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Psychological and pedagogic conditions of activating creative activity in students for successful learning

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ABSTRACT

Creative activity of a pedagogic process subject depends on the pedagogue's position, on his faith in the abilities to learn successfully, on encouragement of achievements, stimulating the initiative and activity.

Successful learning by activating creative activity is possible with the presence of respectful attitude towards the pedagogic process subjects, creation of the conditions for potential capabilities and organization of educational process in such way where the subject feels emotional uplift, physical energy surge, feeling of success and confidence. In this case, learning would not be a burden but would rather become a joy of learning something new, making independent discoveries and achieving positive results in mastering the prospective profession. One of the psychological and pedagogic conditions for activating students' creative activity in the educational process is using the system of educational-creative works. Despite the abovementioned significance of activating creative activity in the educational process, in our opinion, admitting its key role is related to exaggeration of its meaning, because even an ideal system of educational work does not always account for the specifics of structural components of students' creative activity during studying a certain subject. Because of this, we contemplate the implication of educational-creative work system in the educational process not as a key factor but as a structural sub-system of factors, which affect the quality and the level of these works.

KEYWORDS

Process, learning, pedagogue, initiative, activity, capabilities, educational process, creative activity, student, educational-creative works

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Introduction

One of the directions in activating creative activity was created based on the principle of accounting for the psychological bases of students' activity

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through gradual logic of educational process organization, when the creative component of the activity is enhanced from stage to stage.

The main psychological and pedagogic requirement towards gradual learning consisted in their necessary sequence and system.

It is explained by the fact that creative activity corresponds with reflective-creative level of thinking, which follows after the reflective-reproductive level, which corresponds with reproductive executive activity, i.e. while the student does not have certain knowledge, abilities and skills and while his attention is focused only on the working techniques, he is not capable of thinking about any creativity. Creativity implies the maximal independence of students' thoughts and actions, but this independence does not occur on its own. Therefore, before including the students in creative activity, it is necessary to provide them with a certain amount of knowledge, to develop the necessary abilities and skills and to teach how to use knowledge, abilities and skills in new situations.

Methods

Activating creative activity is supported not only by the content of educational material but also by the appropriate methods, techniques, didactic tools and conditions and organizational forms of education. Because of this, further improvement of the methods of organizational forms and didactic tools of education is a pedagogic condition, which provides students' creative activity and independence.

Based to the aims of the study, we have to define didactic conditions for activating students' creative activity.

Results

During the study of the specifics of individual approach towards educating students we concluded that the results of this learning depend not only on the consideration of students' age and psychological traits, but also on positive learning motivation and a teacher's awareness of the level of creative activity activation in each of the students. All of this helps the teacher correctly selecting the pace of the lesson, method of material presentation and other technical means in order to eliminate the blank spots in students' knowledge and develop their creative activity.

The studies that we conducted showed that individual approach to students is reached more successfully due to the following: dependence on the positive qualities of student's personality; positive motivation and support of interest towards learning; strengthening each student's faith in their powers, capabilities and skills; differentiated assistance from the pedagogue. Thus, by defining psychological and pedagogic conditions of students' creative activity development, we concluded that another one of such conditions is individually-differentiated approach towards them.

Therefore, based on psychological and pedagogic literature and the obtained empirical and experimental material, we made an important conclusion that activating students' creative activity is possible in case when the learning process accounts for the integral conduction of actualizing all of the abovementioned psychological and pedagogic conditions of the optimal creative activity structuring and development. But, in our opinion, the system of activating educational work and individually-differentiated approach towards

the students' provide the structuring and development of their creative activity to the highest extent. It is necessary to point out that the proposed psychological and pedagogic conditions can be successfully actualized in the process of teaching all higher school subjects.

Only the competence approach would allow us to talk about activating students' creative activity, which would result in their successful learning. The result of creative pedagogic activity is an independent and initiative person, who possesses professional knowledge of his subject, a person, who is able to imply and use the latest achievements of science and advanced tools, and a person, who has positive constructive energy.

Therefore, it is necessary to activate students' creative activity in the process of group cognitive activity, in cooperation, during the process of interaction, mutual mentoring and mutual development of both teacher and student.

