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THEORETICAL AND METHODOLOGICAL FUNDAMENTALS OF DEVELOPING NON-STANDARD THINKING IN STUDENTS

Abstract: Today, the development of non-standard thinking in students is a very important issue, but it is recognized as a factor that determines the development and prospects of science and leads to any inappropriate situations and situations. Also, the formation of non-standard thinking in students is one of the socially important issues of the school education system and should be aimed at adapting knowledge and skills to the real situation. This article analyzes the theoretical and methodological issues of developing non-standard thinking in students.

Key words: education, knowledge, thinking, creativity, creative thinking, creativity, non-standard thinking, skill, learner, approach.

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Introduction

The development of human society, the study of nature and the environment, communication with them and their coordination in the interests of man have been important factors in all periods, and different views and theories have been formed in this regard. This process is a factor that directs humanity towards development, gaining individuality and giving rise to non-standard, contradictory and contradictory opinions in the approaches of scientists, from the common man to the non-standard appearance. From this point of view, a non-standard way of thinking is inherent in human nature, and everyone is faced with creativity in their lives, with the opportunity to change some aspect of it. However, it is precisely this issue that is explained by the type of activity that is understood and not understood, based on the possibility of discovering something or missing it unknowingly. If a person has a non-standard way of thinking, then he has the competence to discover new things.

The main part

It should be noted that having a non-standard way of thinking is a source of creativity, a "engine"

that reveals the results and effectiveness and innovation associated with human activity. Researcher LS Vygotsky's scientific comments on this subject are relevant, in his opinion, creation is the work of a few selected people, in particular, geniuses, who created unique works of art and art, contributed to the development of mankind, made scientific discoveries, technological advances and inventions. the fate of talented people "[30, 144].

Scientists and researchers who have studied the human mind and thinking since ancient times have conducted a number of scientific and practical studies on creativity and its source, and put forward various theoretical approaches. In particular, ancient Greek scientists and philosophers studied the process of non-standard and creative thinking, which is the product of human thought and thought, and put forward a number of scientific and theoretical views in this regard.

Plato developed a mystical theory of professional training and artistic creation in art, advancing his doctrine that the theory of creation is the rational knowledge of ideas, and declared Plato's act of artistic creation to be an illogical act. According to Plato, the source and cause of creativity in art is obsession (directing or subjugating the human mind to

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something), and the artist sees himself as a creative individual who has formed in himself a source of inspiration with sublime influences and charms of divine powers [39].

Unlike Plato, Socrates' theoretical views that creativity, which is the product of human thought, is in some way different from others, and that his achievements in any field are a divine source given to man, support Plato's approach. In his view, all epic poets acknowledge that their art and creativity create beautiful works of art in harmony with the divine inspiration bestowed upon them [39]. Analyzing these perspectives, creativity is not simply illogical or incomprehensible, as Platon pointed out, but a great blessing bestowed on man by God. In our view, everyone has a higher level of ability and talent than any profession or field. However, it should be possible for the state and society (family, MTC, school, community, educational institutions, non-governmental organizations) to realize it in a timely manner with the targeted use of pedagogical methods and tools. The human mind and worldview play an important role in this, it is possible to see the talent and creativity of each child and increase its ability to target innovation, to develop innovative and non-standard approaches in all areas and to serve the interests of the state and society.

Plato's obsession with creativity was advanced, three of which were repeated in the work of aesthetic idealists of later periods.

In our view, the element of curiosity and attention to something in the creative problem of human creativity and non-standard thinking is sensitively stimulated and stimulated, providing the triggers, while the illogical nature of inspiration is not just a wonder and emotional approach to everything. It is understood that the inner spiritual world is connected with it through invisible chains and seeks resources to materialize, to create the existing conditions as much as possible and not to interfere in their activities, as a basis for aesthetic talent.

