3.Nurıhanova, N.K. bastaýysh synyp oqýshylarynyń bilim berý prosesinde zıatkerlik daǵdylaryn qalyptastyrý [Mátin]: dıs Alı kand. ped. ǵylymdar: 13.00.01 / N. K. Nurıhanova. - Ýfa, 2006. – 192s.

4. Ýsova, a.v. oqýshylardyń oqý eńbeginiń daǵdylary men daǵdylaryn qalyptastyrýdaǵy oqý jáne ádistemelik ádebıettiń rólin arttyrý týraly [Mátin] / A. V. Ýsova // oqýshylardyń jalpy oqý daǵdylary men daǵdylaryn qalyptastyrýdaǵy oqý ádebıetiniń róli. – M., 1984. – B. 34-42.

5. Jaqypov S.M. Jalpy psıhologıa kırispe: oqý quraly. - Almaty: Almaty ýnıversıteti, 2012. - 229 b.

6. Savenkov A.ı. úide jáne mektepte daryndy bala: tulǵanyń áleýeti jáne damý baǵdarlamasy. – Ekaterınbýrg: Ý-Faktorıa, 2004. – 267 B.

7. Taýbaeva Sh.T., Býlatbaeva A.A. pedagogıkalyq zertteýdiń ádisnamasy men ádisteri. – 2015.

8. Galperın, p.ıa. aqyl-oı áreketterin kezeń-kezeńimen ıgerý teorıasy negizinde bilim men daǵdylardy qalyptastyrý [Mátin] / P. Ia. Galperın // maqalalar jınaǵy. – M: Ǵylym, 1968. – 135 b.

9. Kırıllova G.D. túsiný prosesiniń kommýnıkatıvti tapsyrmaǵa táýeldiligin psıhologıalyq taldaý: referat. Dıss. ...k.ps.n. - M., 2011.

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DEVELOPMENT OF COGNITIVE ACTIVITY OF PRESCHOOL CHILDREN BASED ON VISUAL AND CRITICAL THINKING

Abstract

The article discusses the importance of visual and critical thinking in the development of preschool children (5-6). The main problem of the research work was caused by the lack of emphasis on the development of visual and critical thinking in the practice of preschool education.

The main purpose of the article is to consider methods for the development of visual and critical thinking of children in the preschool group. In this regard, the current research work is aimed at studying the development of cognitive activity based on visual and critical thinking of children in the preschool group. Quantitative and qualitative methods were used in the research work, and a control experiment was conducted. Teachers – educators of the preschool organization and children of the preschool group took part in the process of experimental training.

As a result of the study, a positive result was obtained due to the study of the proposed methods / techniques. The article shows that using this method is much more effective than daily traditional methods. Since the study determined the effectiveness of the methods that were founded by Edward De Bono and Adelaide Krapsey, it is recommended to use these methods in the process of organized activities in preschool organizations.

Keywords*:* visual thinking, critical thinking, cognitive activity, preschoolers, educator, preschool organization.

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ВИЗУАЛДЫ ЖӘНЕ СЫНИ ОЙЛАУ НЕГІЗІНДЕ МЕКТЕПАЛДЫ ТОБЫ БАЛАЛАРЫНЫҢ ТАНЫМДЫҚ БЕЛСЕНДІЛІГІН ДАМЫТУ

Аңдатпа

Мақалада мектеп жасына дейінгі балалардың (5-6 л) дамуындағы визуалды және сыни ойлаудың маңыздылығы қарастырылады. Зерттеу жұмысының негізгі мәселесі мектепке дейінгі білім беру тәжірибесінде визуалды және сыни ойлауды дамыту бағыты назардан тыс қалып жастқандықтан туындап отыр.

Мақаланың негізгі мақсаты мектепалды тобы балаларының визуалды және сыни ойлауын дамыту әдістерін қарастыру болып табылады. Осыған байланысты ағымдағы зерттеу жұмысы мектепалды тобы балаларының визуалды және сыни ойлауы негізінде танымдық белсенділіктің дамуын зерттеуге бағытталған. Зерттеу жұмысында сандық және сапалық әдістер қолданылды, сонымен қатар бақылау эксперименті жүргізілді. Экспериментке мектепке дейінгі ұйымның педагог – тәрбиешілері мен мектепалды тобы балалары қатысты. Зерттеу барысында ұсынылған әдістердің қолданылуы оң нәтиже берді.

