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Development of creativity as a basic task of the modern educational system

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Abstract

Last few decades around the world, particularly in developed countries, great attention is paid to studying the phenomenon of creativity. These interests are not random but are the result of scientific-technological revolution, which clearly shows that great and creative minds take credits for the overall progress in all spheres of life and that investing in the development of creativity is very important. On the other hand, we face the intense socio-economic crisis which further emphasizes the need for universal social progress based on private initiatives.

This situation entails active searching for possibilities of change within the educational system, which will put the development of creativity of the student in the first place against multitude of unnecessary memory of facts and information that is common today. In this sense, the ultimate goal of modern educational system should be the development of independent, free, tolerant and creative young people that would satisfy their needs, but also the needs of modern society in which creativity is the basis for development.

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1. The nature of creativity

Modern man lives in a time of great scientific and technological revolution that leads to overall progress in all areas of his life. Our experience has shown that the great and creative minds are most deserving for this progress. Therefore, increases the interest in studying the phenomenon of creativity around the world, particularly in developed countries. Scientific and technological progress confirms the creative abilities of man, but also underlines the need for their identification, stimulation and development. On the other hand, modern man lives in a time of intense social crisis. This further underlines the need for universal social progress based on private initiatives. Hence the need for investment in creativity becomes the key to social progress.

According to Đorđević (2008), creativity is a complex phenomenon, therefore the study of this phenomenon is very complex and depends on several factors including: the area in which it is examined, the types of instruments applied and the materials used for it's determination (Đorđević, 2008, p. 5).

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1.1. Theoretical approaches to the study of creativity

Since the beginning of the study of creativity, several theoretical approaches were developed, which creates additional difficulties in trying to study this phenomenon. Lubart (1994) describes five approaches to the study of creativity: mystical, psychodynamic, cognitive, social-psychological and confluent (integration) (as cited in Arar & Rački, 2003, p. 4). According to mysterious approach, creativity is unexplainable concept ascribed by supernatural. In the psychodynamic approach, creativity arises as a consequence of the tension between conscious reality and unconscious impulses. The cognitive approach observes creativity as a part of a larger process of thinking, not as an independent process. Socio-psychological approach considers motivation, social climate (environment) and characteristics of personality as important parts of the creative process. The last, confluent approach considers that creativity consists of several dimensions and approaches, and covers cognitive, psychological and social approaches stressing the importance of social access, est. environmental impact. The one thing that all agree about is that creative thinking is the highest mental function and peak of human achievement.

1.2. Categories of creativity

When we talk about creativity we distinguish four categories: creative process, creative product, creative person, and creative environment. Some researches are directed towards individuals, others to process, while the third is aimed at exploring the creative products and creative environment.

1.2.1. Creative process

Creativity is a cognitive psychological process. Creative process as a category refers to the way in establishing the creative product. It leads to unusual ideas, creating different mixture of old, upgraded or new ideas to the already existing condition. The psychologist Joy Paul Guilford believes that the basis of creativity is the contemplative divergent production. The divergent contemplative production involves creating a series of solutions to a problem. According to Guilford, the contents of the divergent production or creativity includes: fluency, flexibility, originality and elaboration. The fluency refers to the wealth of ideas on how to get to the solution of a problem. Flexibility is the ability to change direction in our initial opinion, to take different views and paths that are more efficient, without being required by us, neither helped nor suggested by others. Originality is the ability to provide entirely new responses that are rarely declared in a given population or sample of respondents. Elaboration refers to the ability to develop a plan for solving the problem, to analyze the details and components of the whole.

The Creative process has its own dynamics which means that there is a beginning, middle and end. Different authors claim different stages in the creative process. D. Waltz describes creative process and identifies 4 phases: instructing, incubation, illumination and verification. The phase of instructing or preparation involves penetration and focus on the problem, next is the stage of incubation in which the process of thinking about the problem occurs and is characterized with the birth of the idea close to the threshold of consciousness. The third phase, the phase of illumination, called insight or also called Aha-experience in which creative ideas revives. Fourth phase is the period of evaluation and it requires the most time and work. At this stage the creative ideas are consciously acknowledged, developed and applied. Actually this is the phase to which the term productivity or creation binds and is the main goal of the creative process. This model of creative process is not fixed; the phases can interlock mutually, but basically well describes the work of the creative individual.