We believe that this process is a source of creativity for everyone and contributes greatly to the development of creative thinking. Every creative thinking is the common wealth of the state and society, as well as of humanity. In this regard, it is important to pay attention to Aristotle's scientific-theoretical objections, which, in his opinion, the activation of the human way of thinking, a creative approach to everything is an active process that arises from the point of view of its belonging to the perceived type of activity. In his view, a person has a passive mind ("potential mind"), so he sometimes thinks and sometimes doesn't. In order to know, a person must receive a source of knowledge through intuition (sight, hearing) and direct the passive mind to the state of activity, that is, bring the mind closer to the active mind [35]. It should be noted that when it comes to equating the mind with the active mind,

everyone can think, but it means the measures to implement it in the real world, its results and the possibility of further improving its capabilities and effectiveness. Man is always given the opportunity to think, and there is ample basis for choice and approach. Therefore, as Aristotle said, passive consciousness has potential knowledge. If it is put into practice with non-standard approaches and several alternatives, it becomes a product of active consciousness, turns into real knowledge and gives its effect and result.

Aristotle described true intelligence as the consciousness that produces everything and has properties such as a light source. Because light in some sense makes possible colors real. This mind, on the other hand, exists separately, is not subject to anything, does not interfere with anything, and is an activity in its essence.

The non-standard approach in man is the product of constant research and various creative approaches, requiring constant effort. This frees the human mind from the process of regression and serves as a basis for drawing operations-specific conclusions on the basis of more precise operations of thinking, ie analysis and synthesis. As Aristotle points out, knowledge in action is the same as its object, unless the knowledge in the individual's capacity is revealed, it is not knowledge at all. After all, everything that comes into being comes from what actually exists.

Above we can once again substantiate our scientific view that each person has the ability, creative quality and potential for a particular field, which in any case has the potential to emerge in non-standard situations, with the above hypothesis of Aristotle.

When a person studies the essence of things and events, of course, its essence and properties are summed up on the basis of the operations obtained in the process of analysis and synthesis, and the results of logical analysis occur. Of course, this process is the product of the compatibility of the fundamental worldview and creative concepts of the individual, implementing the strategic plan of thinking.

Researcher JE Ermakova analyzes this process from the point of view of the associative approach and puts forward the theoretical view that the elements of all cognitive processes occur in accordance with the nature of the connections between them [32]. From this point of view, the creative activity of an individual is recognized as a product of the processes that take place in the world of imagination and manifests itself as a social reality. We must not deny that creativity is based on certain conceptual factors, coordinated with rational activity, harmonized with the essence of scientific and cognitive understanding. In our opinion, the occurrence of this process is based on a certain algorithm, which creates its movement in the center of interaction of emotionally sensitive "points" that are previously manifested in human thinking.

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If we analyze psychologically, we can see that the elements of creativity that occur at the center of the interaction of emotionally sensitive "points" and its structure are consistent with the theory of the association approach. However, associative psychology has recognized creativity as a non-conscious, emotional approach for a certain period of time, assuming only the conscious, i.e., the product of thinking, as the object of study. But we recognize that any creativity is a product of thinking. The reason is that creativity is unique to each person and is reflected in this or that type of activity.

The problem of human thinking has always been of conceptual importance, and its study has been one of the key factors in the implementation of constructive projects in the life of the state and society. The results of scientific analysis were incorporated into the principles of creativity on the basis of a transformational approach and served as a basis for the implementation of technical and innovative projects for their time. If we analyze the essence of this concept from a pedagogical and psychological point of view, creative thinking is a conceptual improvement aimed at the emergence of scientific research, the search for alternative ways to overcome acute life problems. From a philosophical point of view, the essence of conflicting issues based on conceptual approaches to creative thinking is the development of knowledge based on new ideas and conflicting views, in particular, materialism and idealism, the relationship between being and consciousness, human civilization, religious and mythological ideas and consciousness. we can observe the essence of the primacy of objective knowledge.

Human thinking has also been studied by proponents of the cognitive approach, who have analyzed this process in terms of the idea of 'artificial intelligence'. In the cognitive approach, human brain activity is taken in the form of computer operations, the ability to transform the initially given information into something new is analyzed, and the process of changing the received sensory signal by the brain is studied [37]. In our view, the research conducted by proponents of the cognitive approach is based on the goal of using the product of human thinking in the interests of the state and society, and to identify and nurture existing creative abilities in the future.

