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G.O. Mugauina[1], L.E. Koishigulova[1], B.M. Zhaparova[2], G.S. Ayapbergenova[2], A.E. Mukhametkairov[2]*

[1]Kh. Dosmukhamedov Atyrau University, Atyrau, Kazakhstan
[2]Pavlodar Pedagogical University named after Alkey Margulan, Pavlodar, Kazakhstan

PSYCHOLOGICAL ASPECTS OF DEVELOPMENT OF ANALYTICAL THINKING IN JUNIOR SCHOOLCHILDREN

Abstract

The development of analytical thinking in junior schoolchildren plays a crucial role in their cognitive growth and academic success. This study investigates the psychological aspects affecting the development of analytical thinking at the primary school level, focusing on the cognitive challenges, age-related characteristics, and the individual differences that shape a child's ability to think analytically. The study aims to identify key psychological factors that influence analytical thinking and provide recommendations for enhancing the educational practices to support this development. A combination of research methods was used, including literature analysis, surveys, and interviews with teachers and parents, alongside a controlled psychological experiment.

The results of the study revealed several important findings. First, the initial level of analytical thinking in young schoolchildren was found to be relatively low, with significant difficulties in areas such as logical reasoning, analysis, and information synthesis. Psychological factors such as attention span, memory, and self-control were identified as key challenges. The study also highlighted the lack of specialized methods for fostering analytical thinking in the current educational practices. However, the experimental implementation of a targeted educational program showed a marked improvement in students' analytical thinking abilities. The experimental group demonstrated a significant increase in both high and moderate levels of analytical skills, accompanied by a reduction in the number of students exhibiting low levels of thinking abilities.

The practical significance of this study lies in its contribution to improving teaching methods for developing analytical thinking skills in younger students. The findings support the need for a more structured and interactive approach to teaching, integrating critical thinking exercises and modern educational technologies. It is recommended that schools focus on enhancing cognitive skills such as memory and attention, incorporate more interactive and game-based learning methods, and involve parents in the educational process. These strategies will ensure that students develop stronger analytical skills, which are essential for their academic performance and long-term cognitive development.

Keywords: analytical thinking, psychological features, junior schoolchildren, teachers, parents, thinking development program

Г.О. Мугауина[1], Л.Е. Койшигулова[1], Б.М. Жапарова[2],
Г.С. Аяпбергенова[2], А.Е. Мухаметкаиров[2]*

[1]Х. Досмұхамедов атындағы Атырау университеті, Атырау, Казахстан
[2]Әлкей Марғұлан атындағы Павлодар педагогикалық университеті, Павлодар, Қазақстан

БАСТАУЫШ МЕКТЕП ОҚУШЫЛАРЫНЫҢ АНАЛИТИКАЛЫҚ ОЙЛАУЫН ДАМУЫНЫҢ ПСИХОЛОГИЯЛЫҚ АСПЕКТІЛЕРІ

Аннотация

Бұл мақалада бастауыш мектеп оқушыларының аналитикалық ойлауын дамытудың психологиялық ерекшеліктері қарастырылады. Бұл саладағы проблемалар балалардың жас ерекшеліктері мен жеке қабілеттеріне, сондай-ақ аналитикалық ойлау қабілеттерін дамытуға бағытталған арнайы әдістердің болмауына және оқу тәжірибесінің жеткіліксіздігіне байланысты анықталады.

Зерттеудің мақсаты – бастауыш мектеп оқушыларының аналитикалық ойлауын дамытуға психологиялық факторлардың әсерін зерттеу және бастауыш мектепте оқу процесін оңтайландыру бойынша ұсыныстар әзірлеу. Зерттеуде әдеби талдау және эмпирикалық әдістер, соның ішінде мұғалімдер мен ата-аналармен сауалнамалар мен сұхбаттар, сондай-ақ психологиялық эксперимент қолданылды.

Зерттеу барысында бастауыш мектеп оқушыларының аналитикалық ойлау ерекшеліктерінің теориялық негіздері белгіленіп, осы жасқа тән негізгі психологиялық факторлар мен проблемалар анықталды. Мұғалімдер мен ата-аналардың пікірлері көптеген анықталған ерекшеліктерді растады. Психологиялық эксперимент барысында бастауыш мектеп оқушыларының аналитикалық ойлау деңгейі негізінен төмен екендігі анықталды.

Алынған нәтижелер ұсынылған бағдарламаның тиімділігін растады: эксперименттік топта логикалық ойлау деңгейінің жоғары және орташа деңгейінің айтарлықтай өсуі, сонымен қатар аналитикалық ойлау деңгейі төмен оқушылар санының төмендеуі байқалды. Мақалада мектеп бағдарламасы аясында оқытудың тиімді әдістерін қолдануға және қажетті дағдыларды дамытуға бағытталған бастауыш мектеп оқушыларының аналитикалық ойлауын одан әрі дамыту бойынша ұсыныстар берілген.

