GOSPODARKA I INNOWACJE

LABORATORIUM WIEDZY Artur Borcuch

Volume: 22 | 2022

ISSN: 2545-0573

THE CONCEPT AND ESSENCE OF DIVERGENT THINKING IN PEDAGOGY AND PSYCHOLOGY

Kholdarova Iroda Valijonovna

Fergana State University, Philosophy of Philology PhD, Senior Lecturer

Umarqulova Muhayyoxon A'zamjon qizi

Fergana State University, Theory and methods of education, 1-year master's degree

ARTICLEINFO.

Keywords:
Divergent thinking, pedagogy, psychology, divergent thinking, cognitive activity.

Abstract

The article discusses divergent thinking and its interpretation in pedagogy and psychology. The concept of divergent thinking is also discussed. The essence of divergent thinking is revealed.

Introduction. Modern pedagogical science defines thinking as the highest level of human knowledge, reflecting objective reality. Up to the present time, many scientific theories have been developed that practice different approaches to determining the essence of thinking and its development in ontogenesis.

Preschool childhood is a unique age, and it is at this stage of life that the foundations for the future development of a person are laid.

Main part. The senior preschool age falls on the period of a child's life from five to seven years, as a rule, at this age the child attends the senior and preparatory groups of the kindergarten [24].

Senior preschool age has distinctive features, in comparison with other periods of child development, which affect the living conditions and requirements at this stage, the relationship of children with the outside world, the psychological structure of the child's personality, his knowledge, thinking and physiological characteristics.

A.V. Zaporozhets notes that at the age of five to seven, a child tries to understand the essence of things, the connection of phenomena, it becomes possible to form representations and elementary concepts, the child has a transition to thinking in general concepts, and new ways of generalization open up for him, since it occurs on the basis of an expanded subject activities [21].

L.S. Vygotsky points out that in the spontaneous experience of older preschoolers, for the first time, pre-conceptual formations appear - complexes, pseudo-concepts. Full-fledged concepts will be formed only in the process of purposeful, organized inclusion in active cognitive activity [12].

In preschoolers, of all the motives of cognitive activity, the emotional attitude of the child directly predominates, and in older preschoolers, even if this motive persists, other motives also appear: the motive of a known social necessity and cognitive interest, which under certain conditions acquires sufficient stability and activity.

IN AND. Loginova and P.G. Samorukova note that the conditions for the formation of cognitive activity as motives for the educational and cognitive activity of children of older preschool age are to ensure their active position in the learning process and a gradual increase in the complexity of the content of knowledge [26; 46].

New requirements are imposed on the knowledge of older preschoolers:

- systematic, that is, the need to develop significant connections in matters of public life and natural phenomena;
- relative commonality;
- Association of objects and phenomena on the basis of essentialcharacteristics.

At older preschool age, children can use ordinary generalizations, they have the opportunity to identify the main features within a single generalization in subjects, combine them in accordance with the selected features and prove the correctness of the generalization. In older preschoolers, the effectiveness of the learning process increases, basic mental skills and operations are formed, such as comparison, analysis, generalization and classification. The foundations of abstract thinking and understanding of cause-and-effect relationships are also being formed. In other words, the transition of knowledge to a higher level is observed in older preschoolers [6].

Senior preschool age is the last of the periods of preschool age, when new formations appear in the child's psyche. This is the arbitrariness of mental processes (attention, memory, perception, etc.) and the resulting ability to control one's own behavior, as well as changes in self-awareness, self-awareness and self-esteem. The appearance of arbitrariness is an important change in the child's activity, the purpose of which is not to change external, surrounding objects, but to master one's own behavior.

Older preschoolers have increased physical and mental abilities. They master the basic movements, physically become even stronger. Physical development is still associated with mental development, it becomes a necessary condition, the background against which the versatile development of the child proceeds successfully. Mental, aesthetic, moral, that is, social, development accelerates in the older preschool age [7].

Children of senior preschool age continue to improve all aspects of speech. They basically correctly pronounce all the sounds of their native language, clearly reproduce words, have the necessary vocabulary for free communication, correctly use many grammatical forms and categories, their statements become more meaningful, expressive and accurate.