Мақалада бұл әдісті қолдану күнделікті дәстүрлі әдістерге қарағанда әлдеқайда тиімді екендігі көрсетілген. Зерттеу нәтижесінде негізін Эдвард де Боно және Аделайде Крапси қалаған әдістерді тиімді деп анықталғандықтан мектепке дейінгі ұйымдардағы ұйымдасқан іс-әрекет барысында қолдану ұсынылды.

Түйін сөздер*:* визуалды ойлау, сыни ойлау, танымдық белсенділік, мектеп жасына дейінгі балалар, тәрбиеші, мектепке дейінгі ұйым

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РАЗВИТИЕ ПОЗНАВАТЕЛЬНОЙ АКТИВНОСТИ ДЕТЕЙ ПРЕДШКОЛЬНОЙ ГРУППЫ НА ОСНОВЕ ВИЗУАЛЬНОГО И КРИТИЧЕСКОГО МЫШЛЕНИЯ

Аннотация

В статье рассматривается вопрос о важности визуального и критического мышления в развитии детей дошкольного возраста (5-6л). Основная проблема исследовательской работы была вызвана отсутствием акцента на развитие визуального и критического мышления на практике дошкольного образования.

Основной целью статьи является рассмотрение методик для развитии визуального и критического мышления детей в предшкольной группе. В связи с этим текущая исследовательская работа направлена на изучение развитии позновательной активности на основе визуального и критического мышления детей в предшкольной группе. В исследовательской работе использовались количественные и качественные методы, а также был проведен контрольный эксперимент. В процессе экспериментального обучения приняли участие педагоги – воспитатели дошкольной организации и дети предшкольной группы.

В результате исследования был получен положительный результат благодаря изучению предложенных методов/приемов. В статье показано, что использование этого метода гораздо эффективнее, чем ежедневные традиционные методы. Поскольку в результате исследования была определена эффективность методов которые основали Эдвард Де Боно и Аделайде Крапсей, рекомендуется использовать эти методы в процессе организованной деятельности в дошкольных организациях.

Ключевые слова*:* визуальное мышление, критическое мышление, познавательная активность, дошкольник, вопитатель, дошкольная организация.

Introduction. Modern life requires high-level thinking, communication, and the ability to adapt to a wide range of social and intellectual situations.

Preschool education and training creates conditions for the formation and development of the personality of a child who can successfully adapt in a modern constantly changing world. Psychological and pedagogical studies conducted by leading scientists and practitioners have proven that it is preschool age that is the determining condition for the intellectual, personal, social and emotional development of a person.

Therefore, the use of critical thinking strategies in preschool education can create the basis for the subsequent development of children's thinking that meets modern requirements.

The pace of development of modern educational approaches, the massive innovation of the education system and the restructuring of its paradigm lead to characteristic changes in approaches to learning. Rapidly changing trends in education and the active development of new information and communication technologies determine integrated approaches to learning [1].

In the modern paradigm of education, among the main pedagogical tasks there are such as:

1. Activation of educational and cognitive activity;
2. Formation of a worldview and critical thinking;
3. The formation of an imaginative perception and representation of knowledge and educational activities in the mind of the student;
4. Ensuring the intensification of training;

In our research, we want to focus on the first 3 points. The study of mental processes such as thinking, memory, perception of children, as well as the peculiarities of these processes determine the importance of considering the processes of visualization and critical thinking in learning, since visualization and the ability to analyze educational information can solve a number of pedagogical tasks,

namely, ensuring the intensification of learning, activation of educational and cognitive activity, the formation of and the development of critical and visual thinking, visual perception, imaginative representation of knowledge and educational activities, improving visual literacy and visual culture.

To expand our research work, we will consider the cognitive activity of preschoolers. Cognitive activity is based on cognitive interest. Cognitive interest is a form of manifestation of cognitive need that ensures the orientation of a person towards awareness of the goals of activity and thereby contributes to orientation, familiarization with new facts, a more complete and in–depth representation of reality [2].

Basic provisions. The relevance of the technology for the development of critical thinking is that it is one of the innovative methods that make it possible to achieve positive results in the formation of the child's information competence. It is a holistic system that forms the skills of working with information, makes it possible for the personal growth of the child, the development of his individuality, the development of his thinking. Critical thinking occurs when new, already understood ideas are tested, evaluated, developed and conclusions are drawn based on the work done.

Critical thinking is a special teaching technique that answers the question: how to teach thinking. The child needs critical thinking, it helps him live among people.