Discussion

In our study we use the word "condition" in the meaning of environment or setting, in which the efficiency of educational work is provided, as a necessary execution, following and realization of certain didactic means. Because of this, in present paragraph these conditions are addressed in the intrinsic connection with didactic specifics of educational work. In order to define the necessary psychological and pedagogic conditions for activating students' creative activity, at first it is necessary to define the integration of factors, which affect its quality and level. Almost all psychological and pedagogic publications about the learning process, to some extent, the authors address separate sides and moments of influence of certain factors on activation and activity of students. We would like to focus on those factors, which allow activating students' creative activity.

The science understands factors as the main reasons and conditions of processes realization (Monoszon, 1981; Monoszon, 1986), as stimulating forces of the personality development process (Sokolnikov, 1986) and as mentoring goals (Babanskiy, 1982).

Philosophy usually sees factors as reasons, conditions and stimulating forces of a certain process, which define its nature or its separate traits in a certain space and time. It follows from such understanding that the efficiency of any process and creative activity in particular is always directly dependent on the level of the corresponding factors development; the higher this level, the higher the level of process efficiency. Due to that, in our study we understand factors as sources for the efficiency of activating students' creative activity. Naturally, during educational work organization the requirements of factors, which influence its efficiency, are not fulfilled on their own. This requires certain didactic conditions, which are a system of psychological and didactic tools and social-psychological environment, which allow optimally using all of the sources for activating creative work and providing its high efficiency in educational process.

Such understanding of factors and conditions points to their tight interconnection. Therefore, in order to define the necessary pedagogic conditions of the efficiency of structuring and developing students' creative activity, at first, it is necessary to define the integration of factors.

Based on the analysis of psychological and pedagogic literature and the obtained empirical and experimental material, we concluded that factors, which affect the quality and level of activating students' creative activity, can be internal and internal. External factors include those, which affect the students from the outside, while they are conducting creative work, and internal are the ones that depend on the workers themselves. The first group of factors is causal, because, by affecting the students, they stimulate cognitive interest and activity and, therefore, activate creative activity. As a result, internal factors, which are a consequence of the external ones, gradually gain higher significance in students' creative activity. While creating a system of creative work, selecting its type, defining the amount and content of educational tasks, it is necessary to follow the main principles of didactics, as in educational process in general. The most significant in this process are the principle of availability and consistency, connection between theory and practice, principle of gradual increase of difficulty, principle of creative activity and principle of differentiated approach towards the students.

First of all, the conditions have to correspond with the traits of educational process subjects and with the principles of teaching adult people. In our study we highlight the principles of independent planning of education, regard of student's professional and social experience, individualization of educational process, its systematic structure, context, and selectiveness, realization of educational results and awareness of the educational process. The conditions can be divided into physical, psychological and pedagogic. We consider that it is necessary to add organizational conditions to them, which consist of interconnections in the elements of organizational structure of pedagogues' education, which are the object of our search.

Creating comfortable physical conditions implies the presence of work places for educating pedagogues. The whole technological chain of education is represented by the following fragments of technology: work places for conducting individual consultations, watching video-lectures in individual order, recording oral course work, etc., diagrams, instructive materials and lists of available components in normative packages. In is necessary to have work places, located in a semi-circle, for conducting discussions and seminars, because it has been established by psychological studies that such positioning increases the discussion efficiency. The furniture for "Round tables" has to be structured in a corresponding way (Flinders & Thornton, 2004).

Psychological conditions consist of creating mutually respectful relationships between group members in educational process and of consideration of each pedagogue's strong sides, his interest and goals.

Pedagogic conditions include, first of all, learning materials, test tasks and methods of intermediate control of educational process efficiency. Because we showed before that such materials either do not exist or they do not meet the requirements of educational process, in is necessary to create and develop specific textbooks for pedagogues in college, which would meet the goals and tasks of educational process and andragogic principles. Pedagogic conditions have to provide the actualization of learning context-orientation principle, which requires the development of corresponding materials.

Upon addressing the organizational conditions of education, we would to refer to the following definition: "Organization is an integration of processes or

actions, which lead to the creation and improvement of connections between the parts of a whole" (Pidkasistyy, 1980). Therefore, a search for organizational conditions implies, primarily, the establishment of such college structures, which are useful for designing, execution and correction of the integral educational process.