1.2.2. Creative product

Study of creativity through its products is very usual and natural which is often implicitly understood, even when it is not outlined as a separate subject of study. But when considering the creativity as product, a question rises about the criteria that a product must meet to be able to classify itself as a creative product. According to some authors, it is enough the product to have determined meaning only for the person that creates it, others think that it should be important for the wider social environment.

The Creative product can be expressed in the form of expression (creating "touchable" product) or impression (ability for creatively, rich and detailed observation). Regardless of its nature, the creative products are necessarily consisted of two properties: to be new and useful.

1.2.3. *Creative person*

The creative process involves the whole person. Question that often rises when it comes to individuals as bearers of creative ideas is about the characteristics that make the creative individual. In an attempt to answer this question is difficult to draw a line and to determine those key characteristics. Usually it is claimed that creative people have some of the following features: tolerance of ambiguity, high sense of humour, curiosity, interest, perseverance in work, ambition, wealth of imagination, shows signs of self-confidence, independence from others opinion, the courage to risk, no fear of failure, low anxiety, sensitivity to differences and so on.

Psychologist Kvaščev, calls this specific assembly *creative attitude* and understands it as a tendency that directs individuals to non-conventionality, nonconformity, researching attitude towards problems and their solutions. It is especially important to develop this attitude among students, because it means development of creative abilities among students (as cited in Keramičeva, 2002, p. 208).

1.2.4. *Creative environment*

Besides the creative individual, the social environment also plays great role in the creation of creative ideas. The fourth category precisely emphasizes the importance of the environment, est. the society in which the individual lives. The social mechanisms that encourage the creative process are present here, but also those who recognize and assess cognitive product. Though the environment can stimulate creativity, can also inhibit or prevent it.

Components of creativity are sometimes studied in isolation, but most studies take account of the fact that they are part of the whole and understand their inseparability and entanglement.

Therefore, creativity can not be accurately defined, because of her inequality. Some psychologists understand the creativity like a personal quality or trait. According to Davis, “the single most important characteristic of the highly creative individual is creative attitudes. The concept of creative attitudes is broadly defined to include purposes, values, and a number of personality traits that together predispose an individual to think in an independent, flexible, and imaginative way” (as cited in Woolfolk, 1987, p. 149). Other psychologists suggest that creativity is not a personality trait but a skill or process that produces “creative” product. However, at the heart of all concepts of creativity we find the notion of newness. Creativity results in new, original, independent, and imaginative ways of thinking about or doing something (Woolfolk, 1987, p. 149).

2. **Creativity in the educational process**

Today we become increasingly aware of the fact that creativity is a characteristic of each person, not just privilege of some. In greater or lesser extent it is present in all forms of human activity. Like every other human potential, it can be developed or destroyed depending of environment conditions in which the person lives. Therefore, the study of creativity becomes dominant in the service of schooling and education. The school is seen as a place for fully development of the creative potential of individuals.

However, we must emphasize that the way teaching is performed in most of our schools usually does not stimulate the overall psychological development of students who have broad interests, a high level of aspiration and an expressed curiosity. Unfortunately, we are still facing with a teaching in which verbosity prevails, passivity of students, requesting from them to remember facts mechanically, to rigidly stick to what is presented in the class or textbook, insisting on only one correct answer, intolerance of student's errors, ignoring student's ideas or new solutions, authoritarian attitude of the teacher, emphasizing the curriculum of the teacher, lack of time for students and so on. Such training does not contribute to progressive development of personality, does not stimulate student for activity, work and learning, but it only encourages its unique reproductive capabilities which inhibits his creativity.

2.1. *Mental blockades of creativity*

Students in these conditions adopt various kinds of mental blockades, which additionally inhibit their creative behaviour. Although these mental blockades act mutually in everyday life, they are often grouped by psychologists into three categories: the perceptive-intellectual, cultural and emotional.