Working with preschoolers over the past years, they noticed that many children 5-6 years old have no desire to gain new knowledge, children do not know how to think critically, analyze, draw conclusions, answer only the teacher's questions, and do not ask their own. Not all children by the age of six form more stable attention, the ability of arbitrary memorization arises, perception, imagination are improved, higher forms of visual-figurative thinking, the ability to reason, draw conclusions, and choose the right one develop.

Each child has his own character, different mood. The task of the teacher is to direct the educational process to the development of a child who is active, interacting with the world. In accordance with the modern requirements for the preschool education system, the educational process is based on a system-activity approach, the use of innovative psychological and pedagogical technologies, the proposed tasks have a personal meaning and are aimed at the active communicative development of preschoolers.

The purpose of the work: To prepare children for school, to increase the self-esteem of children, to teach from a huge flow of information to choose the right one, to draw reasoned conclusions, to teach critically, to think.

One of the modern pedagogical technologies is the technology for the development of critical thinking (TRKM).

This technology has attracted attention by the fact that it is part of the technology bank designed to intensify the educational process in the subsidiaries. TRKM can be used in the study of the widest range of children's activities, moreover, due to the variety of techniques, it is possible to build the study of educational material almost entirely within the framework of this technology, making its use systemic and methodical. Critical thinking is intelligent, reflective thinking that can bring forward new ideas and see new opportunities.

The novelty of the technology is the creation of a system for applying critical thinking techniques to form the prerequisites for educational activities in older preschool children.

The purpose of the technology for the development of critical thinking is to develop mental skills that are necessary for children in later life (the ability to make informed decisions, work with information, highlight the main and secondary, analyze various aspects of phenomena).

When using TRKM, pupils are subjects in determining the goals of educational activities, criteria for assessing its results; children have the opportunity to correct, edit works. Such activities make it possible to prove themselves, show their vision of the proposed topics and problems, give great freedom of creative search.

In the technology of developing critical thinking, great importance is given to visual forms of organization of material. Children with the help of the proposed techniques make attempts to pre-systematize the material, express their ideas, visualizing them.

The structure of a lesson in the technology of developing critical thinking consists of three stages: "challenge" - "comprehension" - "reflection." At each stage, different techniques are used to activate the thinking skills and develop the initiative of each child. The choice of techniques depends on the topic of the lesson, taking into account the interest of the pupils.

In our study, we want to focus on the first 3 points. The study of such mental processes as thinking, memory, perception of children, as well as the features of these processes determine the importance of considering the processes of visualization and critical thinking in learning, since visualization and the ability to analyze educational information allow solving a number of pedagogical problems, namely, to ensure the intensification of learning, the activation of educational and cognitive activity, the formation and development of critical and visual thinking, visual perception, figurative representation of knowledge and educational activities, increasing visual literacy and visual culture. To expand on our research work, we look at the cognitive activity of preschoolers. Cognitive activity is based on cognitive interest. Cognitive interest is a form of manifestation of cognitive need, providing a person's orientation to awareness of the goals of activity and their achievement.

The cognitive interests of a preschool child begin to assert themselves very early. This manifests itself at first in the form of children's questions, with which the baby besieges parents from the age of 3-4. However, whether such childish curiosity will become a stable cognitive interest or it will disappear forever depends on us adults surrounding the child. As adults, we must encourage children's curiosity in every possible way, fostering love and the need for knowledge.In the form of didactic tools, visualization accelerates and deepens the understanding of the knowledge structure of the subject area, as well as critical thinking gives a more complete description of educational concepts and the connections between them, helps deep knowledge processing, promotes and improves the ability to apply knowledge in new situations, allows you to link concepts from different areas of organized educational activities [3].

In turn, we will take a broader look at the critical thinking of preschoolers, critical thinking is an important competence that needs to be developed in children from an early age. It allows them to analyze information, evaluate its reliability, compare different points of view and carry out critical reflection. There are many approaches and methods that contribute to the development of critical thinking in preschool children. However, teachers often face certain obstacles when applying methods of developing critical thinking in preschool children. Some of these include lack of time, limited resources, and lack of confidence in their teaching skills. To overcome these obstacles, it is recommended to use systematic programs and training materials that will help teachers to develop critical thinking in children more confidently and effectively.

Foreign scientists and educators offer their own definitions of critical thinking. For example, the founder of the Institute of Critical Thinking and the Institute for the Improvement of Philosophy for Children at the University of Montclair, Professor M. Lipman of Columbia University considers critical thinking as an urgent necessity for life in the modern world, since this complex skill allows you to correctly solve a wide range of practical problems in any professional activity in scientific activity, in everyday life.

