

THE SIGNIFICANCE OF HIGH SCHOOL TEACHER'S CREATIVITY FOR INNOVATIVE PEDAGOGICAL PRACTICE

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Abstract

Modern professional education presupposes the formation of the competences of a future competitive specialist capable of self-development and self-education. The development of creative thinking, creative abilities and creative potential of a student's personality provides the achieving of these aims. Creative organization of the pedagogical process presupposes the inculcation of individual management of the creative process, the formation of psychological and intellectual independence of students, the development of skills of processing different kinds of information to the educational environment. The process of formation of creative thinking provides the transfer of knowledge and skills to a new situation, the discovery of a new problem in a standard situation, alternatives in problem solving, combination and transformation of the well-known methods of action in the new environment. A creative teacher performs diagnostic, prognostic, structural, organizational, communication, research, analytical, social and political functions in his professional activity. He successfully uses innovative pedagogical technologies: trainings, educational consulting, modern techniques of creative thinking such as brainstorming, role-playing and simulation games, case technologies.

Key words: *creativity, creative potential, innovative educational technologies, trainings, educational games, case studies*

The main objectives of education in the XXI century are to prepare competent professionals with creative thinking, creating virtual educational environment, freedom of choice of educational trajectory, creating centers of lifelong learning. Educational systems aimed at the development of thinking and creativity serve best the modernization of education.

Formation of competences occupy the central place in the concept of modern higher education (including medical). A competence is the unity of knowledge, experience, ability to act, skills of individual's behavior, defined by the aim and the position occupied. For each competence's structural component development there is a variety of methods – training for skills' formation, consulting for mastering certain technologies.

The main functional teacher's obligation is education and formation of a future specialist, capable of self-development, self-education and competitive at modern market. Achieving these goals is impossible without creative thinking, creativity, a person's creative potential. Creativity is the activity generating something brand new, marked by originality, and social and historical uniqueness.

Creative potential is a complex integral concept that includes natural and genetic, social and personal and logical components, knowledge, skills, person's abilities and aspirations to transform the world in various fields.

Creative potential of a teacher is a dynamic personal structure including three components:

- valuable - reflecting the valuable and creative ideas and priorities of the teacher;
- cognitive - a complex of knowledge that contribute to the teacher's understanding of the creative nature of his labor and making influence on the creative organization of his professional activity;
- activity - elements providing the actualization of creative potential, professional and personal realization of the teacher, including opportunities for his development.

Pedagogy marks the creative potential of each person as well as the need of development and formation of such characteristics of creative person as purposefulness, self-knowledge, self-esteem, the ability to see the problem, to analyze the situation and mobilize knowledge, to carry out the hypotheses, to evaluate the results, to think critically, etc. A student's creative activity can't go beyond the limits of his knowledge. That's why the formation and development of a person's creative characteristics depends on the teachers' ability to organize them. A teacher's personality plays a special role in the development of the creative potential of the students. A creative student can be raised only by a creative teacher with pedagogical creativity. Only a creative person can possess professional pedagogical creativity.

Creative organization of the educational process presupposes self-management of creative process, formation of psychological and intellectual independence of students, the development of skills of processing different kinds of information.

A creative teacher must have the ability to general self-improvement; recognize the integrity of a student personality's development, formation of individuality and a person's harmonization as the priority of education; be ready for dialogue and understanding the students, be able for improvisation, collective and individual creativity; create and maintain the atmosphere of mutual respect, mutual tolerance, openness to criticism and innovation. The feature of pedagogical creativity of university teacher is that the student's personality is both the object and the subject of his professional activity. Pedagogical creativity, consisting of individual stages, such as the appearance of the idea, its development and implementation requires the certain period of time and sequence of stages, so in the work of the teacher there are no breaks between the stages of the creative cycle.

The process of formation of creative thinking of a teacher and a student involves independent the transfer of knowledge and skills to the new situation, the discovery of a new problem in the standard situation, the establishment of the entire structure of the object, offering alternatives for solving the problem, combining and transformation the well-known methods of activity in the new environment.

Manifestations of creativity depend on many components including teacher's competences.

Competences of the teacher of the XXI century are divided into general - knowledge of mathematics, science, humanities, social and economic sciences, basic computer literacy, knowledge of foreign languages, the ability to obtain and analyze information, assess its reliability, the ability to organize and plan the work; interpersonal or social and personal competencies - criticality, tolerance, ability to work in a team, commitment to ethical values; systemic or organizational and managerial competences - the ability to use the knowledge obtained, legal and organizational basis of the activity.

