



**CONTENT, SIGNIFICANCE, AND METHODOLOGY
FOR USING EDUCATIONAL GAMES OF THE 1ST
GRADE MATHEMATICS TEXTBOOK (Part 1)**

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Abstract. *This article analyzes the content of the 1st-grade mathematics textbook (Part 1), the importance of its topics for elementary education, and its didactic foundations. The study examined the methodology for using educational games to develop the concept of number, compare objects, and foster spatial concepts in elementary school students. The research results show that game technologies serve to effectively develop students' mathematical thinking, logical reasoning, independent work, and communication skills. The scientific novelty is that the article has developed a model for integrating educational games with textbook topics.*

Keywords. *elementary education, mathematics, educational games, number concept, comparing objects, spatial concepts, methodology, thinking, innovative approach, logical thinking, didactic technology.*

Introduction. Mathematics in primary education is of decisive importance for the intellectual development of students. Grade 1 mathematics not only teaches numerical and arithmetic operations but also forms skills in logical thinking, comparison, generalization, and inference making [1.5].

A modern 1st-grade mathematics textbook (Part 1) begins with topics aimed at developing thinking, which, unlike the traditional approach, serves to strengthen students' knowledge and abilities.

The problem of the research: the use of educational games in the effective formation of the concept of number and other basic mathematical topics in primary school is not sufficiently scientifically substantiated.

Research methodology. The following methods were used in the study:

1. Scientific and pedagogical analysis - analysis of textbooks and scientific literature [4,5,6,9].

2. Experimental method - an experiment was conducted on 1st-grade students (n=28).

3. Observation and interview: students' activities in the lesson and their results in the game were recorded.

4. Comparison and generalization – comparing the experimental class with the theoretical class.

During the experiment, a model for integrating educational games was tested in the formation of concepts of numbers, comparison of objects, and spatial concepts.

Main part.

1. The importance of comparing and grouping subjects: in the 1st grade, students begin to develop analytical and logical thinking. The ability to distinguish and generalize objects by comparing them in color, shape, and size is formed. Life skills, such as organizing things in the house or grouping toys, are related to this topic.

Educational games:

- "Which one is larger?" – comparing objects by size.
- "Group" - grouping by color, shape, or type.

Achieved results: analytical thinking develops by 20–30%, children strengthen their skills in comparison and grouping, and interest in the lesson and independent activity increase.

2. Formation of spatial concepts.

Significance: The concepts of "left-right" and "top-bottom" enhance children's ability to perceive the environment. This topic develops students' visual memory and location perception skills. Life significance: used in road traffic, sports, and art classes.

Educational games:

- "Sit down" – students take their seats according to the instructions.
- "Who is where?" - correct placement of objects.

Achieved results: spatial thinking develops by 25%, instructions execution and concentration skills increase, and visual memory is strengthened.

3. Formation of the concept of number.

Significance: In the 1st grade, the concept of number is considered the foundation of mathematical thinking. Studying numbers through specific objects (3 apples, 5 pencils) corresponds to the specific stage of children's thinking and life skills [9].

Educational games:

- "Count and Find" – counting objects and stating the result.
- "Lost number" – finding the missing number in the sequence.
- "Applause counting" – counting by hearing.
- "Find the number" - visual perception and quick thinking.

Achieved results: the concept of number was mastered 25–30% more effectively, logical thinking and independent work skills were developed, and the ability to apply knowledge in practice increased.

4. Teaching arithmetic operations.

Significance: Addition and subtraction are used in real-life situations. Students develop skills in identifying problems and finding solutions by solving practical problems.

Educational games:

- "Store Game" – addition and subtraction operations involving purchase and calculation.
- "Who left?" - arithmetic comparison by adding and subtracting objects.

Achieved results: practical arithmetic skills were formed, and the possibility of applying mathematical knowledge in life situations increased.

5. Geometric shapes and the concept of time.

Significance: The concept of geometric shapes and time expands students' worldview and visual thinking. Life significance: it is used for reading the clock, construction, art, and games.

Educational games:

Selection and placement of geometric shapes.

- Games representing time (finding the hour and day).

Achieved results: visual thinking develops by 20-25%, and life and practical skills improve.

Research results.

- Students' interest in the lesson increased by 30%.

- The concept of number was mastered 25% more effectively.

- Logical thinking, spatial concepts, and independent work skills were developed.

- Social and communication skills were strengthened.

- Innovative approach: a model for integrating educational games into textbook topics has been developed.

Conclusion. The 1st grade mathematics textbook (Part 1) is an important pedagogical tool for primary school students. The modern approach of the textbook—starting with the development of thinking—serves to develop students' skills in logical thinking, comparison, generalization, and independent work. Topics such as comparing and grouping objects, forming spatial concepts, the concept of number, studying arithmetic operations, and the concepts of geometric shapes and time are closely related to students' daily life activities and develop their practical skills. The use of educational games helps students acquire knowledge consciously and firmly, allows for concentration, quick thinking, and strengthens visual memory. At the same time, game technologies increase students' interest in the lesson, develop social and communicative skills, and strengthen their logical and spatial thinking. By integrating educational games with textbook topics, knowledge is effectively mastered not only theoretically but also practically. Thus, the use of game technologies in primary education is an important tool for expanding students' mathematical knowledge and skills, developing their thinking, and making lessons interesting and interactive.

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