In addition to I.V. Mushtavinskaya [4], such foreign scientists as S.I. Zair-Bek [5], M.M. Kotegova [6], E.V. Ivanshina [7], V.A. Bolotov studied critical thinking, Spiro D. [8] argues that critical thinking is informative thinking that begins with posing a question, strives for convincing argumentation and has a social character. The main functions of critical thinking consist of the following phases in Figure 1.

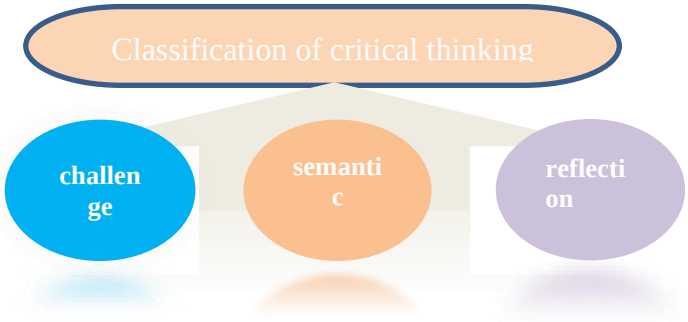


Figure 1- Phases of critical thinking

Research shows that the development of critical thinking in preschool children is of great importance for their personal and cognitive development. Children with this competence cope better with problems, make informed decisions easier, and have self-control skills. Critical thinking also contributes to the development of creativity and intellectual potential, visual thinking in children.

Man's interpretation of the modern world is mediated by images: with the help of visual images, an image of reality is constructed, and visual perception complements oral receptivity. The dynamics and variability of information flows have an impact on how a person, including children, comprehends reality, which mechanisms become relevant in these conditions. The form of thinking as a way of creatively solving problematic problems in terms of imaginative modeling can be called visual thinking. The basis of this form of thinking is visual-effective and visual-imaginative thinking, where, when comparing subject-practical and sensory-practical actions to the properties of objects, external perceptual actions are formed, and in the future there is a reduction and internalization of these actions.

In the 21st century, the age of the Internet and media technologies, the replicability of information contained in a visual object is high and has an impact on various socio-cultural spheres. The reading of a visual image as a complete picture depends on the physical properties of the object of vision itself, on the meanings inherent in it, and on the psychological and individual characteristics of the subject of contemplation.

In modern psychological and pedagogical literature, the issue of the development of artistic perception is covered in sufficient detail, and some aspects of its development are highlighted. The authors note the controversial nature of many issues related to understanding the essence of VM. The scientific literature presents a variety of, often contradictory, points of view on this problem.

Today, there is a need to teach children how to understand visual images for the development of critical thinking, because, as rightly noted by A.Y. Zenkova, "the perception of a visual image requires completely different logical operations compared to a written text or an oral word, which reduces the criticality of thinking, since the picture is given in integrity simultaneously, brightly and catchily, without requiring long reading and reflection" [9].

Materials and Methods. To solve this problem, we applied the following research methods: theoretical methods, research and analysis of scientific literature on pedagogy, psychology, methodology, modeling, system-structural approach.Empirical methods: analysis of normative documents, educational standards, programs, textbooks on the problem of research, analysis of accumulated pedagogical experience. Experimental methods: observation, analysis of personal experience, survey (questionnaire); pedagogical experiment with mathematical processing of the obtained results and analysis of the obtained data.

Guided by the main factors in the scientific works discussed above, as part of the research problem, we conducted an anonymous survey in order to identify the objective attitude of children of the preschool group of educators to the level of visual and critical thinking. The purpose of the questionnaire is to identify the cognitive activity of children based on visual and critical thinking with the help of answers from educators, to listen to their suggestions.

Questions for the questionnaire of educators:

1. Are you familiar with the terms "critical thinking" and "visual thinking"?

A. Yes B. No C. Not really familiar

2. Critical thinking is...

A. the ability to comprehensively analyze information and make informed

conclusions; B. it is an innate talent; C.I find it difficult to answer

3. Visual thinking is ...

A. the ability to comprehensively analyze information and make informed; B. thinking in images; C.I find it difficult to answer

4. Are you familiar with the program or methodological guide for the development of critical and visual thinking of preschool children?

A. Yes; B. No; C. Not really familiar

5. Do you organize work in your professional activity aimed at developing the potential of critical and visual thinking of children?If you organize it by what means?

