



FORMATION AND EVALUATION OF STUDENTS' CREATIVE THINKING SKILLS

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Annotation: This article for the first time emphasizes the role and importance of the formation of creative thinking skills in the development of creative abilities of future specialists. It is argued that creative thinking helps to find unusual solutions to problems, at the same time we should not confuse it with critical thinking, but rather should look at "brothers" who complement each other in solving impossible problems.

Keywords: creativeness, creative thinking, creative activity, flexibility, fluency.

Creativity characterizes the personality as a whole or certain of its features, sharpness of mind. Creativity is also reflected as an important factor of talent. Creativity acquires a research character, character, intensively develops purposeful creative thinking in students. American psychologist P.Torrence believed that creativity is a problem or the promotion of scientific hypotheses; verification and modification of a hypothesis; definition of a problem based on the formulation of the results of the solution; expresses sensitivity to the mutual contradiction of knowledge and practical actions in solving the task.

Creativity, like any other quality (quality), is not formed immediately. Creativity is consistently formed and developed at certain stages. The presence of creative qualities in an employee directs his personal abilities, natural and social forces to a high-quality, effective organization of professional activity.

The presence of creativity qualities in employees working in the higher education system helps them to generate new ideas that differ from traditional approaches to the organization of the educational process, not to think in one form, to show originality, initiative, not to tolerate uncertainty. Consequently, an employee with the qualities of creativity focuses on a creative approach to the organization of his professional activity, being active in creating ideas that contribute to the development of educational activities, personal qualities of new, advanced, future employees, independent study of advanced professional achievements and experience, as well as gaining experience in a constant, consistent exchange of views on professional achievements with colleagues.

Usually, the ability of employees to be creative is provided by their desire to solve professional problems, carry out research or research projects and achieve mutual creative cooperation.

An employee does not become a creator by himself. His ability to create is formed by consistent reading, working on himself for a certain period of time, and he gradually improves and develops. As in the case of any specialist, during the student years, the foundation is laid for future employees to have creative abilities that consistently develop in the organization of professional activities. At the same time, it is important that the employee himself refocused on creative activity and was able to effectively organize this activity. When organizing creative

activity, an employee needs to pay special attention to solving problematic issues, analyzing problematic situations, as well as creating creative products of a professional nature.

When solving problematic issues and situations, the employee's creative approach to solving the issue contributes to the development of emotional and volitional qualities in him. Posing problematic issues, an employee is faced with facts that contradict his knowledge and life experience. As a result, there is a need for self-improvement, independent reading and learning. The employee's performance of research works and scientific or creative projects further develops the potential of creativity in him.

Innovative knowledge and creative abilities are becoming increasingly necessary to solve global problems that cause the need for innovative and creative thinking in all enterprises and organizations of society.

While the main role of education is to provide students with the quality education that is necessary and necessary for success in society, creative thinking is a necessary need for the development of modern youth.

The goal is not only to identify creative personalities, but rather to describe how the ability of students to think creatively in the search, expression of ideas correlates with the approach to learning, school activities and other features of the education system.

Creative thinking is the ability to effectively participate in the process of developing, evaluating and improving ideas aimed at finding innovative (new, innovative, original, non-standard, unusual, etc.) and effective (practical, effective, economical, optimal, etc.) solutions, acquiring new knowledge, expressive expression of imagination.

Creative thinking helps us find unusual solutions to problems. However, we should not confuse it with critical thinking, but rather look at the "brothers" who help us find complementary solutions to impossible problems.

When evaluating creative thinking, the focus is on developing various ideas, developing creative ideas, as well as competence in evaluating and improving ideas.

If primitive people did not have creative thinking, they would not have invented fire by hitting each other with two lightning bolts, Thomas Edison -an electric lamp, Leonardo da Vinci-a parachute.

In the education system of leading foreign countries in recent years, special, serious attention has been paid to the formation of creative qualities in students and future employees. Boone Bronson, Merriman (2010).), Ken Robinson (2007).), Fisher, Free (2008).), Begetto, Kaufman (2013).), Ali (2011).), Treffinger (2008).) and many other studies, the results of which can be seen.

In addition, teachers are serious about learning the basics of creativity (Begetto, Kaufman, 2013).). Published literature on the formation and development of skills, abilities and skills a creative approach to the professional activities of teachers, organized unconventional lessons based on videos prepared by the Department of education (Ali, 2011; Department of education, 2013).).

