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USE OF PEDAGOGICAL TECHNOLOGIES IN TEACHING STUDENTS TO NUMBER

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DOI : 10.26877/jwp.v4i2.19886

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Abstract

Numbers need to be introduced to children from an early age, so teaching numbers in elementary school is something important to implement. The aim of this research is to describe the pedagogical technique (charkhpalak method) used by teachers in teaching numbers to students in elementary schools in Uzbekistan. This type of research is descriptive qualitative where the researcher describes the research objects encountered in the field. The data collection method used was observation where the researcher made observations of teaching and learning activities in elementary schools when the teacher used the Charkhpalak method to teach numbers. The research results show that the Charkhpalak method is able to make students easily understand the material being taught. The conclusion obtained from this research is that the Charkhpalak method needs to also be applied to other learning materials because this method provides several benefits for teachers.

Keyword: Material, concentrate, abstract, charkhpalak method, brainstorming

History Article

Received 12 August 2024

Approved 26 August 2024

Published 27 August 2024

How to Cite

Bozorov, M, N. (2024). Use Of Pedagogical Technologies In Teaching Students To Number. *Jurnal Wawasan Pendidikan*, 4(2), 549-553.

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INTRODUCTION

This research examines the teaching of numbers in elementary schools in Uzbekistan. In teaching numbers, teachers use the Charkhpalak method, which is a method that is often used to teach traditional material to students (Akromovna, 2023; Odilovna, 2024; Qulmatovna, 2024; Sarvinoz, 2022; Sheraliyev, 2024). The syntax of the charkhpalak method is as follows: (1) Hands-On Practice: Learners engage directly with the material or activity. For example, if learning a craft, they would actively create items rather than just studying the theory behind them. (2) Incremental Learning: The method emphasizes starting with simpler tasks and gradually moving to more complex ones. This helps build foundational skills before tackling advanced concepts. (3) Guided Instruction: An instructor provides ongoing guidance and feedback, helping learners refine their techniques and understanding. (4) Repetition and Mastery: Repeated practice is encouraged to achieve proficiency. Learners repeatedly perform tasks until they achieve a desired level of skill. (5) Integration of Knowledge: The method integrates both practical skills and theoretical knowledge, ensuring that learners understand the principles behind their actions.

This approach is especially effective for skills that benefit from muscle memory and hands-on experience, such as crafting, cooking, or certain types of problem-solving activities. This research aims to examine the methods of using pedagogical technologies (charkhpalak method) in teaching students to number numbers. The researcher conducts his research in elementary school in Uzbekistan.

METHOD

This research is qualitative descriptive research where the researcher describes the conditions encountered in the field into a scientific report. The data collection method used was observation. The researcher observed the learning process in several elementary schools in Uzbekistan. Observations were carried out from January 2024 to July 2024. To support the research, researchers discussed several literature reviews as supporting material. In this research, the researcher discusses the literatures about the material on numbering and arithmetic operations for elementary school students. In the literatures about methods of gradual formation of skills for elementary school students using various methods are also studied and analyzed. In this research, using these concepts, the methods of using pedagogical technologies in teaching students to numbers are studied.

DISCUSSION AND RESULTS

Result

In the primary class, the material on numbering and arithmetic operations is studied in groups. A total of five concentrations are provided: tens, second tens, hundreds, thousands, multi-digit numbers (in elementary school - in millions). In this article, using the “Brainstorming” method, the methods of teaching elementary school students to numbering are studied using various methods.

Each concentration is systematic according to its content. reflects the main issues of the course of arithmetic, therefore, students, while studying the numbering of numbers within

certain limits and operations on these numbers, form an idea about the essence of arithmetic in general. Repeated reference to numbering and performing operations based on new numerical material every time allows to deepen and expand the content of the most important arithmetical concepts. In addition, the gradual formation of solid learning and skills (counting, measurements, oral and written numbering, calculations, etc.) is ensured, as the methods of performing these actions, while maintaining generality, gradually become more complex (Abdullayeva, 2010).