In the future, it is necessary to purposefully implement the pedagogical and psychological factors of such differential scientific research, which is of great importance in preventing the loss of creative abilities, which are the intellectual resources of the state and society, and serving the future of mankind.

Researcher E. Torrens, one of the representatives of the psychometric approach to the problem of thinking, analyzed the problem of creativity from a scientific point of view and put forward his views on the problems of ability, lack of knowledge, existing

difficulties and the development of concrete proposals and hypotheses. According to Guilford, creativity is a universal cognitive creative ability, based on the processes of divergence and convergence, as well as the processes of transformation and semiotics [41]. In our view, J.Guilford's creativity is usually based on a strategy of solving problems and tasks, finding many of its solutions, using previously learned algorithms to solve a specific problem, and discovering new approaches in a non-standard situation in terms of sequence and content of elementary operations. advanced the scientific view that

Researcher J. Guilford also notes the following six parameters of creativity. They are: -compatibility - the ability to produce different ideas; ability to identify and formulate problems; specificity - the ability to respond to stimuli in a non-standard way; ability to generate a large number of ideas; the ability to improve an object by adding certain details; the ability to solve problems, i.e. the ability to analyze and synthesize [41].

Analyzing the above parameters of the researcher's creativity, we can distinguish the following elements of the creative approach, which is specific to the individual:

-first, clarity in thinking, with a divergent and convergent approach that occurs over a period of time, and a general conclusion;

-second, mental deformation and mobility, ie a rapid transition from one idea to another and a logical approach;

- Third, individualism in thinking, that is, the promotion of optimal opposing and progressive ideas in the approach from general to specific and from particular to general;

- Fourth, a sympathetic approach to the environment and a high level of curiosity, ie a conscious attitude to natural and social processes;

- Fifth, to have scientific analysis and contradictions, that is, to put forward certain scientific and theoretical hypotheses;

- Sixth, a rational approach, that is, to reflect the real situation, to make practical suggestions and recommendations, and to defend their position;

- Seventh, high sensitivity and reaction, ie the ability to see the impact between subjective and objective factors and respond appropriately;

- Eighth, logic, ie the compatibility of the combination of answers and responses in the process of analysis and synthesis;

- Ninth, creativity, ie a non-standard approach to problem and problem solving, as well as the priority of logic in the conclusions;

- Tenth, to generalize the conclusions, that is, to make a clear and rational decision by rounding up the details of the issue and the problem.

From this point of view, the p of creativity proposed by us above From this point of view, the creative approach to the parameters proposed by us

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above, the creative approach, that is, the manifestation of creativity in non-standard situations, is directly related to the breadth of the human imagination, the ability to fantasize and advance scientific theoretical hypotheses.

If he is rich in life experience, reads a lot of books, analyzes the events and happenings in the activities of himself and others, the process of their occurrence and features, the elements that give a preconceived notions are embodied in the imaginary world. In short, the enrichment of the human experience serves as a basis for the further expansion of the world of creative imagination.

In the psychological and pedagogical literature studied in the process of scientific analysis of research, creative thinking and creative imagination are studied as a separate source of scientific research [2-9]. Creative thinking and creative imagination, based on the experience gained during human life, can not only be the creator of something new, but also to express in their personal activities ideas and thoughts that can not be imagined by other people, the product of spiritual and material creativity. From this point of view, we promote the scientific view that creativity and creativity are an integral part of the human imagination, and we agree with the above-mentioned researchers who think about it.

As researcher V.N.Drujinin points out, we gain new experience and start building or creating something during it. It depends on the scale of our fantasy. The human imagination may or may not correspond to reality, but it depends on a creative approach to the situation that expresses the desire to reveal it [31].

Creativity and imagination in man express the factors of creativity and constructiveness and reflect the essence of improvisation. The lack or lack of a database in the process of doing something by an individual serves as a motivator for the emergence of a creative imagination and the implementation of a creative approach to the missing information.

