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Creativity - as a motivating factor in teaching in pedagogical universities.

[1]Barno A. Nazarova

ABSTRACT---*This article summarizes the data on the very problem of creativity, the creativity of the individual, on research on this topic, on the components of the very concept of creativity. The characteristic of creativity as the ability to create is given. The significance of the research, the initial positions of the mutual influence of various influences is substantiated. defining the concept of creativity. The main theoretical approaches to the study of the nature and structure of creativity for the development of its development strategy are analyzed.*

Keywords---*creativity; concepts of creativity; mechanisms of creative thinking; phenomenon of creativity*

I. INTRODUCTION

As you know, creativity is the creative ability of a person to accept and create radically new ideas. According to Alice Paul Torrens, creativity includes heightened sensitivity to problems, to the lack or inconsistency of knowledge, actions to identify these problems, to search for their solutions based on hypothesizing, to test and change hypotheses, to formulate the result of the solution. For the evaluation of creativity, various tests of divergent thinking, personal questionnaires, performance analysis are used. In order to foster the development of creative thinking, learning situations can be used that are characterized by incompleteness or openness to integrate new elements, while students are encouraged to formulate many questions [1].

At the same time, Sukhomlinsky V. (2016) shares the concept of creativity and creativity. So, in his opinion, creativity is the activity of the spirit, the intellectual activity of a person. Human creativity is limited in time and space by the abilities of the individual and the boundaries of the conscious part of human life. And creativity is a striving for the process of realizing a person's own capabilities. At the same time, the most famous theories of creativity associated with the names of Guilford, Mednick, Torrens, Amabile, Sterinberg, Lyubart, Vygotsky, Brushlinsky, Ponomarev, Shadrikov, Melik-Pashayev [2-7].

Today, in the field of research of creative personalities, such well-known scientific figures as R.Ketelu, M. Collins, D.Mackinnon, C.Martindandale, and the so-called "I" in connection with creativity (F. Barron, H.Gow, R.Kettel) and ending with the study of creativity as self-activation (A. Adler, M. Boden, A. Maslow, C. Rogers) and its relationship with psychiatry (G. Eisenk, A. Ludwig, F. Post).

In the psychology of creativity, cognitive, psychometric approaches are distinguished, as well as mystical, motivational, social-personal, etc., on the basis of which a number of concepts have been developed that define the concept of "creativity" [8].

[1]*PhD, Doctor of Pedagogical Sciences at the Scientific Research Institute of Pedagogical Sciences of Uzbekistan named after Kari Niyazi*

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According to the concept of the reduction of creativity to the intellect, the level of creative abilities is determined by the level of development of the intellect (L. Termen, K. Cox). Thus, G. Ayzenk and D. Wexler argue that a high level of development of the intellect implies a high level of development of creative abilities and vice versa.

Thus, the theory of D.V. Epiphany, which considers creativity as situationally unstimulated activity (the desire to go beyond the given problem) and introduces the concept of "creative activity of the individual." The main indicator of creativity, according to this theory, is intellectual activity, combining two components (cognitive - general mental abilities) and motivational. The criterion for the manifestation of creativity is the nature of the person performing the thought sessions offered to him.

Breeding creativity and a high level of development of the intellect is found in Ya.A. Ponomareva, who identifies creativity with the development of by-products of its activities, that is, new non-standard ideas that arise during the creative process. Thus, Ya.A. Ponomarev considers creative activity as a process of creating a by-product.

The concept of "intellectual range", formulated by V.N. Druzhinin, is that individual and creative achievements are determined by the level of general intelligence, which is a prerequisite for creative achievements, dependent on its search motivation and level of general ideas.

Within the framework of the cognitive direction in the study of creativity, many researchers place special emphasis on the study of the creative process. The stages, stages and phases of the creative process were considered in different ways by numerous researchers. The main thing that unites well-known in psychology descriptions of the creative process is the presence in the vast majority of their conscious and unconscious stages, and the process starts in a conscious sphere, continues in its unconscious structures and again falls into the realm of consciousness [15].

