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Pedagogical Conditions for Developing the Ability of Logical Thinking in Primary School Children

Durdona Toshpulatova

Doctor of Philosophy (PhD) in Pedagogical Sciences, Tashkent State Pedagogical University named after Nizami, Uzbekistan

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*Correspondence: Durdona Toshpulatova
Email: d_toshpulatova@gmail.com

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Abstract: The integration of our country into the world community, the development of science and technology require the young generation to be competitive in the changing world. It is ensured by implementing international experience and models in teaching mother tongue and reading literacy as well as natural sciences. This article discusses the concept of pedagogical conditions for developing the ability of logical thinking in primary school children.

Keywords: Logical Thinking, Abstract Concept, Form, Content, Plot, Interesting, Educational, Practical, Simple, Understandable.

Introduction

There are different views on the organization of the pedagogical process in primary education. When organizing the pedagogical process in primary education, the following criteria are clearly defined by leading scientists and practitioners:

- Elementary school primary school children' logical thinking development is successfully facilitated by the use of generalised methods;
- Elementary school primary school children encounter challenges when learning abstract concepts related to logical thinking development.

It is well recognised that basic education fosters mental development, attention span improvement, a person's will and resolve to accomplish the desired (created) objective, algorithmic order and discipline, and above all-broadened thinking (Belousova, 2021). While learning the exact laws governing the occurrences and phenomena around us is crucial to understanding the world, elementary education is the cornerstone of that discovery (Julianto, 2021). Without a mathematical foundation, the advancement of science and industry is unthinkable. For this reason, it is computed what makes up the universal culture (Gualdrón-Ortiz, 2020).

Methodology

The primary objective of teaching primary education subjects in general secondary education is to develop mathematical knowledge and skills that primary school children can use in their daily lives, study topics, and pursue further education; to develop into a person who can successfully work in a society that is rapidly developing and who can reason critically, logically, and clearly; It includes appreciating one's spiritual, national, and cultural heritage; conserving and wisely using natural resources; and promoting mathematics education as a part of global civilisation.

Primary education teachers' primary responsibilities in general education settings are:

- To impart to children an understanding of mathematical forms, properties, procedures, and algorithms;
- To comprehend the value of elementary education in fostering personal growth, community development, social-economic interactions, and the successful application of mathematics knowledge and abilities in daily life;
- To develop primary school children' unique qualities and their capacity for independent study;
- To incorporate the integration of the sciences, national and international values, the growth of creativity, and the guidance of children in selecting a career (Toshpulatova, 2017).

To some extent, abandoning the approach based on theoretical teaching of elementary education subjects, providing primary school children with ready-made educational materials, developing and developing primary school children' ability to apply mathematical knowledge in everyday life, it is necessary to pay more attention to the manifestation and activation of primary school children' independent thinking skills. Based on the research findings, the content, evaluation criteria, and processes of worldwide evaluation programs for the teaching of primary school subjects, tailored to local conditions, will be appropriate for the purpose (Ristiana, 2020a).

The integrated acquisition by primary school children of multiple skills that enable them to behave effectively in everyday life circumstances, such as natural science and mother tongue, is implied by an integrative approach to mathematics education (Galperin, 2003). As a result, the integrated method concentrates on developing the practical, applied directions while maintaining the fundamentals of mathematical education (Tleuberlinova, 2024).

As the previous points out, these techniques form the basis of this educational program. To prevent instructors from following a set pattern while implementing the curriculum, departments alone are responsible for allocating the hours (Pavlova, 2021). The minister has recommended a model theme calendar that breaks down the hours by topics and classes. Nonetheless, educators are allowed to use their creativity when it comes to assigning hours for each class independently, accounting for a variety of criteria. It is advised to study the subject matter more thoroughly throughout the allotted hours. The

teachers plan the working thematic calendar, which is then authorised by the educational institution's pedagogical council (Kenesbekova, 2019).

Practical exercises are included in scientific curriculum to help primary school children enhance their logical thinking skills and increase their enthusiasm in learning general education subjects through small educational research projects. This condition not only improves the degree of mastery of a given academic subject, but it also provides opportunities for inter-discipline and subject linkage with everyday life, hence increasing educational effectiveness (Nadehina, 2021). The curriculum also involves hours of work on faults following each inspection. In the lesson on working on mistakes, the teacher explains the mistakes in order to close the gaps discovered in the primary school children based on the results of the control work, and the primary school children complete activities comparable to those given in the control work and make conclusions (Tsankov, 2021).

There are designated repetition periods at the end of each session. These periods might be integrated, utilised for additional chapter study, or just for repetition. We have used an integrated strategy to execute the development of logical thinking abilities in elementary school children, drawing on both theoretical and practical experiences to solve the problem of logical thinking development in children. It should be mentioned that the suggested systematisation, cognitive, and communicative problems are also employed as a diagnostic instrument for elementary school children' logical thinking proficiency (Kusainova, 2021).