By the senior preschool age, an extra-situational and personal form of communication appears, which is distinguished by the need for mutual understanding and empathy, personal motives for communication. Communication with a peer acquires non-situational features, communication becomes non-situational - businesslike; stable electoral preferences are formed, that is, communication develops as an activity [22].

The development of a personality in senior preschool age is characterized by the development of new knowledge, the emergence of new qualities and needs. In other words, all aspects of the child's personality are formed: intellectual, moral, emotional, strong-willed and practical.

L.S. Vygotsky and A.V. Zaporozhets pointed out that in the senior preschool age the child moves from situational behavior to activities subject to social norms and requirements, and is very emotional about them. At this age, instead of the cognitive type of communication between a child and an adult, a personal type prevails, which is based on interest in relationships between people. A child at an older preschool age, as a rule, is aware of what adults like and what they do not like in their behavior, and quite adequately assesses the quality of his actions and the individual traits of his personality. By the end of senior preschool age, children develop self-esteem, its content is the state of practical skills and

moral qualities of the child, which are expressed in compliance with the norms of behavior established in a certain group, for example, in a kindergarten group [21; 12].

In children of older preschool age, there are manifestations of false concern for loved ones, actions aimed at protecting them from anxiety and grief. A child of senior preschool age has the ability to restrain violent, sharp manifestations of feelings to some extent, and he can already hold back tears and hide fear. The older preschooler learns the "language" of feelings - accepted in society forms of expressing the shades of experiences through glances, facial expressions, gestures, postures, movements, intonations [31].

Designing, drawing and modeling are the most common activities for older preschoolers. At this age, elements of labor are also formed, the main psychological meaning of which is as follows: the child must understand that he is doing something necessary and useful for others. Self-service skills acquired by the age of five to seven, experience in working in nature, making crafts allow children to participate more in joint activities with adults. Older preschoolers can move from doing individual tasks to full-time responsibilities: cleaning their own playground, watering flowers, caring for clothes and shoes. Together with the performance of such tasks, children receive a sense of satisfaction from the results of their own work. At the senior preschool age, children master the elements of educational activity. Its main feature is that, doing it, the child changes himself, acquiring new knowledge and skills. In educational activities, the main thing is the acquisition of new knowledge [11].

The older preschool age is characterized by the development of the imagination, especially the strong imagination of the child, manifests itself in the game, where he acts with enthusiasm. However, it is not easy to imagine something deliberately binding the will of children in the older preschool years.

The leading activity of older preschoolers is a role-playing game. It is in it that the child takes on the role of an adult, performing his social, social functions. A child at an older preschool age can already first select all the items necessary for a particular game, and only then begin the game, without grabbing at different things in the process. Along with the role-playing game, the leading type of activity in senior preschool age, children have games with rules: hide and seek, sandals, etc. The ability to obey a certain rule begins to form during a role-playing game, where any role contains hidden rules.

By the end of the senior preschool age, the child develops those qualities (new formations) in the game, which become the basis for the formation of learning activities at primary school age [40].

At the senior preschool age, the child acquires the ability to set goals, his own behavior. This new change in activity and its goals is called the arbitrariness of mental processes and is of decisive importance both for the success of subsequent school education and for the entire further mental development of the child [11].

Obedience to rules requires voluntary behavior, which means that the child is able to act according to a certain pattern or rule and control his behavior. It is in the game, performing this or that role, the child, on the one hand, copies the pattern, and on the other hand, controls his behavior, that is, begins to organize himself.

In the older preschool age, the child still looks at the world with great interest, more and more interested in the surrounding phenomena and objects. The older preschooler tries to master both what he understands at his age, and what he is not yet able to deeply and correctly understand and comprehend. It is at the age of five to seven that children experience the peak of cognitive issues.

The possibilities for processing and organizing information that the older preschooler has do not yet allow him to fully cope with the information flow. The discrepancy between the cognitive needs of the child and his ability to process information can lead to an overload of consciousness with various information and facts, many of which children of older preschool age are not able to comprehend and understand due to their age [33].

Cognitive interests arise in games, in communication with adults and peers, but only in learning, where the acquisition of knowledge becomes the main goal and result of activity, and cognitive interests are formed. In order to satisfy their aspirations, desires and needs, a child of senior preschool age has various ways of learning: actions and their own practical experience; words, that is, explanations, stories of adults. Of great importance for the cognitive development of an older child is a conscious acquaintance with various sources of information, instilling primary skills in using some of them.