Creativity means the creation of the new, by which can be meant both transformations in the consciousness and behavior of a person, as well as products generated by him. According to this understanding, not only created paintings, machines, theories, but also all the facts of a person’s personal growth can be considered as creative. If creativity is considered as a process that has a certain specificity and leads to the creation of a new one, then creativity is considered as a potential, an internal human resource. The problem of creativity causes many scientific disputes and disagreements among researchers. In the Big Psychological Dictionary, creativity is interpreted as “a person’s creative abilities, which can manifest themselves in thinking, feelings, communication, certain activities, characterize the person as a whole and / or its individual sides, products of activity, the process of their creation”. In F. Williams, creativity is the ability to generate unusual ideas, deviate thinking from traditional schemes, and quickly solve problem situations. E. Fromm defines creativity as the ability to wonder and learn, to find a solution in non-standard situations; focus on the discovery of new and the ability to deep awareness of their experience. According to R. Sternberg, intellect is involved in the solution of new problems and in the automation of actions. In relation to the outside world, intellectual behavior can be expressed in adaptation, the choice of the type of external environment or its transformation. If a person realizes the third type of relationship, then at the same time he will show creative behavior [10].

Creativity is a complex and multidimensional phenomenon, which also manifests itself in terms of individuality (personality) and cognitive processes. Recently, integrative trends have emerged in this area of research. O.M. Razumnikova and O.S. Shemelina (2015) discovered interactions of the personality and cognitive characteristics of subjects, differing in the degree of originality of thinking. R. R. McCrae, studying the interaction of various parameters of

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divergent thinking with personality characteristics, came to the conclusion that combining these two research plans is legitimate in studies of creativity. Nevertheless, there is very little integration work, and therefore the problem of integrating personal and cognitive plans for studying creativity remains relevant, and requires new and additional research [22].

In this vein, it should be noted the inadequacy of the development of the problem of the interrelationship of the self-concept and the motives of achievement with creativity. Data from a number of studies indicate that the self-concept is related to creativity and can be considered as one of its sources (G. V. Kovaleva, 2002; RB Cattell, 1979; M. Csikszentmihalyi, 1997; HJ Eysenck, 1995; JP Gough, 1979; RR Runco, 1999). Many papers emphasize the importance of achievement motivation for creative success (Yu. D. Babaeva, 1997; T. O. Gordeeva, 2006; A. I. Savenkov, 2000; KA Heller, 1997; RJ Sternberg, 1999, 2002; BS Bloom, 1985; J, S, Renzulli, 1986, etc.). The literature also contains a large amount of data on close relationships between self-concepts and motives (S. M. Andersen & S. Chen, 2002; A. Bandura, 1999; H. Heckhausen, 1982; E. M. Skaalvik, 1997, etc.). Moreover, according to some ideas, the origin of motives goes back to the self-concept (L. Gaertner et al., 2002; C. Martindale, 1980; T. Pyszczynski et al., 2004). Therefore, it is legitimate to consider the self-concept and the motives of achievement as factors of creativity as a relatively independent problem. However, studies of self-concept and motives of achievement in the context of their possible joint contributions to creativity have not been conducted. This problem remains open and requires study [9].

In this paper, the problem of contributions of self-concept and motives for achievement in creativity is studied from the standpoint of a multidimensional (polymodal) approach to self-concept and achievement motives (L. Ya. Dorfman, 2004, 2008) and continues the line of research on the relationship between self-concept and cognitive processes (V. A. Gasimova, 2008; E. V. Dudorova, 2004; G. V. Kovaleva, 2002; O. P. Fenogentova, 2003; S. A. Schebetenko, 2004), Self-Concepts and Creativity (L. J. Dorfman, 2002, 2005; G. V. Kovaleva, 2002; I. V. Smirnova, 2002). However, within the framework of the conceptual model of polymodal I and polymodal motifs, the achievement of the personal and cognitive aspects of creativity have not been studied together. In this paper, an attempt has been made to fill this gap, which also determines its relevance [17].