Түйін сөздер: аналитикалық ойлау, психологиялық мінездеме, бастауыш сынып оқушылары, мұғалімдер, ата-аналар, ойлауды дамыту бағдарламасы

Г.О. Мугауина[1], Л.Е. Койшигулова[1], Б.М. Жапарова[2], Г.С. Аяпбергенова[2], А.Е. Мухаметкаиров[2]*

[1]Атырауский университет имени Х. Досмухамедова, Атырау, Казахстан
[2]Павлодарский педагогический университет им. Әлкей Марғұлан, Павлодар, Казахстан

ПСИХОЛОГИЧЕСКИЕ АСПЕКТЫ РАЗВИТИЯ АНАЛИТИЧЕСКОГО МЫШЛЕНИЯ У МЛАДШИХ ШКОЛЬНИКОВ

Аннотация

Развитие аналитического мышления у младших школьников играет важнейшую роль в их когнитивном росте и академических успехах. В данном исследовании изучаются психологические аспекты, влияющие на развитие аналитического мышления в начальной школе, с акцентом на когнитивные задачи, возрастные особенности и индивидуальные различия, которые формируют способность ребенка к аналитическому мышлению. Цель исследования - выявить ключевые психологические факторы, влияющие на развитие аналитического мышления, и дать рекомендации по совершенствованию образовательной практики для поддержки этого развития. Использовалась комбинация методов исследования, включая анализ литературы, анкетирование, интервью с учителями и родителями, а также контролируемый психологический эксперимент.

Результаты исследования позволили сделать несколько важных выводов. Во-первых, было установлено, что начальный уровень аналитического мышления младших школьников относительно низок, и они испытывают значительные трудности в таких областях, как логическое мышление, анализ и синтез информации. В качестве ключевых проблем были названы такие психологические факторы, как устойчивость внимания, память и самоконтроль. Исследование также выявило отсутствие в существующей образовательной практике специализированных методик по развитию аналитического мышления. Однако экспериментальная реализация целевой образовательной программы показала заметное улучшение способностей студентов к аналитическому мышлению. В экспериментальной группе наблюдался значительный рост как высокого, так и умеренного уровня аналитических способностей, а также сокращение числа студентов с низким уровнем развития мыслительных способностей.

Практическая значимость исследования заключается в том, что оно вносит вклад в совершенствование методики обучения младших школьников навыкам аналитического мышления. Полученные результаты подтверждают необходимость более структурированного и интерактивного подхода к обучению, включающего упражнения на развитие критического мышления и современные образовательные технологии. Школам рекомендуется сосредоточиться на развитии таких когнитивных навыков, как память и внимание, внедрить более интерактивные и игровые методы обучения, а также вовлекать родителей в образовательный процесс. Эти стратегии обеспечат развитие у учащихся более сильных аналитических навыков, которые необходимы для успеваемости и долгосрочного когнитивного развития.

Ключевые слова: аналитическое мышление, психологические особенности, младшие школьники, учителя, родители, программа развития мышления

INTRODUCTION. Relevance. In the XXI century, as in any new time, special approaches to the education system are manifested. Despite the transformations that are constantly noted in the educational process in junior school, the requirements for results in the field of cognition remain unchanged in many respects.

Thus, according to the State Educational Standards of the Republic of Kazakhstan [1], developed analytical thinking, which refers to the universal metaeducational actions, is able to improve the quality of learning, motivate junior schoolchildren to master new knowledge and make the process of their

assimilation faster. Accordingly, fostering analytical thinking skills in junior schoolchildren stands out as a crucial objective in contemporary education, aligned with the updated curriculum.

In the new conditions analytical thinking is also considered as a parameter for the development of such an important flexible skill as critical thinking. Since in modern conditions, characterized by rapid changes and growing requirements for rigid and flexible competencies of students, it is the ability to think analytically that becomes a necessary skill in order to master successfully the junior school program and adapt to future situations arising in later life.

It should be noted that it is the development of analytical and other types of thinking in junior schoolchildren that is at an important stage, which some authors call a turning point [2]. Since it is at this time that there is a transition from visual and figurative thinking (preschool period) to verbal and logical thinking. This transition leads to a certain ambiguity regarding the mental activity of a junior school student:

- develops critical thinking;
- concrete thoughts based on reality and direct observation emerge;
- at a younger age, thinking begins to obey logical principles.

At the same time, it is important to note that abstract and formal-logical reasoning are still inaccessible at the younger school age.

The importance of the study is also determined by the following problems noted in the field of psychological development of analytical thinking in junior high school students:

- Difficulties in understanding abstract concepts that are not related to reality;
- low level of development of analytical and logical thinking, expressed in difficulties in analyzing information and making logical conclusions;
- some memorization problems based on low levels of concentration and recall.