Due to the fact that one of the most significant aspects of our study is direct development of high creative activity level in students, this implies such education structure, which would fulfill all of psychological and pedagogic conditions for structuring and developing their creative activity. In our opinion, another condition is using the methods of problem-based learning (creation of problem-based situations, problem-based questions, creative tasks, etc.) in the teaching process. From the perspective of psychological, pedagogic and organizational criterions we agree with the statements that the main direction in improving educational process, a mean of attracting students to the exploration and a tool for developing their creative activity is problem-based learning, which is supposed to activate their learning, develop creative activity, creative skills and abilities (Hansen, 2007). Developing students' creative activity is one of the main goals of college education, because without it developing a creative and independently thinking specialist becomes impossible. Due to this, teachers' understanding of this educational goal, which is defined by the modern higher school requirements, might provide a strong stimulus for creative activity development. Makhmutov stated: "Problem-based learning as a didactic system is based on the following principles: scientific nature and consistency of education; students' activity and independence in learning; unity of education, mentoring and development; connection between theory and practice; problem-based; learning and working motivation; difficulty and availability; binary; unity of word and illustration; differentiation and individualization of education; orientation on profession" (Makhmutov, 1975). Actualizing the problem-based learning principles implies systematic creation of problem-based situations on the lessons, problem solving, teaching the students to extract the most significant. Activity and creativity of each person are the factors of structuring and development of scientifically-technological and socially-economical processes in the society. Educational process is supposed to directly regulate the process of activating creative activity and to correct it by raising the students' educational activity experience to a systemic level. Fulfilling this educational process function requires the rejection of the proximity-oriented direction of its forms, increase of education's developmental function, and integration of students in the learning and cognitive process and convergence of cognitive and subjective-practical activities (Selinger & Crease, 2006).

We approach problem-based learning as a modern didactic system, which is characterized by its own principles, methods of teaching and structure of educational process organization forms. We consider the presence of problem-based situation and the solution of an educational problem to be the main components of problem-based learning. Problem-based situation is an objective controversy, which occurs in the educational process as a difficulty, overcoming which requires intensive thinking activity from the student. It "characterizes such type of professional or educational activity, in which a person gets a need in acquiring/discovering new knowledge and way of acting" (Makhmutov, 1975).

Problem-based situations often occur in the form of inconsistency between the present knowledge and the requirements, between the present skills and abilities and the ones that are needed for the solution.

Didactics implies the following stages for solving educational problems (Kendall, 1990):

- creating a problem-based situation;
- establishing an educational problem;
- discussing of the hypotheses;
- technical actualizing of the educational problem solutions;
- discussing the obtained conclusions and developed methods.

In the traditional approach towards sharing the content, when a teacher states complete knowledge during the lessons, students acquire it passively. Consolidating the acquired knowledge, specifying and expanding it, improving it to the usable level and developing abilities and skills happen on practical lessons during the solution of educational-exploratory creative tasks. Meanwhile, any information is understood and updated in the process of operating with it. Problem-based learning method provides such opportunities.

On any lesson, during the presentation of any educational material, a teacher can find the opportunities to include the following problem-based elements as a part of educational process: demonstration of the problem's solution, solving the problem with a cooperative effort from the teacher and students, creating a situation of difficulty, attracting students into an exploratory discussion, presenting the tasks for extracting the core content, conducting generalizations, etc. Variety of techniques for attracting students in the creative activity is very wide. The integration of specific activation tools has to influence the other components of an activity by following the dominant goal of that activity, i.e. by following the goal of developing a learning motivation. The stage of developing the content- and operational component of independent activity, for example, during performing the tasks related to finding different solutions to a problem, includes the development of learning motivations, actualization of knowledge, comparison of the results based on self-control and the implication of willful efforts.

Didactic scientists point to the fact that during the knowledge development by integrating problem-based components in educational process it is necessary to remember the ways of using practical actions on the level of skills and abilities.

Students solve an educational problem, set by a teacher, on their own but the problem-solving stages should by regulated by the teacher. Firstly, the teacher has to be able to stimulate the occurrence of students' hypotheses about the possible methods and results of the educational problem solution; secondly, he has to be ready to discuss these hypotheses and quickly evaluate their advantages and disadvantages; thirdly, he has to constantly control the intermediate stages of the problem situation solving in order to attract the attention towards the main moments of each stages; fourthly, he has to be able to draw a conclusion of the whole work by showing the parts, which deserve special attention and which are the core in educational problem solving; and fifthly, he should be able to help structuring new knowledge (Felder & Silverman, 1988).

