

**PEDAGOGICAL CONDITIONS OF FORMING LOGICAL THINKING ABILITY OF
PRIMARY CLASS STUDENTS**

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Annotation: This paper examines the pedagogical conditions necessary for the formation of logical thinking abilities in primary school students. It explores how well-structured educational environments, appropriate teaching methods, and the use of logical reasoning tasks can enhance students' cognitive development at an early age. The research focuses on the role of interactive learning activities, the integration of problem-solving exercises, and the importance of creating a supportive and stimulating classroom atmosphere. Additionally, it highlights the importance of teachers' pedagogical skills in fostering critical thinking and reasoning abilities in young learners. The study concludes that a combination of these pedagogical strategies significantly improves students' ability to think logically and solve problems effectively.

Keywords: logical thinking ability, primary school students, pedagogical conditions, cognitive development, interactive learning, problem-solve, critical thinking, classroom environment, teacher pedagogy, early education.

Introduction

The development of logical thinking in primary school students is a crucial aspect of their cognitive growth. Logical thinking enables students to reason, make connections between concepts, and solve problems systematically. Early introduction to logical reasoning helps children build a foundation for critical thinking, which they will need throughout their academic and personal lives. The formation of logical thinking in primary school children requires intentional pedagogical strategies. This article explores the key pedagogical conditions that foster the development of logical thinking in primary class students.

1. Creating a Thought-Provoking Learning Environment

One of the fundamental conditions for developing logical thinking is to create an intellectually stimulating classroom environment. This environment should encourage curiosity, questioning, and deep thinking. Teachers need to pose open-ended questions and allow time for students to think through their answers. Activities like group discussions, debates, and inquiry-based learning help cultivate a culture where students feel comfortable exploring ideas and testing their understanding.

Additionally, fostering an environment where mistakes are viewed as learning opportunities promotes a growth mindset. When students understand that logical reasoning is a process that involves trial and error, they are more likely to engage fully in problem-solving tasks without fear of failure.

2. Incorporating Logical Exercises and Problem-Solving Tasks

To enhance logical thinking, educators must incorporate exercises that challenge students to apply reasoning skills. These activities should be varied and gradually increase in complexity. For example, puzzles, classification tasks, pattern recognition exercises, and mathematical problems are effective ways to build logical thinking skills. Logical reasoning tasks can also be integrated across different subjects, such as science experiments, which require students to form hypotheses, test them, and draw conclusions based on evidence.

In mathematics, particularly, logical thinking is central. Teachers should focus on helping students understand not only the "how" but also the "why" behind mathematical operations.

Encouraging students to explain their reasoning when solving problems fosters a deeper understanding and enhances their ability to think logically.

3. Developing Cognitive Skills Through Game-Based Learning

Game-based learning is another effective pedagogical tool for developing logical thinking in young learners. Games that involve strategy, pattern recognition, and decision-making, such as chess, checkers, or logic puzzles, help children practice critical thinking in a fun and engaging way. Through these activities, students learn to plan ahead, analyze possibilities, and make connections, all of which are essential components of logical reasoning.

Furthermore, digital educational games can also be leveraged to strengthen students' logical thinking abilities. These games often require students to solve problems, follow sequences, and use deductive reasoning to advance through levels, providing both a motivational and educational experience.

4. Encouraging Active Participation and Collaborative Learning

Collaborative learning fosters a deeper engagement with logical thinking as students work together to solve problems or complete tasks. When students participate in group activities, they are exposed to different ways of thinking and can observe how their peers approach problem-solving. This interaction not only strengthens their reasoning abilities but also encourages communication and teamwork.

Teachers should promote active participation by encouraging students to explain their thought processes to one another. Peer-to-peer learning and discussion help reinforce logical thinking as students articulate their reasoning, challenge assumptions, and consider alternative perspectives.

5. Integration of Logical Thinking Across the Curriculum

Logical thinking should not be confined to one subject; it must be integrated across the curriculum. In language arts, for example, students can engage in activities that require them to infer meaning from texts, identify cause and effect relationships, and compare and contrast characters or events. In social studies, students can examine historical events to identify patterns or use logic to determine the consequences of certain decisions. By incorporating logical thinking into multiple subjects, teachers can help students see the interconnectedness of their learning, reinforcing the importance of reasoning and problem-solving in all areas of life.