As is known, the teacher's relevance to the trends of the changing school is determined by the presence of a variety of personal and professionally important qualities, among which we can distinguish leadership manifestations, activity and initiative, adaptability and readiness to make reasonable pedagogical decisions. They not only characterize the teacher’s compliance with high standards of professional activity, but also determine his ability to predict and implement the directions of his activity in changing conditions, i.e. demonstrate professional mobility, which, in addition to providing instrumental advantages, contributes to the development of the teacher’s subject position, forcing the boundaries of pedagogical routine and routine, saturating professional activity with new meanings and ideas. At the same time, educational practice indicates that many teachers, regardless of length of service, professional and qualification level, do not have the level of professional mobility sufficient for mastering new segments of professional activity, changing the content and nature of their work, and translating their needs into pedagogical work, inclinations and opportunities [12].

In determining the place of creativity in the personality structure, the problem of inconsistency of scientific data in studies of creativity and its relationship with personal characteristics, in particular, the motivational component (VE Milman, LB Ermolaeva-Tomina, EP Ilyin, D. B. Bogoyavlenskaya, AM Matyushkin, I. Poufal-Struzik, Y. Kozeletsky, MS Semiletka and others).

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The selection of specific types of creativity is presented as a solution to the problem of inconsistency of ideas about the relationship with it, various mental features arising from the study of creativity in general. The possibility of specification of creativity is also associated with the development of the psychology of being in the real spheres of human life (in particular, professional life). In connection with the variability and diversity of the social world, specific professions, in which socionomic space is a place for personal realization, impose special requirements on the individual. In order not to be built in, but to master and restructure this space, individuals need to display creative potential, and in this sense, to be a professional. Specific professional socionomic space implies social creativity and social creativity that ensures it (hereafter, the NC). Highlighting for analysis a relatively new psychological category, we note the insufficient development of the term “social creativity”, its absence in psychological dictionaries with the existence of various approaches to its consideration, developments, and research devoted to this topic (GV Sorokoumova, AA Popel, TN Berezina, E. L. Soldatova, A. A. Golovanova, D. L. Johnson, A. N. Voronin, I. E. Strelkova, A. L. Yuzhaninova, N. P. Maltinnikova, etc.). Interest in the compelling reasons for the creative potential of an individual is due to the inconsistency of data on the motivational component of creativity, despite the numerous studies of this kind. The ineffectiveness of motivating creative manifestations of the individual by the influence of external reinforcements confirms that the stimulation of manifestations of creativity occurs in a completely different way: in the first place are internal motives belonging to the personality itself and encouraging it to implement its own strategies and meanings. The question of the motivational component of creativity is controversial, and the study of the motivations for social creativity is one of the ways to solve it. Along with the obvious relevance of the problem of studying certain types of creativity, there is the problem of categorical lack of development and the lack of a diagnostic tool for measuring the social creativity of an individual [25].

Exploring the problem of creativity, we came to the conclusion that in the modern world there is no unequivocal definition of creativity. The concept of "creativity" originated in the 50s of the twentieth century and is associated with the name of J. Gilford. He identified 6 criteria of creativity:

1) Ability to detect and pose problems

2) Ability to generate a large number of ideas

3) Flexibility - the ability to produce a variety of ideas

4) Originality - the ability to respond to stimuli outside the box

5) The ability to improve the object by adding details

6) Ability to solve non-standard problems, i.e. ability to analyze and synthesize.

In research, creativity is understood as:

1) The type of intellectual ability (J. Guilford, N. Marsh, S. Bert)

2) Creative style of activity (F. Headdon, G.Mitton).

3) The result of creative achievement of personality (E.P. Torrens, E.G. Olgetri, J.Foster, F.Yulak)

4) The property or the complex characteristic of the personality (M. S. Bershtein, A. V. Brushlinsky, N. F. Vishnyakova, Y. A. Ponomarev, K. R. Rogers, R. E. Tafel)

5) The peculiarity of the intellect or the highest level of intellectual activity of thinking (D. B. Bogoyavlenskaya, 0. K. Tikhomirov) [14].

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The famous American psychologist of the twentieth century spoke about creativity as a specific kind of ability. L. Thurstone, presenting creativity as the ability to quickly assimilate and use new information in different ways. He noted the role in the creative achievements of inductive thinking and some features of perception, and also drew attention to the fact that creative solutions more often come at the moment of relaxation, dispersion of attention, and not at the moment of focusing on solving the problem.