Therefore, solving any educational problem acts as a two-sided process through the interaction between teacher and student.

Let us analyze the abovementioned method of problem-oriented learning and its manifestations in learning: essentially, the teacher not only states the ultimate conclusions but also reproduces, to some extent, the way of their discovery, makes the students follow the movement of thought towards the truth and, in a way, makes them participants of a scientific search. This method is used mostly in college education, because it realization demands a high level of students' development and experience in problem-solving. Also by learning with this method the teacher systematically includes the students in the problem-solving process and by that the students master the ability of gaining knowledge on their own and using the previously acquired knowledge and gain the experience of creative activity. Actualizing this didactic educational system is completely supported by heuristic and research methods, which are related to using the tasks that lead to the creation of problem-based situations. The lessons efficiency also depends on the combination of teaching methods. Their specific choice is defined by the goals, content of the material, students' development level and the "art" of the teacher himself in mastering the teaching methods. Therefore, the lesson has to have a problem-based nature and a professional orientation (Sokolnikov, 1986).

We can conclude from the mentioned above that establishing a problem-based situation and choosing a mean and a form for its solution are the characteristics of activating students' creative activity.

Students vary not only in the initial level of training but also in the skills for learning, perceiving, understanding, processing and using the proposed information, i.e. in those characteristics, which define individual style of the educational work. In this case differentiated approach towards the students is a necessary condition for developing their creative activity.

According to the data of psychological and pedagogic studies, individualization and differentiation of education has a number of advantages in comparison with the traditional educational methods.

Throughout the history of education, ideas of individualization and differentiation of learning caught the attention of many recognized pedagogues. This idea was founding at the time of establishing the Soviet educational system. During the lessons teachers used such teaching forms, as lectures, seminars and practical lessons. The courses of lectures were presented with the maximal use of interdisciplinary connections. To this end, the teachers coordinated the lecture notes and actively attended each other's lectures and practical lessons (Rysbaeva, 2003).

Lecture is not simply a process of presenting the students with scientific information, even if it is the most modern one. A lecture has to become a process, during which the students start to develop knowledge and skills. It has to provide motivational and general-orientating stages of learning a target action. Actualizing the mentoring, motivational and orientating functions of the lecture is very important for high-quality regulation of students' independent work. Transferring the center of gravity from informational approach towards constructing the lecture to the methodological approach is the first and foremost condition of the consequent students' creative activity. Seminars and practical lessons are efficient forms of educational activity. Seminars are a flexible form of

education, which implies intensive independent work of the prospective specialists, along with directing role of a teacher. A seminar is connected to all types of educational works and, first of all, to the lectures and students' independent studies. Because of this, a seminar's efficiency greatly depends on the quality of lectures and students' self-preparation. In the opinion of A.M. Matyushkin, seminars should provide the development of professional creative thinking, learning motivation and professional use of knowledge in educational conditions (Matyushkin, 1972). Professional use of knowledge is the fluent use of the language of a certain science, scientific accuracy in operating the statements, concepts and definitions. Students have to learn to act in a role of presenter and opponents, to master the abilities and skills of setting and solving intellectual problems and tasks, of proving and disproving, standing for their opinion and demonstrating an achieved level of theoretical preparation. Other specific goals, which a teacher sets for the seminars, such as repetition and consolidation of knowledge and control, should follow the main goal (Curren & Randall, 2007).

Active and creative nature of a seminar greatly depends on the correct choice of forms and methods of its conduction. Active teaching methods, which are used in working with students, increase the level of knowledge acquisition and fasten the process of abilities development. During the seminars the students are presented with a wide range of opportunities for activating their independence.

The ultimate goal of education is developing students' ability to solve professional problems and to work with real objects in various life situations. Due to this, the main type of students' activity during the practical lessons should be the solution of real problems. And in order to be prepared for that, it is necessary to use tasks-models – situational tasks, tasks for mastering professional skills and skills for working with computer programs. In order to increase practical orientation of education, the main focus during the lessons should be at teaching the students abilities and skills. Consequently, it is reasonable to conclude a part of practical lessons with solving situational tasks, which are close to the real activity of a prospective specialist. The proposed situational tasks facilitate the activation of students' cognitive creative activity by being a strong motivational factor, which expands their erudition. Goal-orientation also changes the core nature of student's self-preparation for the practical lessons. It has to provide the stages of mastering an action, i.e. the stages of developing initial professional abilities (Spirkin, 1979; Spirkin, 1988).