Perceptive-intellectual blockades are expressed by failing to recognize situation or problem as are, which contributes to start solving the problem-situation without being properly placed in consciousness. Blockades in this

category often occur in the following difficulties: failure to isolate the problem, its poor identification and definition, increased narrowing, not noticing the obvious, not perceiving the distant relations, not making difference between cause and effect, not involving all senses and others.

The Cultural blockades are difficulties which require person to behave, think and act according to social norms and generally accepted principles applicable in a socio-cultural environment. They insist on conformational behaviour despite the creativity's needs for nonconformity and extraordinary. Some of them are: the desire not to be different from the rest, to be practical and economical, not to be too curious, and to have confidence in the reason and logic, not to be a dreamer and punch, to be mature and serious, not to be naïve and infantile.

The Emotional blockades are results to the stress of which man is exposed in his everyday life. They represent incorrect attitudes, ideas and concepts that hinder the realization of man's inventive potential, which were internalized in his process of socialization. Their presence contributes in development of his sense of fear and insecurity, which inhibits creativity: fear not to make a mistake and "fool" of themselves, fear of risk and incompetence, low ego-image, perfectionism, pathological desire for safety, over motivation for quickly success, impossibility of intense concentration, reluctance to dream, meditate and fantasize, fear and mistrust towards super ordinate associates, lack of persistence in situations of failure, lack of persistence to realize the idea to it's end and so on.

As an objective reason for impeding the creativity within the school may also be excessive number of students in one class, inadequately elaborated curriculum and program, unskilled teachers, time, space, material limitation of work and many other reasons.

2.2. Development of creativity within the school

But as previously mentioned, the school environment can have simulative affect on the development and encouragement of creativity among students. Within the school, creativity can be developed in two ways:

1. With the help of specialized programs and
2. By creating a vantage educational environment for development of creativity.

Kind of special programs are the ones for **stimulation of creative thinking**. Such programs are based on the understanding in which the creative thinking is seen as a creative attitude, creative style and creative ways of applying reflective operations that can be learned and practiced using appropriate creative techniques and strategies of opinion.

Considering *creative techniques* that encourage creative thinking can be said that there are over 50 and that are applicable not only in education, but also beyond. The Techniques for training of creative thinking are based on known principles of creative thinking and also indicate the conditions that stimulate the creation of ideas. These techniques are applied to initiate the creative potential or reactivate it in the event of its blockade during the development of personality.

According to, Pečjak (1989) techniques are categorized based on the type of thought's orientation, which is the dominant during their realization, into two groups: analytical and integrated (Pečjak, 1989, p. 19). In the analytical techniques the material is divided of its basic elements or components, which are then integrated in various ways and determine which combination is the most favourable problem solution. These techniques require thoughtful analysis and synthesis which belong to convergent opinion. These techniques include: check list, forced links, a list of attributes, morphological analysis and input-output technique. The integrated techniques are oriented towards producing more conceptual solutions and encourage the production of complete, undivided ideas. These techniques, contrary to its prior, are based on the divergent outlook, which (as already mentioned) is the basis of creativity. The most familiar integrated techniques are: brainstorming, recording thoughts, ideas, synectics and others.

The application of techniques of creative thinking enables the elimination of numerous blockades of creativity and significantly contributes to the development of creative climate in the school.

The developing of a creative atmosphere in the class is the second method which stimulates the creativity within schools. Many researches show that socio-emotional climate in the class reflects the creativity of students. In the schools with autocratic social climate of governance, students apply authoritarian, they are passive, unwilling, and non-initiative and there is an atmosphere of fear of failure and fear of making "a fool" of himself. In such conditions there is no creativity or production of ideas.

According to Bogнар and Bogнар (2007), the release of creative potential mainly relies on **two psychological conditions**: Psychological safety and psychological freedom (Bognar & Bognar, 2007, p. 4)

The psychological safety is external; it mainly depends on the safety of the environment. Children feel secure when other people accept what they do, accept their unconditional value; behave empathic even when there is no external evaluation.