During the period of transition to senior preschool age, verbal memory develops especially intensively, children perceive information both by ear and visually. Working with verbal material plays an important role in school education, therefore, in older preschool age, attention should be paid to the development of verbal memory.

The level of development of mental operations in a child of senior preschool age (analysis, comparison, generalization, classification, etc.) helps him to more consciously and deeply perceive and comprehend the available and incoming information about the world around him and understand it [12].

In the older preschool age, the child develops a conceptual or

logical thinking, he is interested not only in those phenomena that he saw directly in front of him, but also in the generalized properties of objects in the environment, and also shows interest in the causes, in the relations of objects, in the process of their appearance or manufacture. A child of senior preschool age is able to distract himself from what he has seen, to identify causal relationships between phenomena, to analyze, summarize new material and form logical conclusions. For the development of cognitive interests, the participation of a child of senior preschool age in various activities is of great importance.

At senior preschool age, significant changes occur in all areas of the child's mental development, he masters a wide range of activities - play, labor, production, household, communicative, both their technical side and motivational - target are formed. The main result of the development of all types of activity is the mastery of modeling as the main mental ability and the formation of voluntary behavior.

At senior preschool age, a child can perform this or that activity for a long time, as long as it is interesting to him, does not require any internal efforts, is based only on involuntary attention.Arbitrariness and mediated attention in older preschool age is achieved through game practice.

Senior preschool age is a favorable period for the moral development of the child, the features of which often manifest themselves throughout the rest of their lives. It was at this time that the foundations of moral behavior and attitudes were laid.

Thus, children of senior preschool age from five to seven years old are distinguished by great physical and mental abilities. Their relationships with peers and adults are becoming more complex and meaningful. Children have the necessary vocabulary for free communication, all aspects of the child's personality are formed: intellectual, moral, emotional-volitional, effective and practical; elements of labor are also formed. The main activity is a game, a game with rules; in the game they reflect not only actions and operations with objects, but also relationships between people. The main changes in the activity, consciousness and personality of the child are the emergence of the arbitrariness of mental processes - the ability to purposefully control their behavior and mental processes. One of the first is the associationist theory, according to which the laws of the development of thinking were associated with the formation and accumulation of connections (associations). The 18th century thinker David Hume and his followers interpreted thinking as a process of accumulation of associations. In accordance with the views of the Würzburg school of O. Külpe, thinking is an internal action (act), the development of thought, the representatives of this school considered the processes of identifying relationships between opinions. The founders of Gestalt psychology, M. Wertheimer and his followers, considered thinking in the context of sudden, unprepared analytical activity aimed at highlighting the essential features of a problem situation.

Modern behaviorism emerged in the 20th century. considers thinking as an adaptation of the organism to new conditions, which are a problematic situation for the organism. The theory of psychoanalysis, developed in the late XIX - early XX century by the Austrian neurologist S. Freud, pays great attention to the problem of unconscious forms of thinking and its dependence on human motives and needs. Humanistic psychology, the ideas of which were put forward by the Swiss researcher K. Jung, points to personality traits that affect thinking (perception of reality, attitude to reality, sense of humor). The operational concept of the development of intelligence in childhood was proposed by the Swiss researcher J. Piaget [11].

The theory of the ontogenetic development of thinking, which arose in the 20s - 40s of the XX century, was developed by L.S. Vygotsky, who considered the development of a child's thinking in connection with the assimilation of previously formed mental actions and operations. The theory of the formation and development of intellectual operations in children was developed by P. Ya. Galperin and is based on the idea of a genetic relationship between internal intellectual operations and external practical actions.

The active theory of thinking was developed by A.N. Leontiev, V.V. Davydov. In this theory, thinking is considered not only as a process, but also as an activity.

At the end of the 20th century, the American researcher D. Gilford formulated a theory in which two dimensions of intelligence were distinguished - convergent and divergent thinking, which made it possible to move away from the classical division into inductive (necessary for solving a problem, based on a general rule and particular observations) and deductive (logical thinking. Subsequently, the criteria for divergent thinking were established, its role in the creation of non-standard ideas, hypotheses, classifications and grouping of information was studied [13].