It is also noted in practice that there is insufficient training practice in independent solution of tasks that require analytical thinking from junior school students. Modern methods of analytical thinking development and some other methods are not actively used.

MAIN POINTS. Extent of Problem Development: Pedagogical psychology consistently examines tools and strategies for nurturing analytical thinking, particularly in young school-aged children. Presently, various theories and methods target the cultivation of analytical thinking as a critical skill, incorporating cognitive psychology techniques and specific approaches to enhance analytical and critical thinking. However, many aspects related to the unique development of analytical thinking in primary school students remain underexplored. There is a continued need to deepen our understanding of the psychology underlying analytical thinking development and to create more advanced teaching methodologies.

This article includes a literature review that enabled an analysis of both classical and contemporary studies on the development of analytical thinking in junior school students. The works of Kazakhstani authors and foreign researchers have been analyzed [3]. Such materials allowed us to consider the main approaches in the field of cognitive processes that influence the development of children's analytical competencies. Modern methods and technologies that are proposed to be used in the educational school process have been studied [4].

The study aims to examine the impact of psychological factors on the development of analytical thinking in young schoolchildren and to create recommendations for enhancing the learning process in early education.

Research Objectives

1. to examine the fundamental concepts and challenges involved in developing analytical thinking in young schoolchildren.
2. to identify the key psychological factors that impact the development of analytical thinking skills in young schoolchildren.
3. select methods and techniques to develop analytical thinking skills in junior schoolchildren.
4. on the basis of an experimental study to evaluate the effectiveness of the proposed program.

Research methods: literature analysis, psychological experiment (survey and observation) and methods of statistical analysis of the results.

The study has practical and theoretical significance. Theoretical significance lies in the expansion of knowledge in the context of the research topic. Practical significance lies in the proposal of new methodological applied approaches to the process of teaching the development of analytical thinking skills in junior schoolchildren.

MATERIALS AND METHODS. The study's materials included literature relevant to the topic, such as regulatory documents, scientific books, textbooks, monographs, journal articles, dissertations, and online publications. Literature analysis served as the theoretical research method. This analysis of academic literature and practical studies related to the topic focused on exploring developmental and educational psychology as a rich source of information. This approach enabled identification of core concepts and key psychological factors that directly or indirectly affect the development of analytical thinking in primary school-aged children.

The primary empirical methods included surveys, interviews, and testing. The research methodology encompassed surveys and interviews with teachers and parents, alongside student testing conducted as part of a psychological experiment. These studies were organized within the junior classes of an educational school. This approach enables the following:

- Identification of specific psychological factors affecting the development of analytical thinking in young schoolchildren;
- Assessment of students' analytical thinking levels at both the start and conclusion of the experiment.

Interviews with teachers (four elementary school teachers) and a survey of parents (20 people) are conducted in order to obtain useful information, from parents' opinions and the experience of teachers and parents, as to what psychological factors they consider most significant in the process of developing analytical thinking in children.

Teacher interview questions:

1. In your opinion, what psychological factors most influence the success of analytical thinking development?
2. What, in your opinion, hinders the development of analytical thinking of younger students?
3. What methods do you use to develop analytical thinking in children?
4. How often do you incorporate analytical thinking assignments into your classroom?
5. What do you think is the place of parents in the development of their children's analytical thinking?
6. Do teachers have a need for additional methods to develop students' analytical thinking?
7. Are indicators of students' analytical thinking development assessed in lessons? If yes, how are they assessed?
8. In your opinion, do current educational standards for junior schools adequately address the need to develop analytical thinking, given today’s evolving requirements?

Questions for parents

1. Have you noticed a change in your child's ability to analyze information since starting school?
2. In what situations does your child exert his or her abilities in analytical thinking?
3. What supports do you use to develop your child's analytical skills?
4. How often does your child ask you for help in solving complex problems?
5. How important do you think junior high school is in developing your child's analytical thinking?
6. How important do you consider the development of your child's analytical skills in their studies and in later life?
7. What do you think might be preventing a child from effectively developing their analytical skills?
8. What are your wishes for the school regarding methods and approaches to developing your children's analytical skills?

The level of analytical thinking in junior schoolchildren is tested by the following methods:

- - S.H. Safonov's method "Exclusion of concepts" to reveal "the ability to classify and analyze";
- - V.M. Rusalov's methodology for determining the "ability to generalize";
- - A.N. Bernstein's methodology "Sequences of events" to establish "the ability to logical generalization and concretization";
- - A.N. Bernstein's methodology for "comparison of concepts".

The study was conducted in second grade (A and B) with a total of 37 students (CG - 19 and EG - 18).

The results were calculated according to statistical methods of data analysis.

RESULTS AND DISCUSSION. Basic concepts in analytical thinking in elementary school children. "Analytical thinking" as a phenomenon is studied by different sciences: philosophy, psychology and logic. Each science understands its essence in its own way, but they all agree that analytical thinking includes such types of thinking as abstract and synthetic thinking. All of them are developed through language. Analytical thinking begins to develop actively in people from a certain age, especially actively during the period of the beginning of learning. Therefore, the study of analytical thinking is important not only for such sciences as logic, but also for psychology [5].