The psychological freedom is internal, it stems from the child. It involves playing with the symbols and their use for self-expression. According to the theory of K. Rogers a person is more creative than another because it learned to play with ideas, to be open for experience and new ideas and pays greater attention to self-evaluation than the evaluation of other people.

The school that nurtures creativity seeks to reduce stress and anxiety in children as well as the teachers. According to this, the process is more valued than the product. The time limit for activities involving children is removed. Free and open expression is established and self expression is encouraged at whole. Children are encouraged to exchange ideas not only with teachers, but also among themselves. Competition and remuneration is aimed to be less used. The cooperative relations and free exchange of opinions are more appreciated, but hierarchy and obedience less.

Less frontal teaching is needed because it makes the student passive. All work forms that make students active are welcomed. Such training forms and methods are making social climate democratic, clear up all kinds of blockades and allow the development of the creative spirit among students.

According to Andrić and Čudina (1985) schools should nurture the creative scientific atmosphere in which both teachers and students will have a scientific research attitude. The main feature of this atmosphere is that each individual is expected to be creative, to make small, independent research. The "thinking" about the problem within the school should become a regular activity. Students should be stimulated to think about various problems, to try to explain a problem that been previously noticed or asked. The students should also be stimulated to think about their own thinking process, to discuss with teachers and to each other, for its features and how they can improve it. Any original contribution should be rewarded, to be praised publicly, exhibit and publish (Andrić & Čudina, 1985, p. 220).

The creative climate in the class also requires an appropriate *physical layout of the classroom*. Moving desks with chairs are recommended for a student which can be dislocated; rich and diverse equipment is eligible, modern visual tools, rich libraries, laboratories and a like.

In the encouragement and development of children's creativity within the educational process, a significant role also has the teacher, as a bearer of the teaching. According to Arnaudova (1996) several theories are developed about how teacher can influence the development of creative abilities of children. According to the naturalistic theories, the teaching process should be conducted as natural as possible, and the role of the teacher should solely consist in cultivation of creative ability of the child. But according to the interventionist theories, the teacher has a role to act, to modify, build and upgrade. Depending on the particular case, the eclectic theories, point out that the teacher may behave to one or another way, with guidance on what already exists or by actively intervening to redirect and change it (Arnaudova, 1996, p. 61).

In order to encourage the general creativity of children, the teacher can use many activities that are very closely related to his personal characteristics. Instead being bearer of monotonous activities (listening, dictating, writing, memorizing, reproduction), he should stimulate: reflection, dialogue, asking questions, intellectual hesitation, creative controversy, intellectual opposing, instead insisting students to imitate and copy what he does, he should prepare them for active learning through discovery. But, teachers who have given up from their creativity or live in circumstances unfavourable for creativity can not meet these requirements. Therefore, encouragement of teacher's creativity is the first step and prerequisite for the educational process, which does not suffocate, but encourages the creativity of their students.

Hence, the encouragement of teacher's creativity is not only possible, but also a necessary condition for creative teaching. It has two dimensions: one is the process of education of future teachers, and the other the system of permanent education of teachers. Given that the educational system, through which students went in order to get to university, is more in a function of extinguishing of creativity rather than encouraging it, the education of future teachers has primarily a compensatory role aimed at gradually releasing of the unleashed creativity of students. Participating in a creative teaching the students themselves adopt specific strategies and train to use them in their

future practice. The entire education of future teachers must be exemplary in a certain way and to present a template that they could apply in their practice.

3. Conclusion

Today dependence of the human creativity appears in all areas as imperative. That, is a prerequisite for success in any human activity, and on the other hand is a new chance to return people to their essence and achieving humanization of society. The entire pedagogue-education system is challenging the new paradigm to which the traditional school can not answer. This state entails active search of possibilities for changes which will put the development of individual in the first place, instead of memorizing multitude of useless facts. Schools that will achieve that will have bright future while others will become increasingly inefficient and often harmful to the development of students, and by that to the entire society. Hence, the care for creativity in school's conditions is one of the most important tasks of the modern school that primarily must satisfy the child's needs, but also the needs of modern society in which it is the basis for development.

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