

USE OF INTERACTIVE GAMES AND DIGITAL TOOLS IN THE DEVELOPMENT OF  
ORAL COUNTING IN PRIMARY SCHOOL STUDENTS

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**Abstract.** This article extensively covers the didactic and methodological possibilities of using interactive games and digital learning tools in the process of forming and developing oral calculation skills in primary school students. Oral calculation is the main component of primary education, which plays an important role in the development of students' mathematical thinking, logical thinking, attention, memory, and quick decision-making abilities. The article analyzes the issues of increasing students' interest in learning, ensuring their activity in the lesson process, and consolidating knowledge through the introduction of game technologies into the educational process. Also, on a scientific basis, the influence of classes organized using mobile applications, interactive platforms, electronic resources, and multimedia tools on increasing the accuracy and speed of oral calculations is shown. In the course of the study, it was substantiated that the use of digital tools serves to take into account the individual characteristics of students, implement a differentiated approach, and develop independent work skills. The results of the article show that the effective use of interactive games and digital educational resources contributes to improving the quality and effectiveness of mathematics education in primary grades.

**Keywords:** primary education, oral calculation, interactive games, digital tools, digital educational resources, mathematics education, student activity, educational effectiveness, differential approach, innovative technologies.

The development of oral calculation skills in primary school mathematics education plays an important role in the conscious and thorough acquisition of mathematical knowledge by students. In the process of oral calculation, students develop skills in quickly performing arithmetic operations on numbers, predicting and verifying the result, as well as drawing conclusions based on logical thinking. High efficiency is achieved when this process is organized in accordance with the age and psychological characteristics of primary school students.

In the practice of primary education, the development of oral counting is often carried out through traditional exercises. However, tasks of the same type can cause a feeling of boredom in students. Therefore, the introduction of interactive games into the educational process is considered one of the effective ways to develop oral calculation. Game technologies, relying on the natural interest and activity of students, actively involve them in the calculation process.

In the process of developing oral calculation using interactive games, students perceive mathematical operations as an interesting and meaningful activity. For example, games related to quick calculations, comparing numbers, and tasks related to determining logical sequences increase students' thinking speed. In the process of such games, students develop skills in focusing attention, strengthening memory, and working with accuracy. Another important aspect of interactive games is their communicative nature. Through group or paired games, students have the opportunity to freely express their thoughts, listen to and evaluate the answers of their



peers. This situation increases social activity in the process of oral calculation and further strengthens students' interest in the learning process.

The use of digital tools further expands the possibilities of developing oral calculation in primary school students. With the help of modern educational technologies, it is possible to organize lessons in visual and interactive form. Through interactive whiteboards, electronic textbooks, mobile applications, and online platforms, students will be able to perform mathematical operations directly, see the result immediately, and analyze errors. Digital tools are also important in the development of students' independent work skills. Tasks performed through electronic resources help students assess their level of knowledge, identify shortcomings, and eliminate them independently. This process, along with increasing the accuracy and speed of oral calculations, forms in students the skills of responsibility and self-control.

Digital educational resources intended for primary school students should correspond to their age characteristics. Colorful design, a simple interface, and clear assignments serve to maintain students' attention for a long time. At the same time, digital tools are important because they allow students to quickly identify and correct errors in the calculation process. The use of interactive games and digital tools in the development of oral calculation allows for a differentiated approach. The effectiveness of the educational process is increased by assigning tasks corresponding to the level of knowledge and individual capabilities of each student. Strong students develop their potential by completing more complex tasks, while students with lower levels of knowledge gradually strengthen their computational skills. Also, oral calculation classes, organized using digital tools, allow the teacher to quickly and accurately assess the level of students' knowledge. By analyzing the results, the teacher can take into account the needs of students when planning subsequent lessons. This serves the continuous and effective organization of the educational process.

The use of interactive games and digital tools also develops the teacher's methodological skills. The use of modern technologies in the lesson process requires creativity, flexibility, and an innovative approach from the teacher. At the same time, when choosing educational games and digital resources, the teacher should pay special attention to their didactic significance, expediency, and correspondence to the age characteristics of students.

The game "Quickly Find" is one of the interactive games aimed at developing oral counting skills in primary school students. In this game, students are given arithmetic examples orally and are asked to find the correct answer within the given time. The game can be organized individually or in groups. The main task of the game is to increase the speed of calculation, focus, and develop logical thinking skills in students. Also, the game "Quick Find" awakens in students a spirit of competition, encourages them to be active, and creates interest in the learning process. During the game, the teacher presents a series of examples, and for each example, it is required to answer within the specified time. The student or group that answers the fastest and most correctly receives points. At the end of the game, the student or group that scored the most points is declared the winner. The "Quickly Find" game, along with the development of accuracy and speed in students' oral calculations, serves to form their communication skills, attention, and quick decision-making. At the same time, through interactive and game-rich activities, the lesson process becomes interesting and effective, and students consciously master mathematical operations.