The development of analytical thinking in children usually begins in the process of systematic education, as S. Toleva-Stoimenova writes. In his opinion, a child learns such subjects as arithmetic, science, geography or history in the process of education, and as a result his thinking changes. Analytical thinking develops, because already in the lower grades the child starts to think differently, because he/she gets new knowledge and skills to connect them with each other [6].

Analytical thinking refers to one of the types of theoretical thinking. At the same time, according to a group of authors headed by H. Nuroso [7], it is characterized by some peculiarities. A key condition is that analytical thinking unfolds over time, progressing in stages that require a certain duration. Each stage is consciously recognized, as its outcomes appear clearly within the individual's awareness.

At every stage of human development, including preschool. A child in his development learns to perform different mental actions. His mental and analytical development follows certain rules and depends on how he interacts with others and what he does. Analytical thinking seems to be a natural process characterizing a person who has his knowledge and the logic of its presentation [8].

In children at the younger school age, analytical thinking is considered to be still elementary, as it is still based on visual-action analysis. And analytical-synthetic activity is based on direct visual perception of material objects and some phenomena. It is characterized by the fact that analytical thinking is formed in junior schoolchildren in the process of learning. Since it is in school that they learn to reflect on their actions, learn about the possibility of controlling them, plan their actions in advance and understand some cognitive concepts. Also in the preschool age the skills of formulating thoughts and conclusions are developed [9].

The development of analytical thinking in preschoolers can also be presented through the development of their functions: attention; speech; sensory development; memory; imagination and thinking in general [10]. At school in the process of education children learn scientific concepts in the scope of academic subjects and ways of working with them. New knowledge helps children to reason better and strive for accuracy in their thinking. Over time, their reasoning becomes more analytical and gradually turns into some conclusions. This is due to the fact that preschoolers begin to distinguish thoughts from reality and check their assumptions with the help of analysis and synthesis [11].

The main psychological factors characterizing the development of analytical thinking skills in junior schoolchildren are reflected by us in Figure 1.

These in younger students include:

- indicators of intellectual development;
- reflection skills;
- arbitrary abilities to consciously control behavior and thoughts;
- internal action plans;

- scientific knowledge;
- development of judgments and inferences and the ability to separate the conceivable from the actual.

The most important psychological problems in the development of analytical thinking in junior high school students are in turn identified:

- reflective skills are not yet sufficiently developed;
- the level of arbitrary control is still low;
- poor memory and attention span;
- There are many difficulties in forming an internal action plan;
- problems with mastering the curriculum;
- comparison and generalization operations are not yet fully developed;
- instability of emotion;
- the importance of checking the correctness of answers is not always understood and others.