An optimal form of a modern lesson implies using integrative methodical and technological tools, which provide the synthesis and universalization of knowledge and activity, the development of students' ability to use the apparatus of fundamental disciplines in their further work, the introduction of skills for cooperative work and collective activity, as well as the feedback. Practical activity of teachers and students will depend on the extent, to which the integrative and regulatory functions of the educational program are fulfilled.

One of the teacher's goals is to develop the skills for teamwork, to mentor the culture of communication and ability to present one's own opinion, to be active and initiative. These qualities are the parameters of a specialist's competitiveness on the job market. All of this requires the teacher to organize the pedagogic process with using interactive teaching methods, to constantly

care about his personal and professional growth and to possess the necessary competencies in the conditions of dynamically developing economic and social environment (Ushakov, 2004; Chaklikova, 2007).

Pedagogic encyclopedic dictionary defines creative activity as creating a qualitatively new experience, which has never existed before. An original product of the activity is obtained as a result of proposing a non-conventional hypothesis, seeing non-conventional connections between the elements of a problem-based situation, etc. The predispositions for creative activity are flexibility of thinking, criticism, ability to integrate the concepts, integrity of perception, etc. (Bim-Bad, 2003). It also states that the predispositions for creative activity are common for every person; it is necessary to be able to uncover and develop them. Manifestation of creative skills varies from major and bright talents to modest and hardly noticeable ones, but the essence of creative process is the same for everybody.

In the traditional forms of education, upon obtaining and acquiring certain information, a student becomes able to reproduce the types of activity that he learned. However, he does not participate in the creative search of a way to solving the proposed problem and, therefore, does not gain the experience of such search.

Creative process, in relation to the learning process, is defined as a form of human activity, aimed at creating fundamentally new values, which have social significance, i.e. are important for a person's development as a social subject.

Conclusions

Therefore, modern approaches towards education are connected by the idea of developing and mentoring a growing human, who is able to meet the present needs of the modern society. Currently, more than ever, "it is necessary to teach by structuring a person, who is worth his time period, with significant creative potential, who sees knowledge, education and erudition as the tool for transforming the reality and improving the life and other people, a tool for creating social values. The essence of modern educational process, which contains an integration of education, development and mentoring of students, consists of raising the urge towards truth and kindness and of arming a student – our pupil – with the means for finding the truth, with valuable abilities to express his moral attitude towards the world and the people through actions and opinions" (Tarasenko, 2003).

The above-stated is reflected in the experience of pedagogues-innovators, master teachers of NIS, Sh.A. Amonashvili, S.N. Lysenkov, V.F. Shatalov, K. Bitibaeva, G. Nurgaliev, R. Nurtazina and others. The ideas and technologies of that period are still significant today.

Studying the problem of activating creative activity for successful learning demands the creative approach. Pedagogic activity has always been a creative activity, because it has always had an original nature of performance.

Despite this, it has common ideas, which include:

- humane personality-oriented attitude towards the pedagogic process subjects; seeing a personality in each student;
- an ability to reveal the internal world of a pedagogic process subject, his ideas, aspirations, skills, etc.;

- an ability to correctly build the relationships with pedagogic process subjects, to attract them to the cognitive activities with regard to their interests and wishes;
- an ability to present the pedagogic process subjects with the goals, which are more complicated, by demonstrating the confidence that these goals will be reached;
- an ability to provide the pedagogic process subjects with a right of free choice of tasks, when it is possible;
- attracting the pedagogic process subjects to the collective and individual self-analysis;
- attracting the pedagogic process subjects to the cooperative and social creative activity.

All these ideas reflect the essence of pedagogics of cooperation.

Putting forward the goals of developing creative and cognitive activity in the pedagogic process subjects stimulates the occurrence of new active learning methods, among which problem-based learning has a central place. The works of K. Satybaldina and R. Tarasenko state that the aim of college education is the creation of conditions, which provide the development of creative skills in prospective specialists, which are able to solve non-conventional tasks. This requires students' ability to independently reveal a problem, state it, propose a hypothesis, collect the data, analyze them and see the possibilities of using the obtained results (Satalybaldina & Tarasenko, 1991).

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