

DEVELOPMENT OF LOGICAL THINKING IN PRIMARY GRADE STUDENTS ON THE BASIS OF INTERNATIONAL ASSESSMENT PROGRAMS**Mahmudova Namuna Yaqub kizi**

The modern education system is being radically updated under the influence of rapidly developing global processes. Today, not only the provision of knowledge, but also the formation of skills such as independent thinking, analysis, problem solving and decision-making in students is of great importance. In particular, the primary education stage is the most important foundation of this process. Because it is during this period that students' thinking activity is formed and developed.

Logical thinking serves as a key factor in students' deep assimilation of knowledge, their ability to apply it in practice and adapt to new situations. Therefore, the issue of developing logical thinking in primary school students is considered an urgent scientific and practical problem. In recent years, international assessment programs — PISA, TIMSS, and PIRLS — have taken an important place in assessing the quality of education and are proving to be an effective tool in solving this problem.

Logical thinking is a person's ability to analyze, generalize, compare, and draw conclusions from existing knowledge in the process of thinking. From a psychological point of view, logical thinking is closely related to the level of mental development of the student, and it is formed gradually.

In primary school students, logical thinking develops through the following elements:

analysis and synthesis;

comparison and differentiation;

generalization and classification;

identification of cause-and-effect relationships.[4]

These skills play an important role in the student's successful functioning in the subsequent educational process. Therefore, a systematic approach to the development of logical thinking in primary education is required.

International assessment programs are aimed at assessing the knowledge and skills of students based on international criteria. The most common of them are:

PISA (Programme for International Student Assessment) — assesses students' literacy in reading, mathematics and science, as well as their problem-solving skills.

TIMSS (Trends in International Mathematics and Science Study) — determines the level of knowledge in mathematics and science.

PIRLS (Progress in International Reading Literacy Study) — assesses students' skills in understanding and analyzing text.

These programs pay special attention to students' ability to apply their knowledge in real-life situations. This is directly related to the development of logical thinking.

There are a number of problems in the development of logical thinking in the primary education system:

In many lessons, students are directed to memorize ready-made knowledge, which limits their independent thinking.

Tasks based on real-life situations are rarely used in the lesson process.

The existing assessment system often measures only the level of knowledge, not the level of logical thinking.

Some teachers face difficulties in using modern pedagogical technologies.[2]

Based on international assessment programs, the following methodological approaches are considered effective for developing logical thinking in primary school students:

Providing students with problem situations and encouraging them to solve them independently develops logical thinking.

Using interactive methods

Methods such as “Brainstorming”, “Cluster”, “Insert” ensure active participation of students.

Incorporating questions in the PISA and TIMSS format into the lesson process develops students' analytical thinking.

Efficiency is increased by taking into account the individual abilities of each student.

Logical games, puzzles and rebuses increase students' interest.

For example, in a mathematics lesson, in addition to simple calculation tasks, the following questions can be asked:

“Why did you solve this problem in this way?”

“What other methods are available?”

These questions encourage students to think more deeply.

In reading lessons, the following tasks can be given based on the text:

determining the cause of events;

evaluating the actions of the characters;

creating an alternative ending.

The teacher plays a leading role in developing logical thinking. He or she must have the following competencies:

knowledge of modern pedagogical technologies;

understanding the content of international assessment programs;

establishing effective communication with students;

being able to use a creative approach.[5]

The teacher should encourage students to actively participate in the lesson process and respect their opinions.

As a result of using these approaches, the following positive changes are observed:

students' independent thinking ability develops;

problem-solving skills are formed;

the level of knowledge application in practice increases;

international assessment results improve.

In short, the development of logical thinking of primary school students is one of the important directions of modern education. International assessment programs serve as an effective methodological basis in this process. By organizing the educational process in accordance with the requirements of these programs, it is possible to develop not only the level of knowledge of students, but also their thinking skills.

In the future, it will be important to continue scientific research in this area, introduce innovative methods, and improve the skills of teachers. As a result, it will be possible to educate a modern, competitive, and independently thinking young generation.

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