The following functions are included in the pedagogical activity of a creative teacher: formative, diagnostic, prognostic, structural, organizational, communicative, research, social and political, analytical. Their implementation is carried out at the creative level with the methods of modelling, observation the real educational process, conducting business games of various modifications, with the method of expert assessment. [1]

In the formation and development of the creative potential of students we must consider such characteristic of a person as creativity. Creativity is a certain level of talent. It is a relatively stable characteristic of a personality. There are three sources of a person's creativity: social, personal and situational. Social is the aspiration for extraordinary solutions and ideas, which is influenced by the contradictions between the individual and society. Complete satisfaction doesn't contribute to finding creative ways and solutions. Personal category of creativity is based on the psychophysiological characteristics of a person. Situational source is based on the changes of the state caused by short-term external influences, internal needs of changes, stimulating thinking processes.

There are two main types of creativity: the primary associated with creative insight, allowing to create a product with a high degree of scientific and market novelty, and combinatorial, promoting the creation of innovations by means of combination of well-known ideas, obtaining a product with lesser ideological novelty. With the combination of both types of creativity we can work out not only the 'imitating products' which replicate their predecessors, but also the new and unparalleled ones. The

level of creativity does not always correlate with the development of intelligence. Albert Einstein noted: 'Imagination is more important than facts'. To generate creative ideas we need well-developed imagination, acting as its motivation factor. The main factor of realization of creative abilities is well developed divergent thinking, providing the variety of options for possible solutions of the problem, which is especially important in science.

The main factor of the further development of creative abilities is the thinking capacity. The creative potential is mainly determined by it. According to Abraham Maslow, creative potential is a complex of intellectual and creative tools, interconnected within the professional and creative activity and characterized by the ability of an individual to the development of new ideas and concepts on the basis of available knowledge and information from the external environment. When developing and implementing a variety of innovative projects, the most significant is the development of thinking with its creative and skill components.

Raising creativity at the higher education establishment should be primarily based on the consideration of the specific features and usage of individual methods. The components of creative thinking of both a teacher and a student include the individual transfer of knowledge and skills to a new situation, the discovery of a new problem in the standard situation, the establishment of the entire structure of the object, the vision of its new function, offering the alternatives to solve the problem, combining and transformation of the well-known methods of activity (improvisation) in a new environment. Nowadays creativity in the classroom is considered as a mandatory component of a teacher's professional activity aimed on teaching the students to apply knowledge in the non-standards situations individually.

The points of application of creativity in creating teaching methods and techniques are various and numerous. At the level of development and approval of educational standards of higher medical education creative thinking of the experts of the working group including the significant number of leading university professors which determine the content of the list and the general cultural and professional competences of the future specialist, his qualification characteristics, amount of practical skills needed in professional work is of great importance.

The developers of the technologies, based on the competent approach, who implement them in practice, should apply their creative abilities for improvement of the information product, ensuring conditions and promotion of the development of the students' creative qualities.

Educational standard approved in high school is implemented in the form of the creation of the new working programs, the content of the main sections of which should contribute to the students' acquiring the competencies. When planning the studying of the discipline, including lectures, seminars and practical classes we should use the original themes of the classes attracting the attention of students and calling to view the problems under study from the different angle.

The emphasis of the efforts of the authors' collective should be placed on the usage of innovative forms and methods of the students' extracurricular work, offering the original topics of the course and diploma projects mandatory for student, compiling the list of the additional textbooks, electronic and Internet resources, periodicals.

Special role in the development of creative thinking of the students can be played by the elective courses, programs of which are based on the original design reflecting the creative idea of the authors.

The subsequent stage of the implementation of creative abilities of the teaching staff for the further realization of the goals and objectives of training is the preparation of teaching materials – the unity of the means of teaching and methodological support contributing to the effective mastering of the curriculum of the training the specialists on subjects or modules of the program included in the educational standard. Composition of methodical materials provides a wide scope for the application of the creative initiative of the teacher. [2]

In the process of working out the guidelines for teachers for preparation and delivering the lectures, it is necessary to introduce creative elements contributing to activation of the students' attention starting with the formulation of the topic of the lecture, making up its plan, announcing its goals and

objectives, making up the link of this topic with the other disciplines.

Motivational component of the lecture can be effectively underlined by the usage of questions to the audience on the topic of the lecture stimulating cognitive interest.

Contents of the main part of the lecture presupposes a thorough selection and structuring of educational material, including the author's abstract of the lecture, drawings, illustrations, animation, video and audio clips, allowing the audience to see the problem under study with the maximum possible detailing. Technical means used at the lectures contribute to it. The method of survey can be used as the instrument of the assessment of enhancing learning and cognitive activity of students at the lecture, and the obtained results can be used for the improvement of the organization and quality of the contents of the lecture material.