A. Yes; B. No; C. I find it difficult to answer

6. How can signs of critical and visual thinking be determined in preschoolers?

A. from physical success; B. from answers that are analyzed and visual; C. from the interest in coloring books, an exciting game

7. Do you give tasks to children with the heading "true" and "not true"?

A. Yes*;* B. No*;* C. I find it difficult to answer

8. Do you use the "Cinquain" method for the development of children's speech?

A. Often; B. Sometimes; C. I find it difficult to answer;

9. How effective is the Brainstorming technique for preschool children?

A. children do not understand; B. In different ways; C. we do not focus on this technique

10. How effective is the "Six Hats" method for pre-school children? (Write your answer in the specified line)

11. How do the three phases of critical thinking technology for preschool children go?

A. Consciously; B. In different ways; C. We do not focus on stages;

Results. Critical comprehension of visually presented texts has become an urgent need for a person of the information age. The interpretation procedure is not always linear, but it is an important stage in the formation of critical thinking skills of preschool children. For the effectiveness of our research work, we conducted an experiment in preschool organizations No. 194 and No. 45 in Almaty. To start the experiment, we conducted a survey among educators.

The following table 1 shows the survey conducted by teachers of a preschool organization.

Table 1- The frequency and percentage of meetings using the method of content analysis of the results of the survey of teachers of preschool organizations during the experiment (control group)

	Frequency of occurrence the control group (CG) (n=17)												
	A1- question	A2-question	A3- question	A4- question	A5- question	A6- question	A7- question	A8- question	A9- question	A10- question	A11- question	the average value	ώ%
A sufficient level of development of children's cognitive activity based on visual and critical thinking	4	3	5	4	17	17	3	4	5	5	4	71	12,17

The average level is the development of children's cognitive activity based on visual and critical thinking	6	5	5	5	-	-	4	6	6	6	4	47	29,76
Insufficient level of development of children's cognitive activity based on visual and critical thinking	7	9	7	8	-	-	10	7	6	6	9	69	58,05

Table 2 - The frequency and percentage of meetings using the method of content analysis of the results of the survey of teachers of preschool organizations during the experiment (experimental group)

	Frequency of occurrence the experimental group (EG) (n=20)												
	A1- question	A2-question	A3- question	A4- question	A5- question	A6- question	A7- question	A8- question	A9- question	A10- question	A11- question	the average value	⁄6%
A sufficient level of development of children's cognitive activity based on visual and critical thinking	5	4	5	12	20	20	10	10	6	4	4	101	13,05
The average level is the development of children's cognitive activity based on visual and critical thinking	5	6	5	4	-	-	5	5	6	6	4	49	32,45
Insufficient level of development of children's cognitive activity based on visual and critical thinking	10	10	10	4	-	-	5	5	8	10	9	70	43,5

Based on the answers given in the table in our research paper, we propose a diagram that contains the indicators of the control and experimental groups before the experiment.

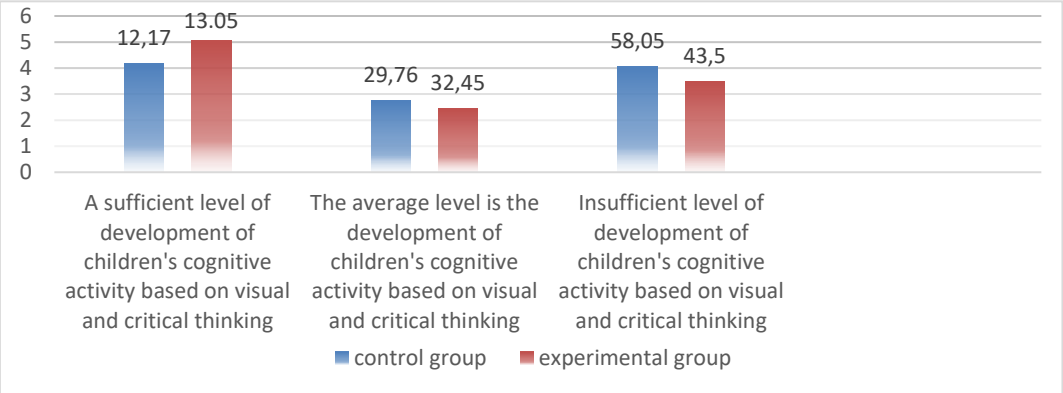
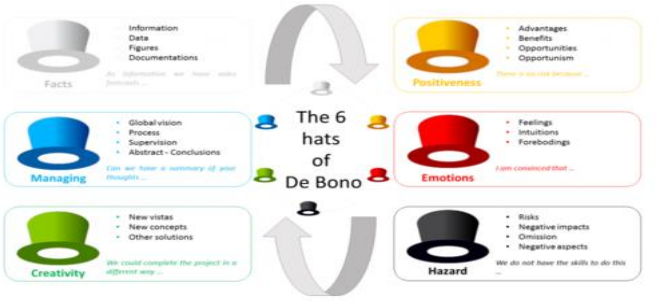


Figure 2 – The diagram after the experiment

Since the indications of the survey results are not satisfied with the continuation of our research in the process of organized activities, children in the preschool group were offered a task in order to improve visual and critical thinking.