Creative imagination and a creative approach to the essence of the problem provide constructive ideas and alternative ways of solving the problem, offering a number of non-standard solutions. From this point of view, we believe that a creative imagination and a creative approach serve the rational modeling of things and events, events and processes, and allow it to be presented in visual images. According to our scientific considerations, the combination of rational modeling and visual imagery in fantasy, creative imagination and a creative approach leads to the emergence of a scientific hypothesis and can provide a way and result to solve an existing problem.

We will try to substantiate the above scientific considerations with the following scientific views of the researcher V.A. Yasvin. In his view, the creative imagination and fantasy, as well as the scientific hypothesis, bind the compositional creativity to a

whole chain of links and serve as a basis for human creative approaches. Creative imagination transforms something new, creates fantasy models and emphasizes solutions, while scientific hypothesis focuses on the correct search for solutions that are relevant to the essence of the problem. This creative approach creates a "finished product" that is interconnected in a chain link fence that belongs to human activity [44].

An analysis of the scientific literature on the issue of creative approach suggests that the idea that creativity in the individual is also related to social factors has been advanced [10 - 19].

According to the scientific analysis of the researcher NV Markina, the most in-depth study of socio-psychological factors in the dynamics of creativity was carried out in the scientific research of T. Emeyal. T. Emeyal highlighted the following factors that negatively affect creativity: Fear of failure leads to a reluctance to take risks; paying too much attention to order and tradition; not being able to see his own strengths and the strengths of other people in the team; much hope for efficient algorithms; unwillingness to advance their ideas; reluctance to play overuse of rewards [38].

Researcher EL Yakovleva has experimentally proved that high sociometric status among high school students does not always lead to the adaptation of creative leadership development programs. puts forward [43].

While we have seen the effect of social factors influencing creativity on the extinction of T. Emeyal's approach, we have observed in EL Yakovleva's research that in the social approach, group relations are one of the factors that create creativity. From this point of view, given the direct influence of social factors on the emergence or extinction of creative imagination and creative approaches in the individual, the child's ability in family and educational institutions, his free thinking, any approach to the issue to create the necessary conditions and psychological it is required to refrain from any means of interaction. If we approach it from the point of view of our national mentality, we will prioritize education and upbringing, which eliminates the creative abilities put forward by the researcher T. Emeyal. This leads to the extinction of any talent and creativity to ignorance and decline, destroys the confidence of young people in themselves and in the future, and serves as a basis for increasing the mood of dependency. The proliferation of this category of individuals in society does not only benefit itself but also the community.

It should be noted that the ability of an individual to be creative is not only hereditary, but also a characteristic of a vitally formed personality, based on scientifically fundamental sources. However, today it is necessary to fully reveal the opportunities for the development of individual creativity and creative

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approach through education, as well as a comprehensive study of the shortcomings in this area from a scientific point of view.

From a pedagogical and psychological point of view, 3 years is a very good time to develop creative abilities, at this age children have a very high level of curiosity and a great desire to learn things and events and the connections between them. During this period, their spiritual and material support, the creation of the necessary conditions will serve as a basis for the accumulation of experience and knowledge necessary for a creative approach and creative imagination in the future. It is during this period that the elements of creative imagination are formed in the child's personality, and the existing curiosity forms the basis of creativity, combined with stereotypes that direct the study of the essence of the problem to the elements of detail, which requires first of all freedom. Especially considering that a child's creativity is combined with behavior based on play activities that are typical of the age, in this process we should not only limit the child's activities, but also take measures not to interfere.

Researcher J.E. Ermakova puts forward her scientific objections, substantiating this position with the scientific opinion of the researcher R. Sternberg that the adaptation of man to the external world is based on the creative behavior in his efforts to change it [32].

From this point of view, we can say that in the organization of relations with the outside world during human activity, the creative approach to the processes that take place in it requires first of all the ability to adapt, secondly the choice of the external environment, and thirdly the attitude to change. occurs, resulting in the manifestation of human conscious activity. It is the end of these processes with the result of perceived activity, thinking is recognized as an example of creativity formed on the basis of analysis and synthesis.