Result and Discussion

Primary school children were given practical and creative tasks and exercises that encouraged the development of logical thinking (Ruziyeva, 2020). These were based on an integrative approach and covered the areas of reading, natural science, and mother tongue.

The training tasks should:

1) Be engaging (in terms of structure, substance, narrative, etc.);
2) Vary in complexity and offer several approaches to solving the problem (and possible solutions);
3) Selecting engaging, instructive, useful, and multidisciplinary content is essential;
4) Be expressed such that obtaining the required knowledge is a prerequisite for executing them;
5) Be easy to comprehend, straightforward, and accessible to the majority of elementary school children (Toshpulatova, 2019).

In light of the aforementioned, the logical reasoning question set is organised as follows:

- Elementary school children' behaviour in connection to their environment is intimately linked to their level of intellectual engagement.
- Initially, traditional education frequently fails not because children are incapable, but rather because they are unable to express their emotions.
- Second, rather than starting with hands-on activities, education frequently starts with verbal explanations (Abdullaeva, 2017).

It is necessary to create favorable conditions for the development of primary school children' logical thinking (Liang, 2023). The following factors influence the development of primary school children' logical thinking: (Figure 1)

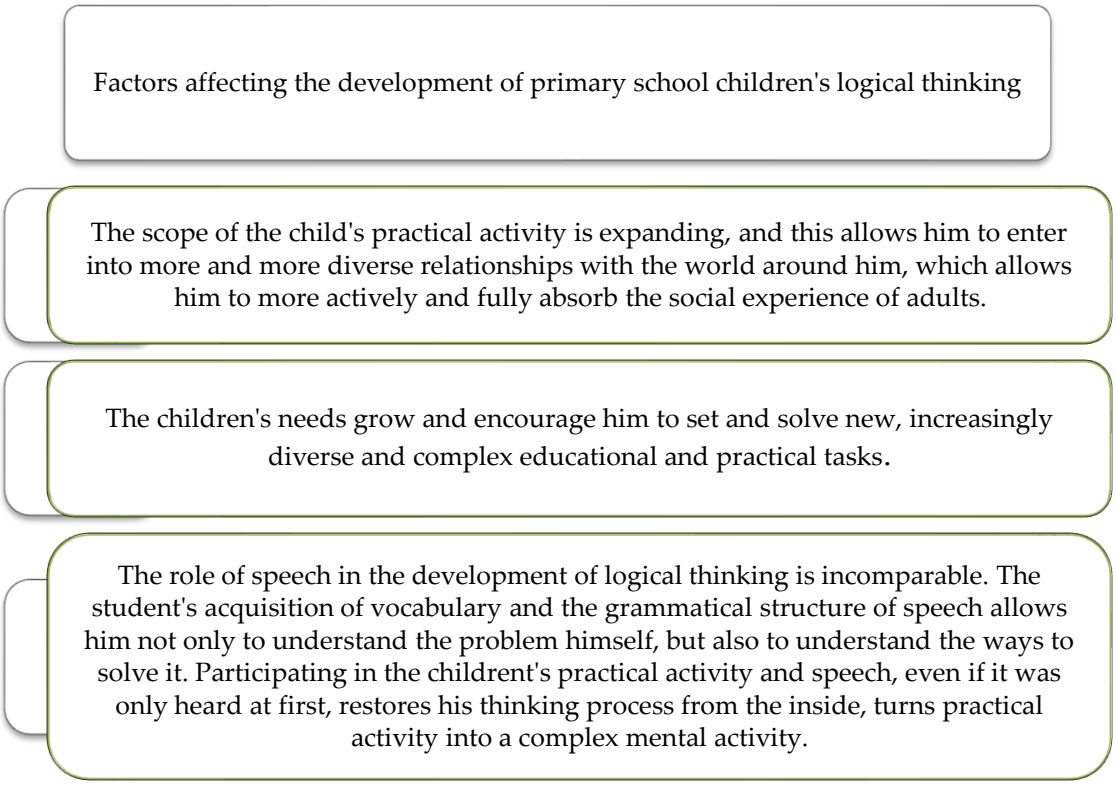

Figure 1. Factors affecting the development of primary school children' logical thinking

Pedagogical conditions for the developing logical thinking abilities in primary school children using an integrative approach comprise a specific pedagogical procedure that consists of the following steps (Ristiana, 2020b).

Conclusion

Pedagogical circumstances for developing logical thinking abilities in primary school children were implemented in the context of learning primary education subjects, mother tongue and reading literacy, and natural sciences both in the classroom and beyond class which open up new opportunities for primary school children to strengthen their logical thinking skills (Moschella, 2020).

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