Before starting the experiment, we assumed that during the performance of tasks in organized activities, children go through three phases of critical thinking, affecting visual thinking. During the study, this assumption was confirmed experimentally. During the experiment, it was found that with the help of task games, children become interested and willing to work. As a result of the experiment, the directions of critical and visual thinking in the educational process were identified, and therefore we propose a task:

1. Task: Six hats. When solving a creative task, he suggests performing one mental action at a time. The children are divided into six groups, each receiving a hat of a certain color.



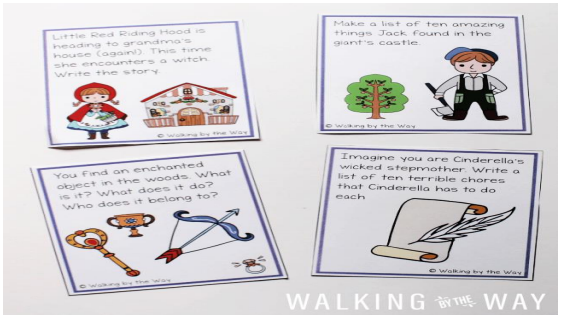
Hat

Management — Blue Hat
Information and Facts — White

Emotions and Feelings — Red Hat
Critical Judgment is a Black Hat
Optimism — Yellow Hat
Creativity — The Green Hat

Figure 3 – Description of the "six hats" reception

3. RAFT reception. The socio-gaming technique of RAFT is borrowed from American educators who develop the ideas of critical thinking technology. The name of the reception comes from the first letters of the words.



R — role
A — audience
F — format
T — topic

Figure 4 - Description of the "RAFT" reception

Discussion. In the article, we proposed in a short form the minimum options for the task that were completed during the experiment. Now we will analyze in detail the above tasks and methods.

Six hats. This is a role-playing method. By wearing a hat of a certain color (literally or mentally), a person plays a certain role that corresponds to it, looks at himself from the outside, looks at the problem from a certain point of view. Changing hats, changing roles, the angle of consideration of the issue. Using the Edward de Bono method, we can change automatic, reactive thinking to intentional and focused thinking. Intentional thinking allows you to work with incoming information and the situation much better. But it is not so easy to send a signal to ourselves that we want to get out of the routine and move from a template, copying type of thinking to an intentional one. The idiom of the hat of thinking can become such a clear and clear signal for yourself and others.

Cinquain. This is a form of free creativity, but according to certain rules. Students can make a cinquain at the "Challenge" stage, then, after studying the information in the lesson, a new cinquain is compiled at the "Reflection" stage, comparing their knowledge before the lesson and after studying a new topic.

Rules for writing cinquain:

One noun word is written on the first line. This is the theme of cinquain.

On the second line, you need to write two adjectives that reveal the theme of cinquain.

On the third line, three verbs are written describing actions related to the topic of cinquain.

On the fourth line there is a whole phrase, a sentence consisting of several words, with which the student expresses his attitude to the topic. This can be a catch phrase, a quote, or a phrase composed by a student in the context of a topic.

The last line is a word summary, which gives a new interpretation of the topic, allows you to express a personal attitude towards it. It is clear that the theme of cinquain should be as emotional as possible.

RAFT. This technique allows the student to effectively immerse himself in the subject content. The acquired knowledge will help him to improvise, build and analyze his actions in the circumstances being formed, to give a moral assessment of events and personalities.

The authors of the reception strongly advise you to record all the stages of work on paper, be sure to instruct the participants accordingly.

