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INNOVATIVE APPROACHES TO USING ORAL EXERCISES IN TEACHING ARITHMETIC OPERATIONS

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Abstract

This article analyzes the pedagogical and methodological aspects of using oral exercises to teach arithmetic operations to primary school students, as well as innovative approaches to this process. The study examines the role of oral exercises in developing students' logical thinking, quick response skills, and reasoning abilities, and highlights their didactic potential and practical methods of implementation.

Keywords

arithmetic operations, oral exercises, innovative method, primary education, mathematical thinking.

Introduction

Teaching arithmetic operations in primary education not only aims to develop calculation skills but also contributes to the development of students' logical thinking, attention, and quick-response abilities.

Oral exercises are a method designed to encourage students to express their calculations verbally, respond quickly, and develop logical reasoning skills. Innovative pedagogical approaches make oral exercises more interactive, engaging, and effective.

The aim of this article is to analyze the effectiveness of combining oral exercises with innovative methods in teaching arithmetic operations.

Oral Exercises and Their Pedagogical Significance

Oral exercises involve students expressing their calculations verbally, which serves several pedagogical purposes:

1. **Developing logical thinking and quickness.** Oral exercises help strengthen students' logical thinking. For example, students are required to recall arithmetic problems and provide verbal solutions. This involves the steps of problem identification → planning the solution → expressing the answer verbally. In this way, students' quick-response skills are also developed, allowing them to answer accurately and promptly.

2. **Strengthening attention and focus.** Oral exercises require students to concentrate their attention. For instance, the teacher frequently asks arithmetic questions, and students must answer in sequence. This process develops the ability to maintain focus, distinguish important information, and avoid mistakes, thereby enhancing students' concentration.

3. **Expanding mathematical vocabulary and verbal skills.** During oral exercises, students articulate mathematical terms and concepts verbally. For example, operations such as "addition," "subtraction," "multiplication," and "division" are explained in words, enriching students' speech. Simultaneously, they develop the ability to reason logically and use words accurately.

4. **Developing social and communication skills.** Group or pair oral exercises cultivate collaboration and communication skills. For example, during "solving a problem together" or "taking turns answering," students learn to:

a) Share their ideas with others,

b) Explain their reasoning,

c) Listen to others.

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These skills are important not only for mathematical knowledge but also for personal and social development.

Didactic Potential of Oral Exercises

1. **Verbal explanation of mathematical concepts**. Through oral exercises, students explain mathematical concepts in words. For example, they describe the essence of "addition" or "subtraction" verbally or explain a problem in text form. This process develops logical explanation skills, understanding of concepts, and the ability to communicate ideas to others. It also deepens comprehension and strengthens command of mathematical terminology.
2. **Reinforcement of arithmetic operations**. Oral exercises allow students to practice arithmetic operations quickly and effectively. For example, students respond verbally to questions like "5 + 3 = ?" or "12 – 7 = ?," repeating the calculation process and consolidating their skills. This method is particularly useful in primary school for efficiently reinforcing knowledge.
3. **Engaging students actively**. Oral exercises ensure students are active participants in the lesson. By taking turns answering, discussing problems in groups, or participating in competitive games, students become active learners rather than passive observers. This increases motivation, develops communication skills, and improves knowledge retention.

Innovative Approaches in Teaching Arithmetic Operations

Innovative approaches enhance students' engagement and make exercises more effective.

Interactive Methods

1. **Mathematical games:** Games like "Quick Answer" or "True or False" develop verbal calculation skills.
2. **Collaborative number games:** Group exercises improve social skills and quick-response abilities.

Multimedia Tools

Slides, images, and animations present arithmetic problems visually and are reinforced by students' verbal responses.

Project-Based and Creative Methods

a) **"Mathematical Story" Project:** Students create a short story or problem based on arithmetic operations and present it verbally.

b) **"Mathematics Diary" Project:** Students complete daily tasks and express solutions orally.

Organizing Oral Exercises

1. **Quick-response exercises**. The teacher asks questions, and students respond as quickly as possible. This develops logical thinking and attention speed.
2. **Role-playing games**. Students express calculation processes in different roles, such as "Shopkeeper and Customer" or "Bank Transactions."
3. **Group work**. Solving problems and responding verbally in groups develops teamwork and collaboration skills.

Pedagogical Impact of Oral Exercises on Students

Oral exercises contribute to:

1. **Logical thinking:** Ability to solve problems quickly and accurately.
2. **Mathematical vocabulary:** Expressing numbers, operations, and concepts verbally.
3. **Attention and focus:** Strengthened concentration through rapid responses.
4. **Social skills:** Enhanced collaboration and communication through group work.

Conclusion

Oral exercises in teaching arithmetic operations can be effectively implemented using innovative approaches. Interactive methods, multimedia tools, and project-based or creative

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methods develop students' mathematical thinking, quick-response skills, and attention. Therefore, emphasizing oral exercises in primary school arithmetic lessons is pedagogically and educationally significant.

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