To maintain the students' cognitive activity of students after finishing lecture its author offers the students a list of references used in the preparation of the lecture for more profound study of the presented problem.

For the development of creative potential and lector's skills it is recommended for the teachers to attend the lectures of the leading specialists in various fields of knowledge, to participate in teaching workshops, teachers training courses on creating and usage of methodical materials for mastering academic disciplines. The system of lifelong learning of the university teachers must also be based on the competence approach with mandatory formation in the process of information and technological and professionally creative competences.

The teachers should have more responsible attitude to the development of the guidelines for the preparation and conducting of seminars, practical and laboratory classes.

Creative organization of the classes may include the usage of tests as the means of input control of the students' level of knowledge made on the principle reverse to the traditional when the students are offered not to recognize a particular pathological condition or disease at the basis of the results of clinical, laboratory and instrumental investigations, but on the contrary at the basis of the diagnosis to list its the most significant criteria.

While working out the guidelines for the students for making practical situational tasks for carrying out output control of knowledge and skills it is recommended to use problem tasks having the uncertainty of the initial data activating a student's search activity. The usage of creative approach to making problem tasks presupposes its a priori unknown multivariate decision, the choice of which should contribute to the formation of such logical operations of thinking as analysis, synthesis, comparison, deduction, abstraction. In solving the problem tasks the students need originality as the degree of deviation from the standard.

While group discussion of solving the tasks a variety of methods can be successfully used: brainstorming, when any opinions of the team members are heard and taken into consideration, and ultimately the most appropriate version of the solution is chosen; collective search for original ideas which combines the components of intuitive and logical cognition; method of key questions which is used for gathering additional information or its systematizing [3].

Case technology is a group of educational methods and techniques based on solving the certain problems, problems with using the principles of problem-based learning. The students use a set of necessary documents illustrating a certain case, identify the problem and the ways of its solutions, develop the ways of solving a difficult situation. Case study method is a tool allowing to apply the theoretical knowledge in solving practical problems, contributing to the development of students' independent thinking, critical skills to evaluate alternative points of view, the development of skills in a team.

Another innovative form of discussing the topics of the practical classes suitable for development of general cultural (communicative) and professional competences of the students is a role-play in the working out of scenario of which it is possible to embody the most original creative ideas of a teacher. One of the creative teaching methods recommended for the usage in solving situational tasks is a role-

playing technique 'thinking hats' described by Edward de Bono. Different points of view corresponding to a specific color of hats tried on when switching attention from one to the other characteristic of the object in the discussion allow us to examine a question or an object from six different points of view. Putting on a white hat, the player must be impartial and objective and use only facts and figures. In a red hat a student can display all his emotions. A yellow hat assumes an optimistic and positive viewpoint. A green hat symbolizes the creativity and development of new ideas. A blue hat is associated with the organization and management of the thinking process, and a black one - with a critical judgment. Business games offer the students specific settings for the modeling and development of possible relationships in the terms of future professional activity, they engage the students in a particular situation, provide the participants with an opportunity to express themselves creatively.

The tendencies of the development of modern education are carried out in the direction of developing a wide application of training technologies in pedagogical system previously characterized mainly with knowledge approach. A training is an active practice oriented part of higher professional education focused on specific activities with the aim of developing professional competences. Any training is a deliberate and purposeful formation of abilities and skills, practice-oriented action on the basis of theoretical knowledge. Mastering a skill is a kind of sequential development, when the sequence of not the verbal but motor reactions is memorized. Actually, a training is one of the forms of teaching, mostly interactive group teaching conducted in the manner of intense interaction of a trainer and participants.

The main types of trainings are skill, psychotherapeutic, social and psychological, business training. As a result, the trainings increase business settings, competence in business and interpersonal communications, provide an opportunity to acquire new knowledge and skills within the profession.

In the process of preparation of a training there are several stages:

1. determination of the contents of the class, the list of knowledge, skills, abilities and values necessary for the formation of physical, emotional, intellectual and spiritual qualities of the future specialist;
2. selection of tasks to be done:
 - a) the usage of personal and group assignments for the participants of the training;
 - b) defining the purpose of training, types of tasks for its achievement, providing the instructions for performing students;
3. selection of methods to achieve the goals: methods aimed at the formation of professionally significant qualities, abilities and skills of the students: group discussion, role playing, solving of problem pedagogical situations, etc.

Evaluation of the results of the training is carried out in general and individually according to the activity of each its participant. The criteria for evaluating the effectiveness of training is success - achieving the objectives of the training; efficiency – the significant changes in the development of the professional and personal qualities and skills of the participants of the training; performance - achieving the best results.