1. Explain that all participants should consider all four components of the admission.

2. Brainstorm about the topic. Select several topics from the suggested ones.

3. Draw up a technological map in which to list the possible roles of the audience and the forms of the event.

4. Give students some examples, and then create conditions for them to offer their own options [10].

Taking into account all the work done with children in the preschool group and educators, in the following table (Table 3) we provide a layout of the experiment:

Table 3 - Indicators and methods of visual and critical thinking of children in the preschool group

Indicators	Diagnostic methods	The degree of manifestation of the assessed quality	Number of points	Researchers	
				CG (n=52)	EG (n=50)
Development of visual and critical thinking	The technique of Edward de Bono	Six hats Children strive to demonstrate cognitive development in visual and critical thinking, and perform tasks with interest.	8-10	8 (15%)	6 (12%)
	The Adelaide Crapsey Technique	Cinquain Executes the conceived ideas in stages.	1-5	4 (23%)	5 (18%)
	Abbreviation Role Audience Form Topic	RAFT Highlights the main thing depending on the thought processes, understands the essence of the problem.	0-3	1 (35%)	2 (42%)
Result	the level of visual and critical thinking of children in the preschool group has risen				

Thus, after the work of the teacher-educators with the children of the preschool group, we again conduct the same survey among the teacher-educators in order to find out the hypothesis of our study.

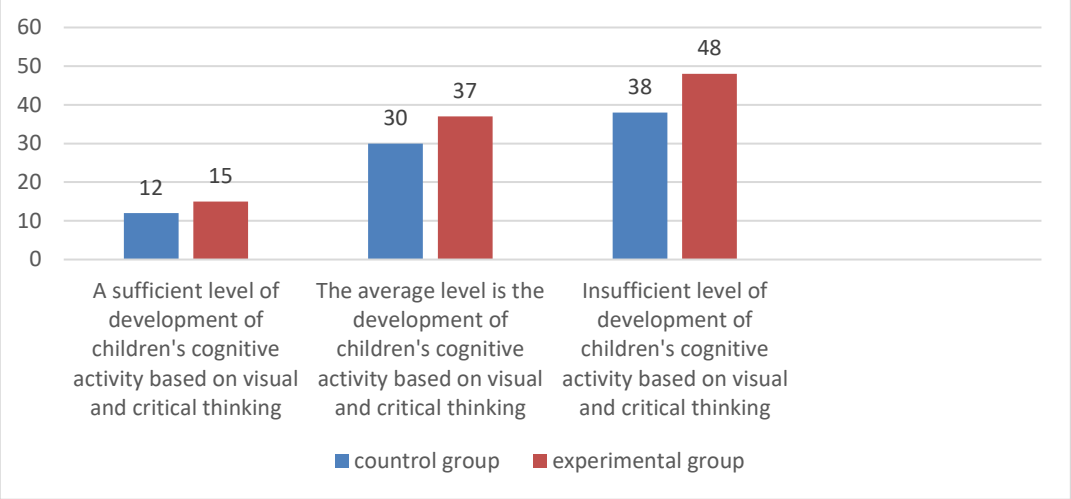


Figure 5 – The diagram before the experiment

Conclusion. At the final stage of an experimental study to determine the effectiveness of the developed methodology for the development of visual and critical thinking of children in the preschool group. Thus, the conducted research allowed us to conclude that with the steady development of educational teaching methods, the hypothesis of the development of visual and critical thinking of children has been confirmed, while developing cognitive activity based on:

The following research topics were conducted: theoretical methods research and analysis of scientific literature on pedagogy, psychology, methodology, modeling, system-structural approach.

Empirical methods were also carried out: analysis of normative documents, educational standards, programs, textbooks on the problem of research, analysis of pedagogical experience. Experimental methods: observation, analysis of personal experience, survey (questionnaire); pedagogical experiment of the results and analysis of the data obtained.

As a result of the analysis of methods of visual structuring of information, we come to the conclusion that visual thinking allows you to activate educational and cognitive activities, provides an intensification of learning, forms and develops critical thinking of children.

References:

1. Доклад всемирного экономического форума. Электронный ресурс. URL: http://reports.weforum.org/global-risks-2019/chapter-one/ (дата обращения 03.05.2024)

2. Киреева, О.В. Развитие исследовательской активности детей дошкольного возраста /О.В. Киреева // Развитие научных идей педагогики детства в современном образовательном пространстве/Сборник научных статей по материалам международной научно–практической конференции. – СПб.: Soiyz 2007,. – 559 С.

3. Герасимов, С.В. Познавательная активность и понимание/С.В. Герасимов// Вопросы психологии. –1994. –№3. –С. 15-25.

4. Муштавинская, И.В. Технология развития критического мышления на уроке и в системе подготовки учителя [текст]: учеб. пособие/ И.В. Муштавинская. метод. пособие. –СПб.: КАРО, 2009. -144 с.

5. Заир-Бек, С.И. Развитие критического мышления на уроке [текст]: пособие для учителей/ С.И. Заир-Бек, И.В. Муштавинская. uchrejdeniy. –М.: Просвещение, 2011. – 223С.

