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INTERACTIVE METHODS USED IN MATHEMATICS LESSONS IN PRIMARY CLASSES

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Abstract: This article is intended to teach methods and their variations, each with its own characteristics.

Keywords: Method, interactive, active, passive, social, goal, lesson, learning.

1. Types of Activity.

2. Types of Methods.

Interactive learning is a dialogical communication between the teacher and the student, during which interaction takes place between them. The teacher uses various means and methods to lead children to conscious activity. For this purpose, individual, paired, and group work is organized during lessons, involving working with documents and various sources of information, and using interactive educational resources. The teacher's role in interactive lessons is directed towards guiding students to achieve the lesson's objectives.

Interactive teaching methods in primary school can be used to educate younger students starting from the first grade. This will make the learning process more meaningful, logically structured, emotionally positive, and consequently more effective.

It's worth noting that the term "interactive" has English roots: "inter" means "mutual," and "act" means to act. The term interactivity is understood as the ability to interact or be in a conversation or dialogue with something (such as a computer) or someone (a person). Therefore, interactive learning is education based on the interaction of the learner with the educational environment, the learning environment that serves as the area of acquired experience.

Importantly, in genuine interactive learning, participants interact with both the physical and social environment, as well as with the content being studied. All three types of activities are interconnected, diverse, and present in the lesson by necessity. Let's name them:

- Physical: changing workspaces, rearranging seats; speaking, writing, listening, drawing, etc.

- Social: asking questions, answering questions, exchanging opinions, etc.

- Cognitive: contributing additions and corrections to the teacher's presentation, finding solutions to problems, acting as a source of professional experience, etc.

Thus, interactive learning is education immersed in communication. It maintains the ultimate goal and core content of the subject but modifies the forms and techniques of conducting the lesson.

In education, three main forms of teacher-student interaction have emerged, solidified, and gained widespread use:

1. Passive methods

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2. Active methods

3. Interactive methods

Each of them has its own characteristics.

Passive Method:

The passive method is a form of interaction between the teacher and the student in which the teacher is the main actor and controller of the lesson, and the students are passive listeners, following the teacher's directives. The teacher's connection with students in passive lessons occurs through surveys, independent work, quizzes, tests, etc. From the perspective of modern pedagogical techniques and the effectiveness of students' mastery of the material, the passive method is less effective. Nonetheless, it has certain advantages. It requires relatively light preparation from the teacher's side and allows presenting a relatively large amount of study material within the limited time frame of the lesson.

Active Method:

The active method is a form of interaction between students and the teacher in which they engage with each other during the lesson. Here, students are not passive listeners but active participants; both students and the teacher have equal rights. If passive methods imply an authoritarian style of interaction, active methods are more democratic. Many consider active and interactive methods as essentially equivalent. However, despite their commonality, they have differences. Interactive methods can be seen as a more modern form of active methods.

Interactive Method:

The interactive method, unlike active methods, is oriented towards broader interaction among students, not only with the teacher but also with each other. It emphasizes the dominance of students' activity in the learning process. The teacher's role in interactive lessons is to guide students towards achieving the lesson's objectives. The teacher also designs the lesson plan, often including interactive exercises and assignments that allow students to study the material while completing them.

Interactive learning is a specific form of organizing cognitive activity. It involves well-defined and predictable goals. The goal is to create comfortable learning conditions where the student feels successful and intellectually competent, making the learning process itself productive. It aims to provide knowledge and skills while also creating a foundation for problem-solving after the learning process concludes.

In other words, interactive learning is primarily dialogical learning, during which interaction occurs between the student and the teacher, as well as among the students themselves.

The objectives of interactive teaching methods are:

- Stimulating students' interest

- Effective assimilation of study material

- Independent exploration by students of various paths and solutions to given educational tasks (choosing from proposed options or finding their own solutions and justifications)

- Establishing interaction among students, teaching them to work in teams, display tolerance toward different viewpoints, respect everyone's freedom of speech, and appreciate each other's merits

- Shaping students' opinions and attitudes

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- Developing life and professional skills

Principles of working in an interactive session:

- The session is not a lecture but collaborative work.