Despite significant practical work, many teachers still can't master the experience of how to effectively forming creativity and future employees.

The management bodies of the education system annually focus on achieving high efficiency of educational institutions. For this purpose, a curriculum will be developed, new textbooks will be created. This contributes to the professional growth of both future

employees and teachers. The practical actions carried out to a certain extent generate the need for future employees to achieve achievements, strive for progress, and contribute to some development of their educational cognitive abilities.

However, by the end of the academic year, there are no high positive results in the development of subjects by future employees. Many future employees have lost interest in education. Because of this, teachers do not even think about organizing professional activities with the head of the dog, as it was before. Despite the fact that the bodies governing the education system are establishing new measures to change the activities of future employees who do not want to receive education, teachers who do not want to teach such recipients of education, the situation remains unchanged.

Creativity can be called: the desire for creativity, a creative approach to life, a constant critical look at yourself and analysis. Relying on modern dictionaries of psychology and pedagogy, we can say that a student's creativity can be defined as the level of his thinking, feelings, communication, a special type of activity, creative approach, cognition.

The creativity of a teacher is his courage to look for various original ideas in strict, limited or weakly limited conditions.

The analysis of scientific literature allows us to identify the following interrelated structural components of creativity:

1. Intellectual (mental);
2. Ethics (self-control);
3. Motivational (target);
4. Emotional (emotional excitement).

The creative ability will consist of interdependent parts in life:

1. The purpose of creativity;
2. Creative aspiration;
3. Creative (installation) construction,
4. Creative direction;
5. Creative expressive act;
6. Creative self-management;
7. Creative activity;
8. The level of creative aspirations.

The creativity of a teacher appears and develops in his creative activity. K. In his work "creativity is self-reinforcement" Rogers asks one of the most fundamental questions for a creative person: "Does my lifestyle satisfy me or does it interpret it correctly. The teacher's answer to this question is that his desire for professional and creative heights is high creative competence, and the desire to fully express himself from the creative side is to be a creative person"

Thus, creativity manifests itself in the creative aspiration, creative abilities, creative goals, orientation and self-control of the teacher in his creative activity and indicates to him that he is becoming a mature developing, growing personality with activity, self-control.

Paul Torrance, known as the "father of creativity", identified four creative skills (1987). His research shows that these creative skills can be formed and evaluated:

1. Fluency. The ability to come up with a lot of ideas is based on the word a lot.
2. Flexibility. The ability to come up with different ideas is based on the word transformation.

3. Uniqueness. The ability to come up with an idea that stands out, unlike others, is based on the word "unique".

4. Creativity. The ability to expand ideas is based on the word "add".

In creativity lessons, these skills overlap when future employees are required to come up with great ideas (originality); expand them (development); or compare them with other ideas and find connections in them (flexibility).

The main goal of creative fluency is to form the ability of future employees to put forward not one, but several ideas. The number is the ultimate goal; from a number of ideas, we can find one or more acceptable ones. In many cases, teachers use a brainstorming strategy to develop fluency skills in future employees. This exercise can be done orally or in writing (ideas should be written down on paper and passed on to the next student for additional ideas). In the brainstorming exercise with the content "stop and start", potential employees put forward ideas, analyze and evaluate them, and then this is repeated over and over again. When future employees succeed in this exercise, their creativity skills will be closely related to the skills of free and fluent thinking. If the opposite is true, you can achieve the desired results with the help of constant training and experiments.

Using the interests of future employees when coming up with new ideas. When the brainstorming exercise is dedicated to a specific literary work, the heroes of the work can compare their character and behavior with the characters and actions of the heroes of the work they liked, the creators of the TV show or famous athletes.

Flexibility. When students can think broadly, they find many different solutions to both situations and problems. Flexibility can be observed in future employees when they take into account different points of view and opinions and analyze them, compare their different opinions with each other and find similarities and differences in them, and finally achieve success and show good results. To be flexible, future employees must understand not only the superficial part of the information, but also its deep essence. When developing flexibility skills, when future employees are given practice and are guided, this serves as a powerful incentive to search for various ideas in the future. If a student has found a lot of ideas, he shows fluent thinking, not flexibility, because in this all the attention is focused on one or more types of answers. It should be particularly noted that when developing flexibility skills in future employees, it is necessary to find ideas not quantitative, but diverse content.