Not all questions can be resolved by a person with the help of sensory reflection, and then the main tool comes in - thinking. Thinking is the search for answers and the desire for comprehension, it involves many types of mental activities, including observation and attention, memory and curiosity, imagination and judgment. For the first time in science, the concept of "Divergent thinking" was introduced by the scientist J. Gilford. He pointed out the fundamental difference between two mental operations: convergent and divergent. Divergence is defined as the ability to think in different currents, to correspond to the desired phenomenon of exit in the widest "space".

Convergent thinking - (from Latin Convergere - converge) - is a form of thinking based on the strategy of accurately using previously learned algorithms for solving a specific problem, this is when instructions are given on the sequence and content of elementary operations to solve this problem.

Divergent thinking - (from the Latin divergere "diverge, deviate") - is the ability of a person to issue a large number of decisions based on the same data.

The line of research started by J. Guildford and most consistently continued by E. Torrens. The work is based on the idea that the processes related to the solution of a problem situation - from the discovery of a problem to the communication of its solution - are directly related to creativity. E. Torrens includes among the manifestations of creativity not only specific phenomena, but also features that are associated with intelligence. Intersections of intelligence and creativity were found in the experimental study of the characteristics of creativity - fluency, flexibility, originality, speed.

Divergent thinking is not directional thinking, but the ability to think in breadth. It provides a way out of the limits, beyond the framework of the started direction of solving the original problem [13].

Since there is no clearly formulated concept of divergent thinking in domestic and foreign psychological literature, we have made an attempt to give it its own definition, which, in our opinion, most fully reflects its essential characteristics.

Divergent thinking is an active, exploratory, original, productive thinking that has a holistic inversion

discrete divergent character.

Divergent thinking is characterized by creative approach to problem solving, non-standard solutions and ignoring known algorithms and patterns. Its value lies in discovering unconventional sequences and conclusions, in achieving original results.

In order not to stay in place, constant advancement with double acceleration is required. Similarly, in the real life of every child, preschool children's thinking and creative gift cannot tolerate self-satisfaction and stagnation. They exist and develop only in dynamics.

The concept of divergent thinking is better known as the creative thought process. To understand what needs to be developed for the formation of this type of thinking, we list the main properties of a creative approach to the search and development of ideas:

1) speed - the ability to formulate the maximum number of ideas;
2) flexibility - the ability to offer a variety of ideas;
3) originality - the ability to offer non-standard ideas;
4) Completeness - the ability to give your ideas a finished look.

Divergent thinking has been researched by

domestic researchers: D.B. Bogoyavlenskaya, V.N. Druzhinin, A.M. Matyushkin, S.L. Rubinstein, E.L. Yakovleva and other and foreign researchers: De Bono, J. Gilford, A. Maslow, J. Renzulli, A. Rotenberg, E.P. Torrens, D. Filtenson, K. Heller and others. Psychologists G. Allport and A. Maslow believed that the initial basis of creativity is the motivation for personal growth, which is not subject to the principle of pleasure, but according to A. Maslow, it is the need for self-realization, the full and independent implementation of one’s talents and opportunities in life [30].

The studies of E. Torrance, D. Guildford, K. Taylor emphasize that the goal of exploratory divergent thinking is to develop research interest, focus on finding new forms of activity that form thinking skills of a higher level. In addition, divergence activates the ability to evaluate, compare, hypothesize, analyze and classify the received material [13].

In the studies of E. Renzuli, D. Filtenson, divergence was considered as a basic personality trait. The position of J. Piaget is interesting, considering divergence as mediated by upbringing and personal experience, independence of thought and action. The independence of divergent thinking is expressed in the ability to operate with ideas with the constant addition of one's own facts to judgments [42].

To study divergent thinking, A.M. Matyushkin believed that the complete structure of a productive mental act includes the generation of a problem and the formation of a mental task, as well as the search for a solution and justification [31].

Representatives N. Gnatko, V. Druzhinin considers divergent thinking as an integrative property of a person. Consequently, various definitions of researchers and approaches to the study of the problem of divergent thinking show the existence of various positions and opinions. They more clearly formed the concept of divergence, established the criteria for its detection that this type of thinking allows a person to create ideas, hypotheses, and classifications [18].