Abroad, the study of creativity goes in two directions. The first direction is connected with the question of whether creativity depends on human intelligence and whether it is oriented towards measuring cognitive processes in connection with creativity. The second direction is to find out whether a person with his psychological features is an essential aspect of creativity and is characterized by attention to personal and motivational features. Gilford identified 16 hypothesized intellectual features that characterize creativity. Among them:

1) The fluency of thought (the number of ideas that arise in a unit of time)

2) Flexibility of thought (ability to switch from one thought to another)

3) The originality of thought (the ability to produce ideas that differ from the generally accepted views)

4) Curiosity (sensitivity to problems in the world)

5) Ability to develop hypotheses

6) Logical independence of reaction from stimulus

7) Fantastic thought (complete isolation of the response from reality in the presence of a logical connection between the stimulus and the reaction

J. Guilford combined these factors under the general name “divergent thinking”, which manifests itself when the problem has yet to be defined or disclosed, and when there is no pre-prescribed solution (unlike convergent thinking, it’s a solution to the problem) [24].

In the problem of creativity R. Muni identified four main aspects: the creative process, the creative product, the creative personality, the creative situation.

At the same time, in the creative process, there is a preparation stage (problem identification, information gathering, solution attempts), an incubation stage (seemingly avoiding a problem, finding difficulties, unconscious maturation of the solution), insight (enlightenment, restructuring, a sudden finding of a solution), a verification stage (solution check).

J. Davidson, as the central mechanism of the creative process, advanced insight, that is, in her opinion, the creative solution would be what was obtained as a result of inspiration. Selective decoding insight has been highlighted, allowing to separate relevant information from the irrevalent, selective combining insight, making it possible to correctly match the pieces of information, selective comparison insight, which allows us to associate the resulting information with existing ones [18].

According to L.S. Vygotsky plays an important role in creativity in the imagination, the successful work of which is directly dependent on the wealth and diversity of the person’s previous experience. The mechanism of imagination consists in the recombination of the elements already present in the memory and the construction in a new system.

The results of the conducted studies show the dependence of the estimates of creativity on past experience, the nature of the acquired knowledge and skills, and environmental features. Studies show that the environment should differ in the

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wealth of information and great freedom, free atmosphere, as well as from the individual characteristics of the individual. The personal approach to the study of creativity is characterized by particular attention to the emotional and motivational factors included in this property. Some personality traits (self-reliance, aggressiveness, complacency, non-recognition of social restrictions and other people's opinions) that distinguish creative from non-creative are highlighted. Interestingly, studies conducted on children and young people showed that the personality traits of young and adult creative individuals are the same. This means that creativity can be predicted on the basis of the manifestation of personal characteristics at a fairly early age.

The concept of E.P. Torrens - "Theory of Intellectual Threshold" or IQ (intelligence coefficient). If IQ is below 115-120, then creativity and intelligence are part of the same author, with IQ above 120, creativity becomes a factor independent of intelligence. The result of the study of E.P. Torrens was the measurement system of creative abilities. The author found that the hereditary potential is not the most important indicator of future creative activity, namely the influence of family, parents, schools, teachers will contribute to the development of creativity. In studies E.P. Torrens and J. Guilford revealed a high positive correlation between the level of IQ and the level of creativity [23].

At the same time, M.Vollah and N.Kogan believe that the intelligence factor and the creativity factor are independent, but interrelated not only at the level of personality traits, but also at the level of the whole cognitive process. The basis of their research was the proof that the motivation of achievements, the competitive motivation and the motivation of social approval block self-actualization of the personality, complicates the manifestation of its creative abilities. The researchers, using the independent factor of intelligence and the factor of creativity, identified 4 groups of people, differing in ways of adapting to external conditions and solving life problems.

As many researchers note, the creative personality has a high emotional excitability. There is information about a direct relationship between emotional stress with concomitant physiological changes and the level of the creative process. Such factors as joy, passion, a surge of sthenic emotions, desire for domination, risk, independence, disorder of order, removal of feelings of fear and frustration, have a favorable effect on creativity. Emotional correlates of creativity are most revealing, and without emotional activity, according to many researchers, creativity itself is not observed [20].