The game "Who is quicker?" is an interactive exercise that serves to develop the skills of oral calculation in primary school students. In this game, students are given sequential arithmetic examples, and they try to answer the fastest and most correctly within the given time. The game is organized individually or in groups. At the same time, the game awakens a spirit of competition, increases student activity, and makes the lesson process interesting.

During the game, each student or group is given consecutive examples through the teacher or a digital tool. Each example requires an answer within a specified timeframe (e.g., 10-15 seconds). The student or group that answers the fastest and most correctly receives points. At the end of the game, the student or group that scored the most points is declared the winner. The game "Who is quicker?" develops in students the skills of quick thinking, accuracy, and decision-making. In addition, through interactive and competitive activities, students consciously master mathematical operations. This game is an important pedagogical tool for making the process of oral calculation interesting and effective.

The "Chain Calculus" game is an interactive exercise aimed at developing students' oral calculation skills, in which tasks are solved sequentially in the form of a chain: each student solves a new arithmetic example, relying on the answer of the previous student. Also, through games, students develop skills in listening to each other, identifying mistakes, and analyzing answers. The game process is organized as follows: the first student solves the problem and says the answer; the next student solves a new problem taking this answer into account; this process continues throughout the chain until all students participate. The teacher will be able to monitor the process, correct errors, and show the correct approach.

The game "Chain Calculation," along with strengthening students' oral calculation skills, develops cooperation and communication skills. At the same time, the game helps students focus their attention and actively use their mathematical thinking. This interactive exercise makes the lesson process interesting and effective and encourages students to consciously master mathematical operations.

The game "Find the correct answer" is an interactive exercise aimed at activating students' mathematical thinking and strengthening oral calculation skills. In it, students are given several answer options and are asked to choose the correct answer from among them. This game encourages students to be active and makes the lesson process interesting, as they analyze incorrect answer options, recognize their mistakes, and strive to find the correct answer.

The game process is organized as follows: the teacher presents the example to the students orally or digitally and gives several answer options. Students choose the correct one from the given options. The process of analyzing variants teaches them to think logically and consciously perform calculations. The "Find the Right Answer" game develops students' critical thinking skills, quick decision-making, and the ability to perform mathematical operations accurately. At the same time, through classes rich in interactive and selective elements, students, along with strengthening mathematical knowledge, are satisfied with the lesson process. This game is an important pedagogical tool for making oral counting effective and interesting.

In the game "Find a Number," students are verbally explained some properties of numbers, and they are asked to find the correct number based on the given descriptions. The main goal of the game is to develop students' logical thinking, attention, and analytical skills, as well as to



consciously perform arithmetic operations. During the game, students listen attentively to the given descriptions, take into account each characteristic, and try to determine the corresponding number.

The game is organized as follows: a description of a number is given through the teacher or a digital tool, for example: "This number is greater than 10, less than 20, and even." Students analyze the given descriptions and find the correct number. This process allows students to actively use their mathematical thinking and consciously perform calculations. The game "Find a Number" develops students' critical thinking, logical connections, and oral calculation skills. At the same time, through interactive and interesting activities, the lesson process will be effective and memorable. This game helps to consolidate students' mathematical knowledge, increase their ability to respond quickly and correctly, and increase interest in the learning process. When interactive games are organized in a digital environment, their effectiveness increases even more.

The studied literature and practical experience have shown that the integrated use of interactive games and digital tools in the process of developing oral calculation for primary school students creates an effective educational environment. These methods strengthen students' ability to consciously perform mathematical operations, activate attention and quick thinking. Interactive lessons and digital tools encourage students to communicate, exchange ideas, and evaluate results. This contributes to a deeper understanding of mathematical concepts, the development of independent thinking, and the formation of a creative approach during the lesson. The use of methodologically coordinated games and technological tools in the development of oral calculation increases the motivation of students, strengthens their ability to confidently express themselves, and as a result, makes it possible to effectively study mathematics. Therefore, interactive and digital approaches are recommended as the main means of forming oral calculation skills in primary grades.

Interactive games, in particular, such as "Who is quick?," "Chain calculation," "Find the correct answer," and "Find the number," increase students' ability to perform mathematical operations quickly and accurately. At the same time, they help students develop cooperation and communication skills, form critical thinking by analyzing mistakes and searching for the correct answer.

The use of digital tools and interactive platforms allows organizing classes individually and in groups. Electronic whiteboards, mobile applications, and visual elements enhance student concentration, make lessons more engaging, and increase student motivation. At the same time, tasks adapted to the level serve for effective development, taking into account the level of students' knowledge.

In general, the use of interactive and digital methods is considered as a modern, scientifically and practically proven approach to the development of oral calculation skills in primary grades.



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