So, after analyzing the literature on the research problem, we can conclude that the development of divergent thinking in the educational process plays an important role. And in this regard, the works of D.B. Elkonin, who argued that play actions create a zone of proximal development of the child's cognitive sphere [55].

Conclusion. Thus, having analyzed the concept of divergent thinking and the main approaches to its study. It can be summarized that divergent thinking is the ability of a person to issue a large number of decisions based on the same data, a fundamentally different paradigm of mental activity, based on

creativity and the ability to paradoxical thinking, multivariate conclusions and results of the activity process. It is characterized by a creative approach to solving problems, non-standard solutions and ignoring known algorithms and patterns. Its value lies in discovering unconventional sequences and conclusions, in achieving original results.

Literatures

1. Abdujabborovna, K. S. (2021). Pedagogical Conditions Of Professional Direction Of Pupils Of The Orphanage. European Journal Of Innovation In Nonformal Education, 1(2), 158-160.
2. Abdupattoyev, M. (2019). The Congruence And Its Place In Contrastive Linguistics. *ScientificJournalOfTheFerganaStateUniversity*, *2*(2), 101-103.
3. Ahmedova, U. Y. Q., &Axmedova, M. U. B. Q. (2021). VatanimSurati. *Oriental Renaissance: Innovative, Educational, Natural And Social Sciences*, *1*(11), 877-883.
4. Akbarova, Z. (2020, December). Between Concept And Concept In Lin
5. Akbarova, Z. A. (2020). The Study Of The Concept Of" Language Carrier" In Linguistics. In *International Scientific Review Of The Problems Of History, Cultural Studies And Philology* (Pp. 14-19).
6. Akmaljonovna, A. Z. (2020). The Impact Of Linguistic Consciousness On The World Image. *Anglisticum. Journal Of The Association-Institute For English Language And American Studies*, *9*(5), 26-38.
7. Akmaljonovna, Z. A., &Usmonalievna, A. R. (2022). Analysis Of Views On The Formation Of The Linguistic Landscape Of The World. *Anglisticum. Journal Of The Association-Institute For English Language And American Studies*, *11*(1), 11-18.
8. Axmedova, U. (2021). On Certain Conditions Of Striking Coefficients Of Fourier Series To Zero. *ScientificBulletinOfNamanganStateUniversity*, *3*(3), 3-8.
9. Dehqonova, O., &Yusupova, F. (2019). The Use Of Interactive Methods To Increase The Efficiency Of Studying Physics In Secondary School. *ScientificJournalOfTheFerganaStateUniversity*, *2*(2), 20-23.
10. Inter, Fiber Length In. "An International Multidisciplinary Research Journal." *An International Multidisciplinary Research Journal* 41.43 (2017).
11. Kholdarova, I. V. (2021). The Folks Discoveries And Generative Lexemes. *Theoretical&AppliedScience*, (3), 267-270.
12. Kochkorbaevna, K. B. (2022). The Main Directions And Methods Of Work On Vocabulary In Primary School. *InternationalJournalOfInnovativeAnalysesAndEmergingTechnology*, *2*(2), 95-99.
13. Kochkorbaevna, K. B., &Gulomova, O. (2022). Technologies For Teaching Students To Think Independently In The Process Of Analyzing Literary Texts Based On An Innovative Approach. *InternationalJournalOfCultureAndModernity*, *13*, 115-120.
14. Kochkorbaevna, K. B., &Hilola, I. (2022). Developing Pedagogical Abilities In Students Through Introducing Modern Forms And Methods Of Education In The Mother Tongue Teaching Process. *InternationalJournalOfCultureAndModernity*, *13*, 1-3.
15. Kuchkarova, M. A. (2020). Role Of Principles In Teaching The Course Of Theoretical Physics. *ScientificBulletinOfNamanganStateUniversity*, *2*(11), 408-412.
16. Kuchkarova, M. A. (2020). Решение Нестандартных Задач Методом Рассуждения На Уроках Математики В Начальных Классах. *Theoretical&AppliedScience*, (1), 682-685.

17. Mukhtoraliyevna, Z. S. (2016). The Notion Of Non-Equivalent Vocabulary In Linguistics. *International Journal On Studies In English Language And Literature (Ijsell) Volume*, *4*, 70-72.