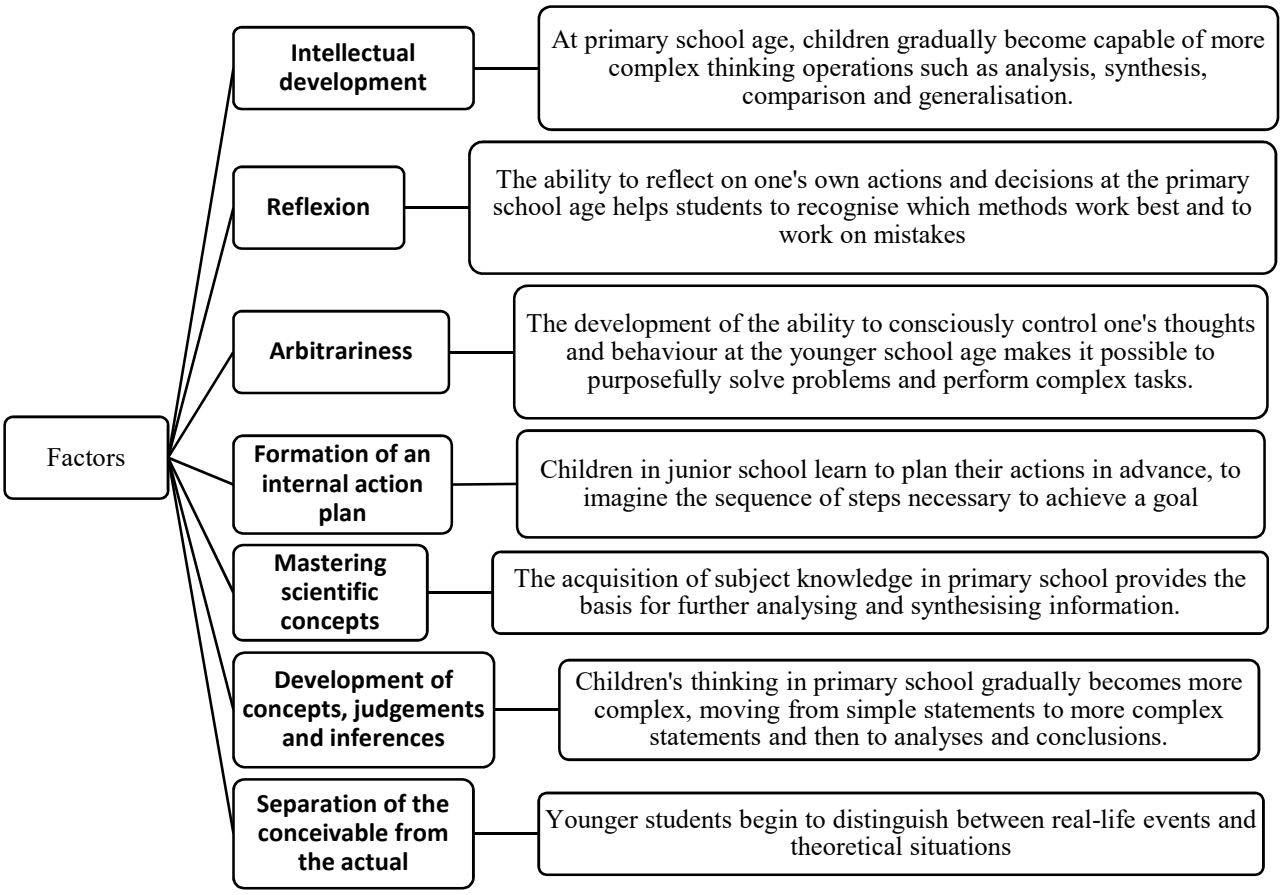

Figure 1 - Main psychological factors characterizing the development of analytical thinking skills in junior schoolchildren

Teachers' opinions:

1. The main psychological factors that most of all influence the success of analytical thinking development in children in junior school are defined as: internal motivation of the child, expressed in the desire to learn (75%), encouragement from parents and teachers (50%); individual abilities (50%); self-confidence (25%); level of concentration and memory development (50%); ability to manage their emotions and self-control (25%); family support (25%).

2. The following psychological factors hinder the development of analytical thinking of junior schoolchildren: lack of time to perform tasks (75%); lack of analytical thinking skills, which are

necessary to study the educational material (50%), inability to focus attention on the main thing (50%), lack of self-confidence (50%), high level of anxiety expressed in the fear of making mistakes (50%), insufficient support of the child in the family (25%), the presence of memory problems, information is perceived without interest, passively (25%), underdeveloped self-control (25%) and others.

3. The main methods used in junior grades for the development of analytical thinking are: conducting game tasks (75%), solving logical problems (50%), discussing a question in groups (25%), analyzing texts (25%), solving mathematical problems (25%) and others.

4. Teachers incorporate analytical thinking tasks into the teaching process: daily (25%), several times a week (50%, less than once a week (25%).

5. According to teachers, the place of parents in the development of their children's analytical thinking in the younger grades is: great, as children are not yet fully adapted to schooling (75%); many parents are engaged with their children at home, helping to solve homework (50%); parents do provide emotional support to their children (25%).

6. Teachers need additional methods to develop students' analytical thinking: additional teaching and methodological materials (75%), organization of professional development courses (50); consultations with psychologists (25%); support from parents (25%)

7. At lessons in junior school, indicators of development of students' analytical thinking: are not officially assessed (100%); the teacher makes observations of progressive or negative development (50%); uses feedback from parents (25%), takes into account self-assessment of students themselves (25%).

8. They think that educational standards in junior school fully enough take into account the necessity of analytical thinking development, taking into account modern conditions: fully agree (0%); partially agree (50%); disagree (50%).

Parents' Opinions:

1. Notice changes in your child's ability to analyze information after starting school: significant improvement (20%), slight improvement (25%), no change (50%), worsening (5%).

2. The child renders his abilities in analytical thinking, to the greatest extent, in the following situations: while solving homework (50%); while reading books (20%); while communicating (20%); while solving everyday problems (5%), while playing (5%).

3. Ways of support used by parents to develop their child's analytical skills: help with homework (50%), encouragement of independent decisions (20%), playing games together (20%), discussing interesting topics (10%).

4. Frequency of child asking for help with complex tasks: always (20%), sometimes (50%), rarely (20%), never (10%).

5. The importance of elementary school in the development of a child's analytical thinking: leading (75%); secondary (15%), minor (10%).

6. How important they consider the development of the child's analytical skills in their studies and in their future life: very important (50); moderately important (40%); unimportant (10%).

7. Preventing a child from effectively developing analytical thinking: individual abilities (35%); improperly designed learning process (25%); insufficient attention from the teacher (25%); low level of motivation (5%), external pressure (5%).