Even with a deep understanding of the essence of the problem, potential employees have difficulty finding different ideas or cannot afford it at all. And this, in turn, indicates the need for them to develop flexibility skills.

Many years ago, Alex Osborne formulated a category of questions that strengthen thinking with flexibility (1963). The SCAMPER mnemonic scheme, developed by Eberle in 1971, was developed on the basis of concepts such as substitute (replace, change), combine (combine), adapt (adapt), modify (change, give a different form), maximize (maximize, minimize), put to other uses (apply in another area, method), eliminate (avoid) and rearrange (change application). The educator of group 4 shows that the SCAMPER mnemonic uses information related to the symbol of the city, district, microdistrict in which they live, or to the sphere of economy, industry, nutrition, namely the famous apple pie, which is the symbol of the city of Main, to attract the attention of students to develop flexible thinking in future employees. Students use a mnemonic scheme to analyze if chocolate is used when baking the

famous apple pie from chocolate, and the composition or shape of the pie changes during baking, and how this chocolate pie can be turned into the famous pie of the city of Main."

Uniqueness. Originality is the ability to come up with unusual ideas. Students must first develop the skills of flexibility and fluency, and then the ability to come up with unusual, original ideas. Fluent thinking skills serve as a starting point and a fundamental step in developing students' originality; if a student throws a lot of ideas, one or two of them will certainly be another student's idea (Simonton, 1999). Flexible thinking allows students to see and understand that each of their ideas is different from each other; if there is an idea among them that stands out from all, then it is an original (original) idea.

Creation. The concept of "creativity" is based on the development of another idea and its expansion, i.e. on the basis of this idea, tasks are performed. To expand the idea, potential employees must have a deep understanding of the content of the topic, problem or task and have the necessary level of knowledge.

Telling future employees about the concept of "creativity", it is worth giving them examples from life (for example, computers, reconstructions, film and literary works, scientific concepts and theories, organizations created to solve problems that arise in people's lives). In the formation of development skills for future employees, an exercise in comparing literature or works with each other gives a great effect (sometimes multi-page works do not provide as much information as small, small-page works)."

Intelligence is the activity of the human brain that controls the reflection of the world and a person's relationship to reality. Reason makes it possible to reflect the essential natural connections-the relations of objects and phenomena of the objective world and thereby creatively transform reality. Depth, criticality, harmony, breadth and speed of thought are the most important qualities of the mind. Intelligence develops under the influence of living conditions, in the process of activity and especially education and training. In a number of philosophical movements, reason is understood as the highest being and essence, the basis of knowledge and behavior of people.

Intelligence is a great blessing given by Allah. That's why we do everything we do wisely. I would like to illustrate the meaning of the use of intelligence from the phrases concerning the question of intelligence given in Imam Gazzali's book "O child".

Oh, baby! Allah created the mind first. This is reported by the Prophet (S.a.v.) so they say:

"Allah created the mind and placed it in the light. He put science on the body of the mind. He gave Fahm (intuition) to the soul of reason. He placed Zuhd and piety in it. He gave passion in the face. Greed (insatiability) they gave him in the ear. He gave the truth to his tongue. He gave jumarlik (generosity) into his own hands. He took a risk up to his waist. He gave fear below the belt, hope above the belt.

In the present time, electronic machines are created, which also carry out complex creative processes, but they can not replace consciousness, because consciousness is an extremely complex object of existence.

Psychics differ in different levels of reality as aksi in the person's brain.

The higher the level of the psyche inherent in a person is the consciousness. Consciousness is the result of the social historical conditions of the formation of the psyche in the process of communicating with others with the help of language, in the labor activity of a



person, in which it becomes a holistic form. What is the structure of the structure of consciousness, its important psychological definition?

The first definition of it-the name given in its own way, it is the word mind. The consciousness of the individual was composed of a complex of knowledge about the scientist, who surrounded our surroundings. The structure of consciousness includes important cognitive processes. With their help, a person will constantly enrich his knowledge. Among these processes, it is possible to add intuition and perception, memory, imagination and thinking. With the help of intuition and cognition, the direct reflection of observers affecting the brain, the emotional picture of the being in consciousness formed in the imagination of a person at that moment is shaken. Memory revitalizes the images of the past in consciousness. Fantasy forms an imaginative model of something that is an object of need but that is not present. Contemplation provides for the solution of the issue by the way of fodled from the generalized knowledge. From the mentioned process of psychic cognition leads to the complete destruction of any one.

