, argumentation, development.

In the development of a person's worldview, it is very important that his language and speech are developed. Because, in the process of solving the task, the student's ability to explain the ways to solve the task through his speech, to be able to say the main elements of the task, to be able to draw and know graphic drawings, plays a big role in the development of the student's creative thinking. The more vocabulary a student has, the higher his internal and mental abilities are developed and formed. In the creative process, the student first performs the task through his imagination, that is, his mind, makes a plan, and then this plan is implemented based on external opportunities.

A. Savenkov [2] lists the following principles for the development of logical thinking in students:

- use of divergent and convergent types of problem setting and its solution, that is, training in thinking is not uniform, but developing problem setting in the problem;
- educational material updated with the latest important information, continuous development of problem setting and solving;
- the combination of the student's ability to apply his knowledge and skills in practice with the expansion of the scope of the student's logical thinking;
- the student can express that he has acquired new knowledge in his actions and practices;
- ability to show intellectual initiative and know how to solve problems; in this case, "intellectual initiative" is manifested in the student's independent desire to see the problem more deeply, to find original and alternative solutions in the solution of various educational and creative issues.
- to avoid conformism, that is, to eliminate ideas and situations that lead to the wrong solution;
- critical approach skills are formed in the analysis of ideas;
- striving for a deeper study of the problem;
- to achieve rationality in educational activities, that is, to achieve independent research in researching and solving problems;

- to achieve individualization - to develop the personal qualities of students participating in the educational process and to create conditions for each student to be able to fully express himself as a subject of the process;
- creating a problem situation - being able to come up with and direct the creation of a problem situation among students.

Based on this, if we purposefully use the above-mentioned principles, students' logical thinking will be formed at a high level.

Even in the East, the problem of human thinking is analyzed on the basis of different views. Farabi dwells extensively on the relationship between man and being, on the analysis of thinking based on various sciences. According to him, the highest level of human spirituality is mind, spirit and thinking, which are manifested in the forms corresponding to human cognitive activity.

In his book "About the Mind", Farabi describes the "twelve innate qualities" of a moral person and dwells on a person's ability to think. A person with high pharaonic thinking ability can quickly and fully understand the analysis of all assignments, mastering its meaning, understanding the purpose of the person speaking and the truth of the expressed opinion, having a strong memory, remembering all the information received from the existence, keeping it in his memory, with his mental perception, it shows that he can quickly determine what this sign means, can fully and consistently express his thoughts and opinions, and can easily and quickly absorb knowledge [3].

Abu Ali ibn Sina in the work titled "Snapshots from the Development of Pedagogical Thought in Central Asia" elaborated on the information related to the process of thinking. In the scientist's work "Tadbiri Manozil" ("Education and Education of a Child"), he emphasizes the need to train students together in order to improve the thinking of students, to increase the effectiveness of education, and to create an opportunity to compete.

Focusing on treating the interlocutor with respect, the scientist says: "Let your thoughts reach (the child's) heart and allow him to think and reflect... If you feel that your interlocutor or friend is not paying attention to your words and advice, move the conversation to another time." [3].

Kaikovus writes in his work "Nightmare" in the form of admonition to his son that a person can think based on his own life experiences without always relying on scientific and theoretical knowledge: they learn the work even with such activities" [3].

Encyclopedist Abu Rayhan Beruni, explaining the opinions of a person about the acquisition of knowledge through his thoughts, intellect, and senses, writes: "Knowledge gained only through intuition, with sense organs, can lead to mistakes. If a person uses his senses to think and draw conclusions, he can make great progress in learning what is perceived with the help of these senses. Desires are achieved through hard work" [3]. He emphasized that in life situations, in the process of solving existing problems, the information received through the senses is not directly perceived, but if the thought is fully diagnosed and appropriate conclusions are drawn, then only this knowledge will be real and solid.

Alisher Navoi, who sees thought and thinking as closely related units, expresses his views on the problem of taking a responsible view of thought in his works in the style of "Don't mention thought until you have it in your heart, don't mention it even if it's in your heart." In the poet's work "Mahbub-ul-Qulub", he calls a person who is educated, but cannot think correctly, "a scholar who does not follow his knowledge is like a donkey with a book loaded on him" as "ignorant".

Abdulla Awlani gives special importance to the education of body and mind in the work "Turkish Gulistan or Morality". He said that the education of thought "needs second only to the help of the teacher" and is important in human life.

As a result of the research analysis, the study of the mental activity of children of primary school age confirmed the following conclusion: only as a result of the student's own mental activity, deep thinking in solving creative tasks, the variety of connections is created. This represents a high, consistent level of mental activity. Based on this, the acceleration of educational activity is ensured.

Several psychologists have studied the problems of creative thinking and creative activity.

Creative thinking - 1. a form of thinking in which the principle of free thinking and creativity is the priority. 2. Internal intelligence is the product of the logical consistency of new thinking based on interrelated factors.

Creative thinking involves analyzing, comparing, comparing events, improving the idea based on it, finding new aspects of it, thus enriching the world of knowledge and imagination. Creative thinking is human. Those who are deprived of this quality become a slave who does everything blindly. A person with creative thinking has his own independent opinion. He has a free attitude towards life and people, and can express his opinion on any event. Creative thinking is an important condition for spiritual renewal of the human community, expansion of people's thinking, celebration of good ideas.

Creative activity is a type of activity that embodies the striving for a specific goal, a special emotional state - inspiration, spiritual experience, as well as the desire to fully solve the problem of a person working in a certain field [3].

At the next stage of solving the problems of thinking development in the teaching process, the problem of managing the thinking processes of students of junior school age arose. In this case, thinking in the activity of reading, on the one hand, acting on ready-made knowledge, on the other hand, is manifested as a creative ability worthy of creating a new pure original system. Productive processes take place during the solving of problematic situations, a factor that develops the ability of students to think. The development of active, independent, creative thinking skills in students depends on the purpose of teaching and the problem set before it. We believe that it is necessary for the teacher not only to give the students ready-made knowledge, but to make them learn independently, to arouse enthusiasm for their own research, and to use appropriate educational technologies.

Now we turn to the analysis of some research related to the problems posed by us:

Another important issue is to determine the possibilities of organizing extracurricular activities from subjects in the educational process, to develop the didactic bases of goal-oriented oral questions and exercises, the ways and conditions for using them in the development of students' logical thinking ability. To do this, it is necessary to solve the following problems: there is a need to determine the methodological possibilities of organizing extracurricular activities in the development of logical thinking activities in elementary school students.

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