6. Котегова, М.М. Развитие критического мышления как средство формирования ключевых компетенций на уроках химии / М.М. Котегова. [Электронный ресурс]. URL: http://festival.1september.ru/articles/627760/ (дата обращения: 09.11.2018).

7. Муштавинская И.В., Иваншина Е.В. Критическое мышление на уроках естествознания // Естествознание в школе. –2004. –№3. –С. 34-39.

8. Болотов В.А., Спиро Д. Критическое мышление – ключ к преобразованию российской школы // Директор школы. –1995. –№1. –С. 67-73.

9. Конаржевский Ю.А. Анализ урока. –Москва: Пед. ун-т. поиск, 2000. -334 с.

10. Таубаева, Ш.Т. Методология и методика педагогических исследований / Ш.Т.Таубаева, А.А. Булатбаева. – Алматы: Казак университет, 2015. -214 с.

References:

1. Doklad vsemirnogo ekonomicheskogo foruma [ReportoftheWorldEconomicForum]. [Elektronnyɯresurs]. URL: http://reports.weforum.org/global-risks-2019/chapter-one/ (data obrasheniia 03.05.2024)

2. Kireeva O.V. Razvitie issledovatelskoy aktivnosti detei doshkolnogo vozrasta [Development of research activity of preschool children]// Razvitie nauchnyh idei pedagogiki detstva v sovremennom obrazovatelnom prostranste/Sbornik nauchnyh statei po materialam mejdunarodnoi nauchno – prakticheskoi konferensii. – SPb.: Soiyz, 2007. – 559 s.

3. Gerasimov S.V. Poznavatelnaia aktivnost i ponimanie [Cognitive activity and understanding]// Voprosy psihologii. – 1994. –No3. –S. 15–25.

4. Mushtavinskaia I.V. Tehnologiia razvitiia kriticheskogo myshleniia na uroke i v sisteme podgotovki uchitelia [Technology development of critical thinking in the classroom and in the teacher training system]: ucheb. metod. posobie. –SPb.: KARO, 2009. –144 c

5. Zair-Bek S.I., Mushtavinskaia I.V. Razvitie kriticheskogo myshleniia na uroke [Developing critical thinking in the lesson]: posobie dlia uchiteleiobsheobrazovat. uchrejdeniy. –M.: Prosveshenie, 2011. –223 s.

6. Kotegova M.M. Razvitie kriticheskogo myshleniia kak sredstvo formirovaniia kliuchevyh kompetenciyna urokah himii [Development of critical thinking as a means of forming key competencies in chemistry lessons]. [Electronic resource]. URL: http://festival.1september.ru/articles/627760/ (qaralgan kuni: 09.11.2018).

7. Mushtavinskaia I.V., Ivanshina E.V. Kriticheskoe myshlenie na urokah estestvoznaniia [Critical thinking in natural science lessons] // Estestvoznanie v shkole. –2004. –No3. –C. 34–39.

8. Bolotov V.A., Spiro D. Kriticheskoe myshlenie –kliuch k preobrazovaniiam rossiyskoishkoly [Critical thinking -the key to the transformation of the Russian school]// Direktor shkoly. –1995. –No1. –S. 67–73. [in Russian]

9. Konarjevskii Iu.A. Analiz uroka [Lesson Analysis]. –Moskva: Ped. poisk, 2000. –334 s.

10. Taubaeva Sh.T., Bulatbaeva A.A. Metodologiia i metodika pedagogicheskih issledovaniy [Methodology and methods of pedagogical research]. –Almaty: Qazaq universiteti, 2015. –214 c.

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PEDAGOGICAL PROBLEMS OF TEACHING CHILDREN WITH SPECIAL EDUCATIONAL NEEDS

Abstract

Recently, inclusive education has become an integral part of our lives. The problem of early assistance to children with existing physical, intellectual, social, emotional, linguistic and other health characteristics and their social adaptation to society is currently extremely relevant in the field of education and healthcare.

The upbringing of children requires special methodological approaches and the creation of a whole range of additional conditions. In the presence of appropriate pedagogical conditions, certain mental processes and qualities develop most easily, which are very difficult to form at later age stages.

Therefore, we consider the principles of children's development in the context of inclusive education, analyzing pedagogical issues.

The article is devoted to the peculiarities of psychological and pedagogical assistance to children with various developmental disorders and special needs. The experience of developing and implementing an early intervention program for children with multiple developmental disorders is shown.

Keywords: inclusive education, children with disabilities, child development, social adaptation, pedagogical conditions.