Thus, the study of numbering and arithmetic operations in each previous concentration is considered a preparatory work for the future study of the corresponding issues, and in each subsequent concentration the previously learned material is summarized and strengthened. There is a lot in common in the content, sequence and learning method of the material of all the centers, which allows for the formation of general methods of working in a certain method of teaching, develops students' intelligence and independent thinking. At the same time, each concentration has its own characteristic, which is the basis for distinguishing it. On the one hand, this is due to the properties of the arithmetic material. For example, numbering numbers within 10 is different from numbering numbers greater than ten: the methods of verbal counting have their own aspects compared to the methods of performing calculations on multi-digit numbers (Akhmedov, 2023).

On the other hand, the uniqueness of the goals and tasks of teaching at some stages of the work is the reason for the separation of concentrations. For example, the cases of adding and multiplying single-digit numbers (tables) are memorized differently from all other cases (in other cases), calculations are performed using tables, and the results are not memorized. The concentric structure of the elementary arithmetic course corresponds to the psychological characteristics of elementary school students: initial introduction to counting, measuring, and arithmetic operations using sets of objects. It is necessary to perform in the example of small numbers that can be displayed (Abdullayeva, 2011). Gradually expanding the number field is also adapted to the development of students' thinking by moving from visual to abstract actions (Bikboyeva, 1996).

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“Brainstorming” is the most effective way to solve a problem by gathering free ideas and opinions expressed by individuals or groups and arriving at a certain solution through them. When it is used correctly and creatively, it teaches a person to think freely, creatively and non-standardly. Ways to solve various problems are sought with the help of “brainstorming”. This method allows you to quickly collect and summarize the opinion of each member of the group. “Brainstorming” can also be used when students do not have enough information about the problem (Abdullayeva, 2009).

When using the “brainstorming” method, the exercise usually consists of two stages: the first stage - the proposal stage (the “brainstorming” itself) and the second stage - the stage

of analysis and sorting out solutions. It is advisable to give a small break between stages during brainstorming (Azixhodjayeva, 2003). When the teacher works in small groups, he has the right to actively participate in the lesson, to be in the role of leader, to learn from each other and to appreciate different points of view (Abdullayeva, 2011).

Steps of working in small groups and recommendations for its organization: (1) Divide into groups. Students are divided into groups of 5-7 people. (2) Clarify the direction of activity of each group. Each group is given a clear problem. (3) Provision of necessary materials and sources of information. (4) Support. The work process in groups is supported and monitored in every way. (5) Presentation. The group's problem-solving presentations are listened to. (6) Evaluation. The work of the groups is interpreted, evaluated and concluded (Abdullayeva, 2009).

DISCUSSION.

It is necessary to follow the following instructions for conducting the debate: 1. The topic of the debate is chosen; 2. The procedure for conducting the debate is agreed upon; any student can participate in the discussion; 3. Different opinions of students are heard in turn. At this stage, compliance with the discussion procedure is strictly controlled. Each idea is briefly recorded on the board; 4. Thoughts are sorted, interpreted and summarized (Jumayev, 2006).

"CHARPALAK" method. With the help of this method, students will acquire independent knowledge of the new material to be studied, acquire the skills to work with a team, exchange information and make decisions as a team. The method consists of the following steps: (1) students are divided into groups of 6 people; (2) separate assignments are given to each group; (3) each group is provided with necessary materials to complete the task; (4) Group work is organized for 15-20 minutes, (5) students learn new material independently; (6) the activity of each group is monitored, questions are answered when necessary; (7) each member of the group records the solution of their assignment separately; (8) at the next stage, each group member is assigned serial numbers from 1 to 6, and new groups are formed from students with the same serial numbers; (9) work in new groups is organized for 15-20 minutes; each member of the new group explains his topic to others. As a result, overall mastering of the general topic is ensured; (10) at the end of the lesson, a comprehensive test is conducted on all independently studied materials to check and evaluate students' knowledge (Abdullayeva, 2009).

CONCLUSION

The concentric structure of the elementary arithmetic course is suitable for the psychological characteristics of elementary school students. In this article, effective methods of teaching numbering to elementary school students are studied using methods learned from various literature. To sum up, it is very important to teach primary school students to count numbers in learning nature, developing their intelligence and independent thinking. In this article, the methods of using pedagogical technologies in teaching students to number numbers using objects from nature are studied.

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