A. Maslow believes that the main impulse of creativity is the need for self-actualization, i.e. human desire for the full and free realization of their inclinations and personal capabilities. In self-actualization, the individual exhibits integrity and overcomes splitting. Through episodes of self-actualization, a person becomes more open to experience, perfect and spontaneous, humorous, transcendental, and independent of lower needs.

Due to the episodes of self-actualization, a person reveals his possibilities close to the essence of his being. Creativity is one of the important characteristics of self-actualization.

A. Maslow relies on the experience of especially creative people. At the same time, however, he understands creativity widely. Creativity is a quality that can be applied to any task in life. If personality enhancement is paramount, and painting is a minor task, then personality enhancement is more important and creative than painting.

K. Rogers described the tendency towards self-realization as an incentive force developing within the framework of encouraging environmental assessments. The concept of an actualizing K. Rogers trend includes the entire area of motivation, tension, needs, stress reduction, as well as creativity, which is expressed in the search for trends towards pleasure.

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According to K. Rogers, an actualizing tendency characterizes a person as a whole, but not its individual components (such as “I”). Ideal conditions of human life are created through the full functioning of the individual. This means that a person freely expresses his feelings, performs independent actions, is creative and lives a “good” life. The unadapted person is the opposite pole in relation to a fully functioning individuality. A non-adapted person is a defensive person. He rather maintains his life than improves it and raises her price. He lives according to a predetermined plan, feels dependent on others, and not creative. A person completely realizing himself, on the contrary, is free from defenses, open to experience, creative and able to live a “good” life.

A.M. Matyushkin structures the creative mind as follows:

a) the dominant role of internal (cognitive) motivation;

b) research creative activity, expressed in the ability to detect new, in the formulation and solution of problems;

c) the possibility of achieving original solutions;

d) the ability to predict and anticipate;

e) the ability to create ideal standards that provide high aesthetic, moral, intellectual evaluations

Integrative in their essence are the studies of LB Yermolayeva-Tomina. For the author, creativity is not stimulated from the outside, search and transformative activity. It is based on special creative abilities, which have the makings of, and manifests itself in any kinds of activity. The complex of primary creative properties and qualities are: a combination of several accentuated character traits, a high level of development of the perceptual sphere and some one quality in the cognitive sphere, the specificity of the interaction of the left and right hemispheres, regardless of the problem being solved. However, if a favorable combination is absent, it can be compensated by external factors - the efforts of teachers and educators, a special stimulation of creativity. Like the representatives of humanistic psychology, LB Yermolaeva-Tomina proposes to consider creative activity (creativity) as an ideal model of the mental construction of the personality, as a standard of mental health.

The youngest concept proposed by R. Sternberg and D.Lavert, known as the “investment theory,” defines creatively the person who seeks and is able to buy ideas at a low price and sell at a high price. Creativity, according to R. Sternberg, is the ability to take reasonable risks, the willingness to overcome obstacles, intrinsic motivation, tolerance for uncertainty, the willingness to resist to the opinions of others. The manifestation of creativity is impossible if there is no creative environment. According to R. Sternberg, creative manifestations are determined by the following factors: intelligence, as ability, knowledge, style of thinking, individual traits, motivation, external environment. At the same time, the components of intelligence are important for creativity: synthetic ability (new vision of the problem, overcoming the boundaries of everyday consciousness), analytical ability (revealing ideas worthy of further development), practical abilities (ability to convince others of the value of the idea).

K.V. Taylor, considering creativity as a problem solving, identifies 6 groups of definitions of creativity:

1) the definition of the type of "Geshalt", which emphasizes the creation of a new integrity

2) definitions focused on “final product” or “innovative” definitions, which emphasize the production of something new

3) “aesthetic” definitions that emphasize self-expression (the ability to think in an unexplored area without being limited by past experience)

4) “psychoanalytic” definitions in which creativity is defined in terms of the interaction “I”, “It” and “Super I”.

5) definitions in terms of “decision-oriented thinking”, which emphasize not the decision, but the thought process itself

6) other various definitions [19,21].

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II. CONCLUSION

Thus, the concept of "creativity" is treated as a multidimensional and multidimensional concept. In a broad sense, it is an independent phenomenon, which is a single integral system and functions in all spheres of human life as a creative process, a creative product is the result of a creative process and a quality property of a creative type.

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