8. School preferences for methods and approaches to fostering analytical skills in elementary students include: adopting an individualized approach to students (35%), increasing the volume of analytical thinking tasks (35%), incorporating more contemporary teaching methods (20%), and more frequently using game-based formats (10%).

The results of analytical thinking diagnostics according to the four methods are summarized in Table 1

Table 1. - Determination of the level of analytical skills development at the initial stage, in %

Name of methodology/level	On exclusion of concepts (FE)		To define concepts (OP)		On the sequence of events (SOE)		On comparing concepts (SP)	
	KG	EG	KG	EG	KG	EG	KG	EG
High level	21	17	6	11	11	6	11	6
Medium level	37	33	42	44	42	44	42	44
Low level	42	50	42	44	47	50	47	50

The best results were demonstrated by pupils from the control group when performing the "Concepts Exclusion" method. For clarity, the obtained results are shown in Figure 2

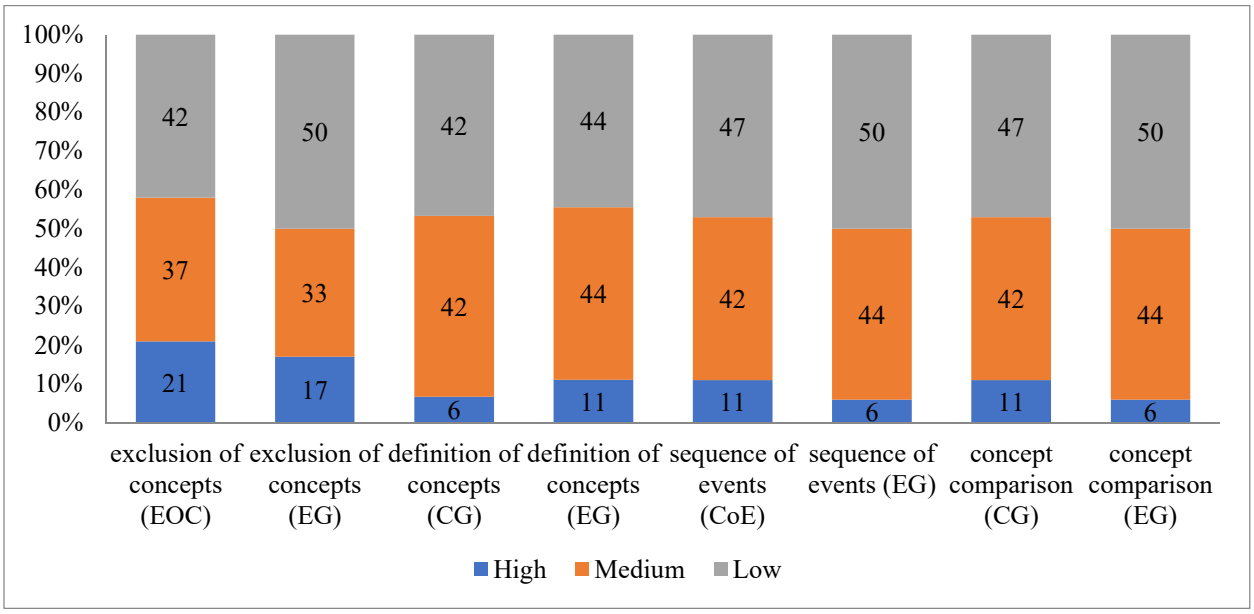

Figure 2 - Structure of the level of analytical skills development at the initial stage, in %

At the same time, it should be noted that, on average, the indicators in both groups did not differ significantly.

A program for the development of analytical thinking in elementary school children has been developed. It includes four modules, each of which realizes goals aimed at developing certain types of logical thinking. It is complex, as it includes traditional teaching methods supplemented with the latest technologies, which makes the lessons on the development of analytical thinking more effective and quite exciting

1. Development of classification and comparison skills: comparison games (what is common and what is different), classification exercises, solving logical problems

2. Development of the ability to analyze and synthesize information: tasks for parsing and composing words and word combinations; logic puzzles, constructing models of various parts.

3. Developing the ability to solve various logical problems: tasks to find patterns; mazes and schemes; checkers and chess.

4. Development of creative thinking: tasks for children to create puzzles, crosswords, rebuses, their own board logic games, writing projects to develop logical thinking.

The curriculum includes online item comparison games and a variety of interactive exercises.

The teaching methods are defined as: game and practical lessons. All of them are designed for 12 lessons. The main methods were: collective work, problem solving and discussion in groups; independent homework.