- All participants are equal, regardless of age, social status, experience, or workplace.

- Each participant has the right to their opinion on any question.

- Direct criticism of personalities is avoided (only ideas can be criticized).

- Everything said in the session is not a directive but information for reflection.

When used appropriately, computer technologies facilitate an active dialogue between the teacher and the student through demonstrations and assessments. It's important that the teacher doesn't feel like an "appendage" to such activities; instead, technology should be an instrument for the teacher.

For students, the focus is on active participation at every stage rather than passive material reception.

Here's an example of using interactive technology in a math lesson:

- Enables interactive interaction

- Activates student actions (not just listening and watching; they have to answer questions posed during demonstrations)

- Provides an opportunity to evaluate each student's actions, offering hints and the chance to retry in case of incorrect answers

- Facilitates collaborative and independent work during lessons

- Allows the teacher to individually monitor and guide students' work, correcting and assisting collectively or individually

- Supports the implementation of an activity-based approach to learning

Let's provide an example of a lesson—student mutual learning in the form of the game "Mathematical Banker." The class is divided into teams (preferably two students each), each representing a bank (with a bank president and deputy president). Cards with tasks are placed face down on the table, each card having a value ranging from 50 to 300 fictional units based on task complexity. These represent potential deposits, investments, etc. Each bank starts with a capital of 500 fictional units. By selecting a task card and solving it, a bank can increase its capital by the specified amount if the task is solved correctly or incur losses if the solution is incorrect. The game continues over one or two lessons, and at the end, capital scores are calculated.

This game can be used to practice problem-solving skills for a specific topic. It allows students to work at their own pace and select tasks of varying difficulty levels for that topic.

The implementation of interactive approaches to content education is based on developing and using interactive tasks and exercises that students engage with. The main distinction between interactive exercises and ordinary ones is that the former are directed not only at reinforcing already learned material but also at learning new material.

This is why each interactive task is a creative educational task that demands not simple information reproduction but contains an element of uncertainty and typically has several approaches.

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Here's an example of tasks related to the topic "Trigonometric Equations." In initial lessons on solving trigonometric equations, textbooks provide exercises to practice equation root formulas. We add questions to these equations:

- Select roots that belong to a given interval

- Choose roots that satisfy a given condition

Students must apply previously learned material on the properties of trigonometric functions.

The positive aspects of using interactive teaching methods are as follows:

When employing interactive methods, the role of the teacher undergoes a significant change. It no longer remains central; instead, the teacher regulates the process and is involved in its overall organization. They prepare necessary tasks in advance, formulate questions or topics for discussion in groups, provide consultations, and oversee the timing and order of the planned agenda.

Psychologists have found that within the context of educational interaction, there is an increase in the accuracy of perception, an enhancement in memory performance, and more intensive development of intellectual and emotional traits within individuals. These traits include sustained attention, the ability to allocate attention, perceptiveness during perception, and the capability to analyze a partner's actions, discerning their motives and goals. Interactive learning not only aids a child's education but also facilitates their way of living. Thus, interactive learning is undoubtedly an interesting, creative, and promising direction in our pedagogical practices.

Drawing from the aforementioned, the creed of interactive learning can be formulated by slightly altering the words of the great Chinese educator, Confucius:

- What I hear, I forget.

- What I see and hear, I remember a little.

- What I hear, see, and discuss, I begin to understand.

- When I hear, see, discuss, and do, I acquire knowledge and skills.

- When I pass on knowledge to others, I become a master.

Most importantly, the focus should be on teaching rather than merely conveying information (even though this method is simpler, more accessible, and faster). And this can be achieved only through active (interactive) learning.