18. Mukhtoraliyevna, Z. S. (2021). The Use Of Vocabulary Words In The Dictionary Given In The Textbook Of The 1st Class Native Language And Reading Literacy. *International Journal Of Culture And Modernity*, *10*, 39-42.

19. Nurmahamatovna, O. Z. (2021, November). The Place Of The Family, School And Neighborhood In The Formation Of Social And Moral Qualities Of Children. In*ArchiveOfConferences* (Vol. 22, No. 1, Pp. 104-106).

20. Nurmaxamatovna, O. Z. (2021). Content Of Socio-Moral Qualities Of Children Through Tv Shows. *Academicia: AnInternationalMultidisciplinaryResearchJournal*, *11*(3), 1261-1264.

21. Мирзарахимов, Б. Х. (2019). Культура Туризма Как Стратегия Развития Книговедения. In *Перспективные Области Развития Науки И Технологий* (Pp. 57-58).

22. Mirzarahimov, B. (2019). The Factor Of Good Neighborhood And Tourism Development (Philosophical Analysis). *ScientificBulletinOfNamanganStateUniversity*, *1*(1), 140-145.

23. Мирзарахимов, Б. Х. (2019). Культура Туризма Как Стратегия Развития Книговедения. In *Перспективные Области Развития Науки И Технологий* (Pp. 57-58).

24. Mirzarakhimov, B. (2020). Tourism–Is A Modern Means Of Aesthetic Education. *Сборник Статей*.

25. Mirzarahimov, B. H., Narmanov, U. A., Dekhkanova, N. S., Ortikov, O. H., &Uktamov, K. F. The Role Of Uzbek Tourism Culture And Its Historical And Cultural Transformation Processes In Economic Development.

26. Mirzarahimov, B. (2019). The Factor Of Good Neighborhood And Tourism Development (Philosophical Analysis). *ScientificBulletinOfNamanganStateUniversity*, *1*(1), 140-145.

27. Ortikova, Z. (2020). Mechanisms Of Preparing Adolescents For Social Relations In The Era Of Globalization. *Theoretical&AppliedScience*, (2), 661-664.

28. Qo'chqarova, M. A. (2021). Solving Text Problems In Simple And Convenient Ways. *Theoretical&AppliedScience*, (4), 234-236.

29. Valijonovna, K. I. (2022). About Humorous Literature For Children. *InternationalJournalOfCultureAndModernity*, *14*, 5-10.

30. Valijonovna, K. I. (2022). Some Speeches About Spelling. *International Journal Of Culture And Modernity*, *14*, 1-4.

31. Valijonovna, K. I., &Askaraliyevna, U. M. (2021). Use Of Modern Information Technologies In Literacy Classes. *InternationalJournalOfCultureAndModernity*, *11*, 268-273.

32. Zokirov, M. T., &Zokirova, S. M. On Researching Phonetic Level Of The Languages.

33. Zokirova, S. M. (2014). The Issue Of Word Combination In Languages Of Different Structures On The Examples Of The Uzbek And Tajik Languages. *TheWayOfScience*, *135*.

34. Zokirova, S. M. (2016). About The Congruent Phenomenon In The Contrastive Linguistics. *SciencesOfEurope*, (8-2), 45-46.

35. Zokirova, S. M. (2019). Contrast Analysis Of Syntactic Layer Units. *ScientificBulletinOfNamanganStateUniversity*, *1*(8), 250-255.

36. Zokirova, S. M. (2020). Ta'limdaAxborotTexnalogiyalariningVujudgaKelishTarixi. *Молодой Ученый*, (18), 586-587.

37. Zokirova, S. M. (2021). Formation Of Creative Literacy In Modern Youth And The Value Of Mnemonic Technology. *Theoretical&AppliedScience*, (4), 240-243.

38. Zokirova, S. M., &Axmedova, D. O. (2021). Working With Borrowings Given In Dictionaries Of Primary School Textbooks. *Theoretical&AppliedScience*, (3), 275-278.

39. Zokirova, S. M., &Topvoldiyeva, Z. R. (2020). About Borrowings In The Uzbek Lexicon. *Theoretical&AppliedScience*, (4), 701-705