



ANALYZING THE IMPACT OF ORAL ARITHMETIC EXERCISES ON STUDENT THINKING IN ELEMENTARY SCHOOL STUDENTS.

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Are both primary education students

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Abstract: *This article analyzes the process of forming verbal arithmetic skills in primary school students and its impact on the development of student thinking. Through verbal arithmetic exercises, the development of students' attention, memory, logical thinking, and quick decision-making skills is highlighted. The study analyzes advanced pedagogical experiences and modern methodological approaches.*

Keywords: *verbal calculation, thinking, logical thinking, primary education, mathematical skills, mental development.*

Introduction: In the current educational system, one of the important tasks is to develop students' independent thinking, analysis and quick decision-making skills. Especially at the primary education stage, this process becomes the foundation for the student's future educational activities. In primary grades, mathematics is not only a means of teaching numbers and operations, but also an important subject that shapes thinking and develops logical thinking.

Verbal arithmetic exercises are an integral part of mathematics lessons, they activate students' thinking processes, develop memory, attention, speed, analytical and logical thinking skills. In the process of verbal arithmetic, the student performs operations mentally, without writing them down, which leads to significant changes in his thinking. The purpose of this article is to study the impact of verbal arithmetic exercises on the thinking of primary school students and to analyze its effective methods.

Main part:

1. The content and importance of verbal calculation exercises.

In the elementary school mathematics course, verbal calculation refers to arithmetic operations performed on numbers without writing, mentally. They serve the following educational goals:

consolidation of mathematical concepts;

development of quick thinking;

understanding the relationship between numbers;

strengthening logical thinking and memory skills.

Verbal calculation teaches the student to clearly express his thoughts, think and draw correct conclusions. In this process, the student learns not only to calculate, but also to mathematical analysis and logical generalization.

2. The effect of verbal calculation on the student's thinking.

The effect of verbal calculation exercises is manifested in several cognitive areas:

1. Logical thinking - the student performs each action based on a certain rule, which develops his logical thinking.

2. Attention and memory - in the process of verbal calculation, it is necessary to remember intermediate results, which strengthens working memory.

3. Quick thinking - finding the answer in a short time teaches the student to think quickly and clearly.

4. Creative approach - achieving the same result in different ways develops the student's creative thinking.

5. Teaches to act freely on numbers,

6. Understand mathematical laws,

7. Teaches to think quickly and clearly.

3. Effective methodological approaches.

- The game “Chain Counting”;

- “Mathematical Dictation”;

- “Who is Faster?” Competitions;

- Organization of oral exercises through digital technologies (interactive tests, “Kahoot”, “Quizizz” platforms).

Thus, oral counting exercises play an important role in the intellectual development of the student.

3. Practical experience (example). An experiment was conducted with primary school students over a period of 3 months based on oral arithmetic exercises. At the initial stage, 45% of students had difficulty with quick arithmetic, but after the training, this figure decreased to 20%. In addition, the students' logical thinking skills improved by 30%. 4. Methods of organizing oral arithmetic exercises in primary school.

When organizing oral arithmetic exercises in primary school, the teacher uses the following methodological approaches:

“Chain arithmetic” - students take turns saying operations (for example: $2+3=5$, $5+4=9$, $9-2=7$, etc.).

“Mathematical dictation” - the teacher says oral problems, students quickly say the answer.

“Who is faster?” game - students solve the given examples as quickly as possible.

“Game arithmetic” - using games such as “Riddle examples”, “Interesting numbers”. Using information technology - organizing interactive exercises through online platforms such as “Kahoot”, “Quizizz”, “Math Games”. These methods increase students' interest in mathematics and encourage them to actively use their thinking.

In the current educational system, one of the important tasks is to develop students' independent thinking, analytical and quick decision-making skills. Especially at the primary education stage, this process becomes the foundation for the student's future educational activities. In primary grades, mathematics is not only a means of teaching numbers and operations, but also an important subject that shapes thinking and develops logical thinking.

Verbal calculation exercises are an integral part of mathematics lessons, they activate the thinking process of students, develop memory, attention, speed, analytical and logical thinking skills. In the process of verbal calculation, the student performs operations mentally, without writing them down, which leads to significant changes in his thinking. At the same time, the use of digital technologies, interactive methods and game technologies in modern education further increases the effectiveness of verbal calculation exercises. This increases students' interest in mathematical activities, forms their ability to think independently, draw logical conclusions and respond quickly.

The relevance of this study is that oral arithmetic exercises are one of the main tools for the comprehensive development of student thinking. Therefore, conducting a scientific analysis on this topic, studying existing experiences and applying them in educational practice is of great scientific and practical importance.

Literature review: Issues related to verbal arithmetic in primary education have been studied by many pedagogical and psychological scientists. For example: L.S. Vygotsky substantiated the formation of a student's thinking in the process of activity. J. Piaget proposed a theory of the development of children's thinking by age stages. Scientists such as A. D. Aleksandrov, A. I. Markov, N. Ya. Vilenkin paid attention to the role of verbal exercises in the formation of mathematical thinking. Among the scientists of Uzbekistan, Sh. Shodiev, Kh. T. Tulaganova, N. M. Abdullayeva and others studied the methodology for developing arithmetic skills in primary education.

In these sources, verbal arithmetic is described as a tool that strengthens not only the speed of calculation, but also the student's clarity of thinking, logical consistency, and attention.

Conclusion. Verbal arithmetic exercises play an important role in the formation and development of thinking in primary school students. With their help, students:

learn to think quickly and clearly;

develop logical and analytical thinking skills;
form a positive attitude towards learning activities;
acquire the ability to independently find solutions.

Therefore, the systematic use of verbal arithmetic exercises in mathematics lessons, based on modern methodological approaches, has an effective effect on the mental development of students.

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