References Used:

1. Xursanova Zilola Mirzaxolmatovna, (2023/02) "Pedagogical Opportunities for Developing Logical Thinking in Elementary School Students." FAN, Integration of Science, Education, and Practice: 02, 94-98.
2. Xursanova, Z. (2023). "Theoretical Foundations for Developing Logical Thinking in Elementary School Students." Academic Research in Modern Science, 2(14), 84-87.
3. Gafurova, M. A., & Xursanova, Z. M. (2023). "Modern Approaches to Teaching Mathematics in Primary School." International Journal of Advanced Research in Education, Technology, and Management, 2(4).

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4. Xursanova, Z. (2023). "Developing Logical Thinking in Elementary School Students during the Process of Teaching Mathematics." Pedagogy and Psychology in the Modern World: Theoretical and Practical Research, 2(8), 18-21.
5. Mirzaxolmatova, X. Z. (2023). "Current Views on Logic and Scientists Today." World of Science: Journal on Modern Research Methodologies, 2(4), 71-73.
6. Mirzaxolmatovna, X. Z. (2023). "Strategies for Organizing Activities of Intellectually Advanced Students in Developing Logical Thinking." World of Science: Journal on Modern Research Methodologies, 2(6), 56-58.
7. Xursanova, Z., & Kasimova, N. (2023). "The Development of Logical Thinking in Children in Chinese Countries." Modern Science and Research, 2(5), 875-879.
8. Mirzaxolmatovna, X. Z. (2023). "Strategies for Organizing Activities of Intellectually Advanced Students in Developing Logical Thinking." World of Science: Journal on Modern Research Methodologies, 2(6), 56-58.
9. Mirzaxolmatovna, X. Z., Nematovna, R. S., & Shavkatovna, S. R. (2022). "Forms of Thinking in the Process of Studying Mathematics." European International Journal of Multidisciplinary Research and Management Studies, 2(12), 259-263.
10. Mahpuza, A., Rahmatjonzoda, A., & Zilola, X. (2022). "Primary School Students' Attitudes Toward Mathematics." European International Journal of Multidisciplinary Research and Management Studies, 2(11), 208-212.
11. Adkhamjanovna, K. M., Mirzakholmatovna, K. Z., & Raxmonberdiyevna, T. S. kizi, M. MB. (2022). "Enhancing Interest in Lessons through Extracurricular Activities." Spanish Journal of Innovation and Integrity, 6, 256-261.
12. KHursanova Z.M. "Key Concepts for Developing Logical Thinking in Elementary School Students." Conference of England Science and Pedagogy in the Modern World: Problems and Solutions, Vol. 1, Issue 6, July 16, 2023, 88-93.
13. KHursanova Z.M. "Developing Logical Thinking in Elementary School Students." AMERICAN Journal of Language, Literacy and Learning in STEM Education, Volume 01, Issue 06, 2023, ISSN (E): 2993-2769, 13-15.
14. (Remaining references are not provided due to space limitations.)
15. Gafurova, M. A. (2022). "Methods and Forms of Organizing Students' Activities in Mathematics Lessons in Elementary School." Scientific Impulse, 1(5), 598-602.

16. MA Gafurova, ZI Muhammadiyeva. "Scientific Research in Elementary Mathematics Classes Using Methods." - Texas Journal of Multidisciplinary Studies, April 26, 2023.

17. Mahfuza Gafurova, Yodgoroy Mamatova. "Necessity of Teaching Information Security and Cyber-Security in Primary Education." Central Asian Journal of Mathematical Theory and Computer Sciences, June 13, 2023.

18. KHursanova Z.M. "Fundamental Concepts of Developing Logical Thinking in Elementary School Students." Conference of England Science and Pedagogy in the Modern World: Problems and Solutions, Vol. 1, Issue 6, July 16, 2023, pp. 88-93.

19. KHursanova Z.M. "Developing Logical Thinking in Primary School Students." AMERICAN Journal of Language, Literacy and Learning in STEM Education, Volume 01, Issue 06, 2023, ISSN (E): 2993-2769, pp. 13-15.