Table 2 shows the test scores of the final diagnostic students

Table 2. - Generalized results of the final diagnostics of the level on establishing the formation of analytical skills, in %

Name of methodology/level	**On exclusion of concepts (FE)**		**To define concepts (OP)**		**On the sequence of events (SOE)**		**On comparing concepts (SP)**	
	KG	EG	KG	EG	KG	EG	KG	EG
High level	22	30	15	20	11	20	11	21
Medium level	38	40	43	53	42	40	42	47
Low level	40	30	42	27	48	40	47	34

Figure 3 shows the indicators of the level of analytical skills development at the initial stage, in %

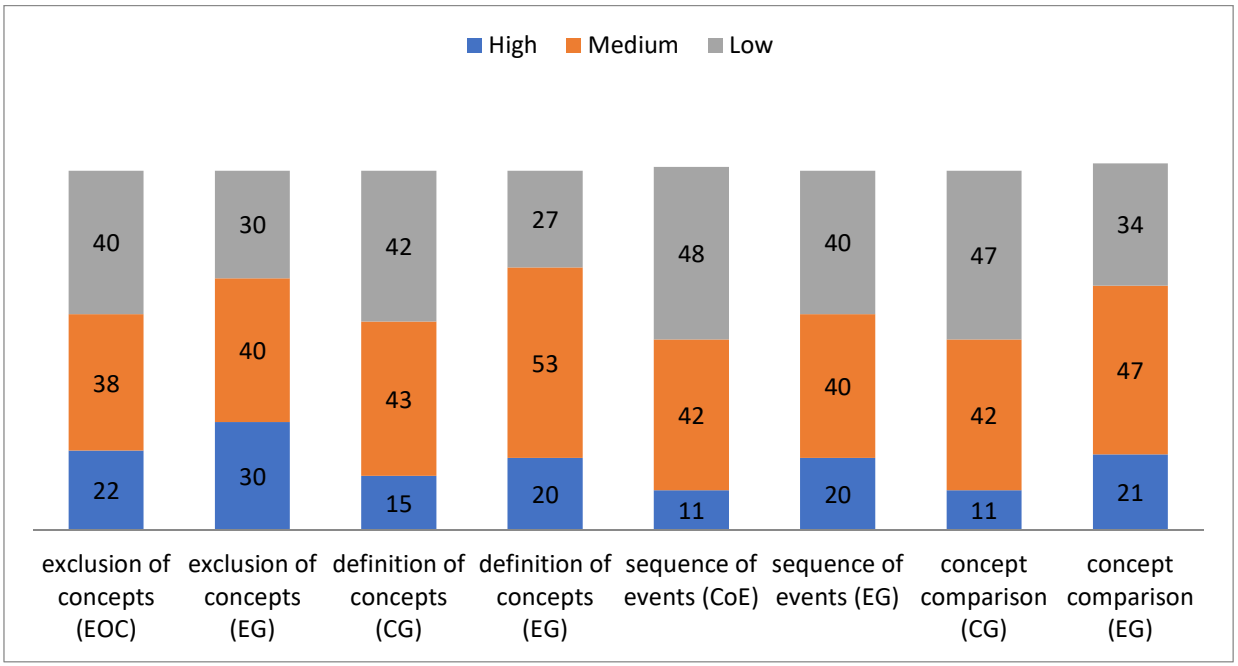

Figure 3 - Structure of analytical skills development level at the initial stage, in %

The generalized results of diagnostics at the stage of the control experiment show that EG students began to have a higher level of task performance in all areas of analytical thinking development, compared to students from the CG.

For comparative analysis, average indicators were calculated, which allowed us to compare the data on the level of development of logical thinking in students before the experiment, with the use of the developed program and after. The obtained results are presented in Table 3 and Figure 4.

Table 3. -Results of comparative analysis of logical thinking development among junior school pupils

	High	**Medium**	**Low**
KG at the initial stage	15	41	44
CG at the end stage	15	41	44
EG at the initial stage	10	41	49
EG at the end stage	22	45	33