The second definition of consciousness is that in it one can express himself a clear distinction between the subject and the object, that is, a person knows exactly what belongs to the concept of "I". A person who is the first in the history of the senses of living organisms to be separated from it and to look after himself in his environment, is maintaining this search and discrepancy in his consciousness.

Within living beings, its self-knowledge is the direction to which it studies itself, that is, its psychic activity. A person consciously evaluates his actions and in general himself. The separation of "I "to" not me " is the way that everyone experiences in childhood, occurs in the process of self-realization of it.

The third definition of consciousness is to ensure the person's purposeful activity. The creation of the goals of activity enters the function of the mind. In this, the activity motivations arise and the squat is released. Willpower decisions are made. How the actions go is taken into account. Relevant corrections will be made to it and hakazo.

It is necessary to look in the direction and in the direction of carrying out purposeful activities as a result of a disease or for any other reason that there is a violation of consciousness that occurs.

A person inevitably enters his consciousness into a world of emotions, in which a complex object is first of all reflected in the social relations that he is involved in. In this place (involved) social as in many other cases, potency helps to understand the essence of normal consciousness. A violation of consciousness when suffering from certain mental disorders is determined precisely by a violation in the sphere of feelings and relationships:

The patient will remain undressed by his mother, whom he loved in vain until this. That is, he talks about people with zarda and hakazo.

The inevitable condition for the manifestation of all the above-mentioned specific features and formation of consciousness is language. In the activity of the speech process, a person forms knowledge. Until a person comes to the world, he enriches his life with the human mind, wealth, which he brings to him, strengthening for him the language that humanity has created. A.I.Sensen wrote: "Everyone relies on a terrible genealogy that goes back to Adam times even if its roots were a raft: a whole-headed ocean behind us like a wave on the beach-a whole world history shiddati is felt: at this moment in our brains the ideas of all ages...language, a special object, systematically reflect in it a social historical experience or

social consciousness. Being mastered by a concrete person, the language becomes his real consciousness in a certain sense.»

Great thinkers-quot; language is a practical, real consciousness, a consciousness that exists for me also because of the same that exists for others..."it was noted that. The concept of consciousness is used in psychology and in psychology and in other sciences in the sense that it corresponds to the above basic definitions.

Unconsciousness is the sum of the actions and circumstances of the psychological processes associated with the actions that make a person unable to behave. As a psychological state, unconsciousness is considered a form of reflection of reality ,in which the place and time of action is maximized, the integrity is lost, the management of the action with the help of speech is broken. Unconsciousness can be attributed to the following psychological states: the response reactions to observers, in which the psychic phenomena (dreaming) that occur during sleep are not felt but are also influenced by reality: the foreground consciousness is an action, but some inclinations that are not perceived from the sense of purpose, provoking the activity of actions that have become repetitive automated and, accordingly, Based on this, it would be wrong to assume that unconsciousness is an anti-conscious, equalizing it with the psyche of animals.

Unconsciousness is a kind of psychological image of a person, just like consciousness, in which a person is connected with the social conditions of a person's life in the form of aksi to a sufficiently unequal part of existence in the brain.

Creative thinking is often characterized by a desire to think differently, most studies are devoted to the study of mental processes associated with pre-emptive thinking. But, studies have shown that the intelligent processes of similar thinking, such as analytical or decision-making, are also important for creativity (Cromptley, 2006; Reiter-Palmon and Robinson, 2009; Tanggard and Glaveanu, 2014). For example, the ability to give new and valuable ideas can first be attributed to the implementation of such processes as describing another, problem with a mustache (Runco, 1997). In fact, Getzels and Csikszentmihalyi (1976) found that students ' success in describing the problem in terms of painting is closely related to the criteria of aesthetic value and originality of the pictures they draw. These criteria, in turn, were also a link to the success of these students in the long term in the quality of the artist.

The school can promote educational methodology that supports the mental abilities and approaches necessary for creativity (Beghetto and Kaufman, 2010). For example, Mayer (1989) demonstrated that the study of the formation of mental images (mental reproduction) can improve the student's creativeness in science, mathematics and ICT.

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