6. Providing Continuous Feedback and Encouragement

Continuous feedback is essential in helping students develop logical thinking skills. Teachers should offer constructive feedback that guides students toward the correct reasoning process, rather than simply providing the correct answer. Praise for effort and creative problem-solving approaches can encourage students to persist, even when tasks are challenging.

Students should also be given opportunities for self-assessment and reflection, allowing them to evaluate their own thought processes. This reflective practice helps students become more aware of their reasoning patterns and areas that need improvement.

Conclusion

The formation of logical thinking ability in primary class students is a multi-faceted process that requires intentional pedagogical strategies. By creating a stimulating learning environment, incorporating problem-solving tasks, using game-based learning, encouraging collaboration, integrating logical thinking across the curriculum, and providing continuous feedback, educators can foster the development of strong reasoning skills in their students. Early mastery of logical thinking not only enhances academic achievement but also equips students with the critical thinking tools they need for future success.

Used sources and literature:

1. Shavkatjonovna T. N. A Creative Approach to Teaching Geometry in the Primary Grades // International Journal on Orange Technologies. – 2021. – T. 3. – №. 9. – C. 48-53.

2. Ziyaqulova M., Ashurova S., Toshpulatova N.
BOSHLANG'ICHSINFO'QUVCHILARINING AQLIY SALOHİYATINI
HAMDAKREATIVLIGINIOSHIRISHDA MENTAL ARIFMETIKANING O'RNI
//Development and innovationsinscience. – 2023. – T. 2. – №. 3. – C. 92-98.
3. Niyohon T. THE WORLD OF SCIENCE IN
PRIMARYCLASSSTUDENTSIMPROVING THE INTERDISCIPLINARY FORMATION OF
VIEW//International Journalof Pedagogics. – 2023. – T. 3. – №. 05. – C. 113-120.
4. Toshpulatova N., Almanova D. THE CONTENT AND TASKS OFTEACHINGMOTHER
TONGUE AND READING LITERACY TO PRIMARYSCHOOLSTUDENTS
5. Marufjonova R. L. RESEARCH ACTIVITIES IN PRESCHOOL CHILDREN
//Экономика и социум. – 2021. – №. 12-1 (91). – C. 341-344.
6. Marufjonova R. METHODOLOGY FOR DEVELOPMENT OF RESEARCH ACTIVITY
IN CHILDREN OF PRESCHOOL AGE (6-7 YEARS OLD) //Academia Repository. – 2023. – T.
4. – №. 11. – C. 32-38.
7. qizi Ma'rufjonova R. L. SOCIAL PSYCHOLOGICAL ASPECTS OF DEVELOPMENT
OF RESEARCH ACTIVITY IN PRESCHOOL CHILDREN //World of Scientific news in
Science. – 2023. – T. 1. – №. 1. – C. 38-47.
8. Rahila M. BUILDING STUDENTS'SCIENTIFIC RESEARCH SKILLS BASED ON
THE VITAGEN APPROACH //Academia Repository. – 2024. – T. 5. – №. 2. – C. 136-141.
9. Choriyeвна C. S. Ways to Develop Mental Abilities in Preschool Children //Eurasian
Journal of Learning and Academic Teaching. – 2022. – T. 15. – C. 174-177.
10. Choriyeва S. C. TALABALARNI TA'LIMIY QADRIYATLAR ASOSIDA
PEDAGOGIK FAOLIYATGA TAYYORLASHNI RIVOJLANTIRISH TIZIMI //Educational
Research in Universal Sciences. – 2023. – T. 2. – №. 4 SPECIAL. – C. 1177-1181.
11. Choriyeвна C. S. et al. A MODEL FOR IMPROVING THE SYSTEM OF PREPARING
STUDENTS FOR PEDAGOGICAL ACTIVITY ON THE BASE OF EDUCATIONAL
VALUES //Multidisciplinary Journal of Science and Technology. – 2023. – T. 3. – №. 6
(INTERNATIONAL SCIENTIFIC RESEARCHER). – C. 283-285.
12. Choriyeвна C. S. Main Directions of Teacher Training and Improving Their Quality for
the Preschool Education System //Vital Annex: International Journal of Novel Research in
Advanced Sciences. – 2022. – T. 1. – №. 5. – C. 51-54.
13. Чориева С. Ч., Шамсиддинова Д. Б. Приоритеты Системы Образования В
Республике Узбекистан //International Journal of Formal Education. – 2023. – T. 2. – №. 11. –
C. 240-245.