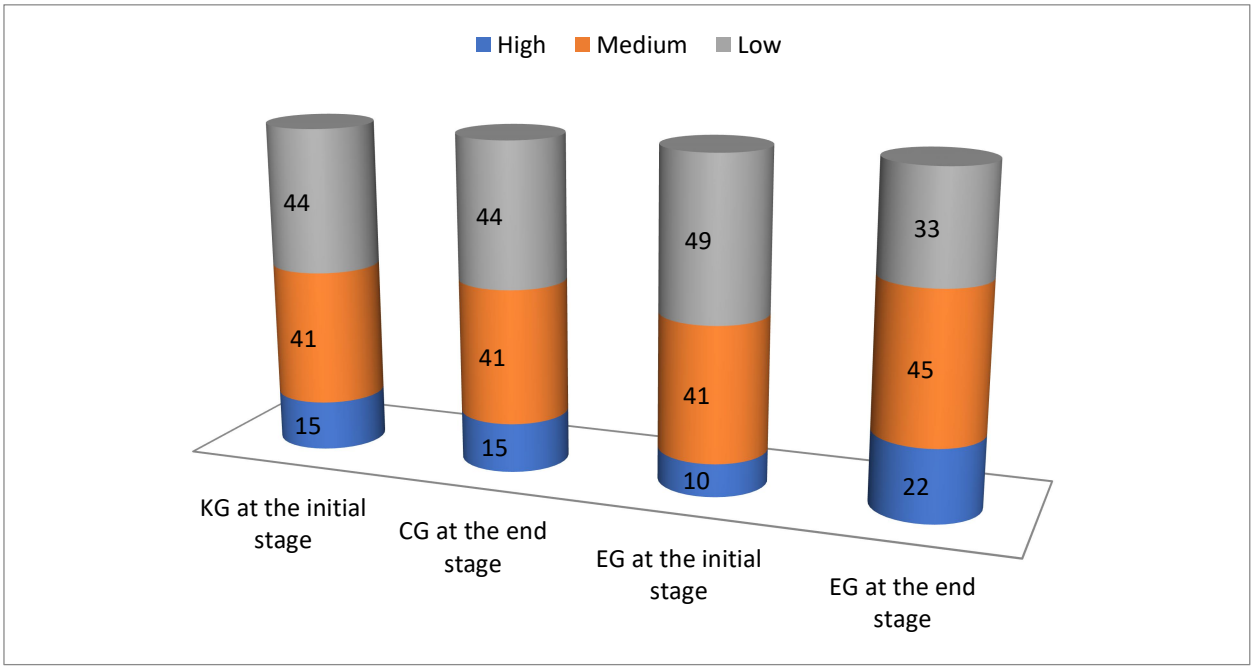

Figure 4 - Dynamics of results of logical thinking development among junior school pupils

In the experimental group, a positive trend was observed: - an increase in students with a high level of logical thinking, from 10% to 22%; - an increase in students with an average level of analytical skill development, from 41% to 45%; - a reduction in the number of students with a low level of logical thinking, from 49% to 33%.

These results confirm the effectiveness of the proposed program, as its implementation in the experimental group led to a significant rise in both high and average levels of logical thinking, alongside a decrease in students with lower logical development skills.

There is a correlation between the study and the materials that were presented earlier by such authors as A.S. Smirnova who considers the peculiarities of thinking development in primary school children, who says that only a primary school teacher can help children to take the initiative in the development of analytical skills [12]. It is also necessary to pay special attention to the research conducted by. O.V Ryabova regarding the formation of cognitive-analytical abilities in junior school through research activities [13; 14].

All this emphasizes the regularity of the fact that the emphasis on the development of analytical abilities in primary school students, through a specially designed training program, in which we include both educational tasks and modern active exercises, can improve their mental abilities and analytical thinking. It will also ensure improved academic performance due to the further development of sustainable skills in concentration, memory and analyzing information.

CONCLUSION. Analytical thinking in young schoolchildren encompasses skills in thorough analysis and synthesis of learned material, identifying key elements, comparing and systematizing phenomena and objects, and drawing conclusions based on acquired information. This form of thinking relies on a logical approach, enabling elementary school students to tackle complex problems by breaking them into parts, discerning relationships among events, objects, and phenomena, and discovering more rational solutions. The core elements of analytical thinking at the primary school level include observation, analysis, comparison, generalization, classification, logical reasoning, and conclusion formulation. Psychological factors (intellectual development; reflection; development of judgments and inferences: separation of the conceivable from the actual and others) contribute to the fact that a junior schoolchild acquires new skills in the field of thinking and moves gradually from simple perception of the environment to its analysis. They form the basis for analytical tactics for solving complex problems.

The level of analytical thinking in young schoolchildren was found to be relatively low during the initial stage of the experiment. Many researchers and practitioners agree that developing analytical thinking requires consideration of numerous psychological factors, as well as the age and individual traits of each child. Additionally, establishing supportive environments at home and school is essential, as these contribute significantly to analytical thinking development during early schooling.

The program implemented with the experimental group of second-grade students proved effective, resulting in a marked improvement in analytical thinking levels. A comparison between the two groups revealed that students in the control group, where analytical thinking development measures were not applied, showed no positive changes, suggesting the absence of external factors that could enhance analytical skills. In contrast, the experimental group demonstrated a positive trend, with more students reaching high and moderate levels of analytical thinking. This progress indicates that the applied program and teaching methods played a crucial role in developing analytical skills within this group. The findings support the hypothesis that specially designed programs can have a positive impact on the development of analytical thinking in young schoolchildren.

Recommended at the junior high school level:

- more actively develop cognitive skills (memory, attention and perception) as a basis for more robust analytical thinking skills;
- use interactive teaching methods more often than traditional lessons;
- create conditions and assistance for students to analyze their own work;
- constantly teach children the techniques of analysis and synthesis;
- use more visual materials in lessons;
- To develop a motivation to learn through encouragement;
- Engage with parents on an ongoing basis

All recommendations are aimed at creating conditions for younger students to develop analytical skills more effectively, which will contribute to their further learning and successful personal development.

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