Researchers GI Ruzavin, BCStyopin, MKSotiboldieva, KSTodjibaeva, T.S. N. Shcherbakova, E.L. Yakovleva, E.A. Yakovleva, A.V. Leibina, E.P. Ilin, B.M. Velichkovskiy, Yu.V. Velichko and others [20-29].

From this point of view, thinking is a process of reflection of objects, creative change of objective and subjective images in the human mind, elimination of contradictions in life, formation of new ideas and setting goals and discovering plans for their implementation. reveals its essence by ensuring compliance.

From a pedagogical point of view, the problem of creative thinking and creativity is coordinated with the problem of "production". Because in the creative process, many new ideas and creative products emerge. From this perspective, the thought process is based on the "production" and reproductive component. A number of researchers have put forward their scientific views on the pedagogical and

psychological nature of creative thinking, the mechanisms of creative activity, the specificity, unique nature and individuality of creative thinking.

Researcher I.Ya. Lerner argues that creative thinking should have a certain product, in the process of creation a person discovers a subjective novelty by demonstrating his individuality [36]. In D.B. Bogoyavlenskaya's scientific point of view, creativity is an situational activity, which is manifested in the desire to go beyond the given problem [1], while Ya.A. Ponomarev, defining the essence of creative thinking and focusing on the mechanism of action, implements the scientific approach that intellectual activity is sensitivity to the by-products of its activity [40].

Based on the above scientific considerations, we provide the following descriptive approach to creative thinking. In our opinion, creativity and creative thinking is the predominance of a non-standard approach in individual creativity, individuality in the creative process, the manifestation of subjectivity in the product of creativity, the priority of non-standard in assessing the situation, compatibility with emotional intelligence.

From this point of view, the creativity and creative thinking of teachers working in the field of education should be given priority to the following factors: first, the ability to demonstrate professional aesthetics and the level of moral consciousness with the content of education; second, the ability to distinguish between individual and general tasks and assignments given to students in the educational process, as well as a creative approach to the issue quickly; third, to determine the competence to form each element of creativity in the educational process; fourth, the ability to see the existing problems in the process of education and upbringing and to recommend several alternatives to the optimal options for their solution; fifth, education and upbringing to see the contradictions between the professional and personal qualities of a teacher, which affect the quality of education and upbringing; sixth, the use of mobility and developmental components in the full expression of creative imagination in self-taught science classes; seventh, the diversity of creativity and creative imagination aimed at achieving effective results in pedagogical activity.

BM Teplov, who studied the creative approach to pedagogical activity, in his scientific views, the creativity of the teacher - based on experience, understanding, idea, individual example, form, style, gradually decreases the component of imitation and, consequently, the creative component of pedagogical activity [42].

Analyzing this idea, pedagogical creativity manifests itself from the moment it refuses to copy through creative imitation and imitation creativity. We fully agree with the same researcher BM Teplov, acknowledging that today we can free the education

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system from the problem of molding it as a technology or a method, and that every teacher of science will be able to fully develop himself and his creativity. we

In this regard, it is worth noting the following scientific comment of the researcher A.V. Leibina, which is similar to the above ideas. From his point of view, a creative teacher in modern conditions is, first of all, a researcher with scientific creative psychological-pedagogical thinking, high pedagogical skills, developed pedagogical intuition, critical analysis, and the need for self-professional development [34].

Conclusion

In conclusion, in today's society, the creativity and creativity of teachers engaged in pedagogical activities in the pedagogical activity serves as a basis for ensuring the following in the educational environment:

- to increase the ability to apply modern non-standard technologies that serve the quality of

education in the educational process on the basis of a creative approach;

- to strengthen the ability to find the intersection between modern education and traditional education and to identify alternatives to existing problems and offer solutions;

- to analyze the shortcomings of educational technologies that affect the quality of education and to develop the ability to search for systematic methods of solving current problems of education;

- to stabilize the practice of consistent improvement of methods and forms of pedagogical activity in education and upbringing on the basis of a systematic approach;

- to focus on innovative activities in the process of education and upbringing, to develop the skills to make new and non-standard and important and promising projects the main aspect of their professional activity.

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