The creative component of the organization of a training or a simulation course is realized in the best mastering of a certain skill in the conditions when technical performance is stimulated by the student's emotional reaction to the imitated real situation (counseling, medical emergency), the tactics of behavior in which allows to repeat a certain skill, bringing it to perfection.

Another innovative pedagogical technology is educational consulting – a kind of intellectual activity for providing consulting services in the field of education. One should differ consulting from usual counseling. Consulting is a process of making influence, and its component – counseling – is the transfer of information which can be used by the recipient (a student) at his own wish.

In the process of pedagogical consulting one should observe the following principles:

1. scientific character - recommendations offered after counseling should be based on scientific facts and personal experience;
2. flexibility - for achieving the goals it is necessary to use the variety of techniques and tools allowing to change the scheme of counseling in different pedagogical situations quickly;
3. progressivity - dynamism of the approaches used that require continuous development and improvement of the theory and practice of consulting;
4. continuity - the usage of the most effective techniques and methods used by the different generations of consultants, making necessary innovations based on personal experience;
5. concreteness – the effect of consulting is largely due to its timeliness and compliance to the demands of teaching practice, the results of consulting should clearly and precisely predict the further development of students on the basis of recommendations of the consultants.
6. competence - a certain level of the requirements to the competence of the professional consultants on specific educational problems;
7. dynamism - the counseling process should bring the necessary dynamics in pedagogical practice remaining after completion of counseling;
8. scientific perspective - the emergence of new scientific ideas in the process of consulting, identifying the promising directions of its development;
9. creativity - the process of consulting requires constant creativity, the search of non-standard solutions and non-traditional approaches; in different pedagogical situations the consultants use original methods and techniques invented by them;
10. efficiency - in the process of pedagogical consulting it is necessary to carry out the constant search of the ways of improvement its effectiveness. [4]

The stages of pedagogical consulting are gathering the initial information, a stage of complex examination of problem pedagogical situation, analysis, internal consulting (consultation, expert evaluation of the situation of integrative educational process) and recommendations.

The greatest role in the assessment of the completeness of mastering knowledge and skills is played by the properly formulated and carefully selected tests for current, intermediate, boundary and final control of knowledge. In the process of working them out both the semantic contents and technical design of the tasks can be creatively performed. Due to the modern programs of testing we have a wide range of the possibilities of visual presentation of textual and graphical information, and its selection is fully determined by the qualification and creative energy of a teacher. [5]

The additional sources of literature in the course of university education are the textbooks, compiled by the teachers, among them multimedia aids have been successfully used in recent years. They significantly improve the perception of educational information and understanding of the complex pathological processes, diagnostic and therapeutic algorithms. Their presentation with the usage of fantastic elements or famous literary characters allows a student to perceive emotionally and safely memorize difficult theoretical material, avoiding its primitive learning.

Organization of the students' research work according to the standards of the 3rd generation provides a wide field of teacher's creativity in the choice of topics, research methods, and in the interpretation of the results which must be correctly represented in the methodological guidelines for the organization and writing a diploma or graduate qualification work compiled by the teacher.

Educational practice is an obligatory part of training, in the creation of methodological support of which the manifestation of the creative abilities of the teacher is necessary, because the real situations of a doctor's activity provide the greater possibilities than the modeled. The time of practical training must be used by the student for performing various kinds of activity, and their results must be presented in a portfolio serving the reflection of a student's creative abilities.

The final examinations is a responsible stage control of knowledge and skills of the graduates in the

various fields of training. Materials for them in the form of the tests, situational tasks and assessment of practical skills must give the graduates the opportunity to demonstrate not only knowledge, but also thinking skills. Therefore, the tasks should include the questions, the search for answers to which will not only activate the mechanisms of memory, but also that of thinking.

A teacher's creative competence is necessary in the organization of educational process contributing to the formation of common cultural competence of a person, which is especially important for the future physician as the representative of an intellectual profession. Manifestations of the creative activity of a teacher can be the original ideas and their implementation during the educational events, meetings with famous people of culture and science, scientific and practical conferences with the students' participation 'Medicine as a science, art and craft', 'The art of communication in medical practice', 'Clinical thinking in medical practice', 'Personality of a doctor of the 21st century', 'Study to learn', 'Creativity as the basis for an innovative approach to the quality of higher medical education'. Students' participation in such conferences and in the dramatizations illustrating thematic reports contributes to the development of their creative potential, and the young teachers master the advanced creative teaching experience.

In Kursk State Medical University at the course of thematic advancement of the teachers at the faculty of improving qualification 'Development of creative potential and pedagogical creativity of the university teachers' 15 teachers were trained. They received a systemic understanding of the various methods of psychological activation of thinking, creative approaches to the organization of the educational process widely used in the global and Russian teaching practice.

The study of self-assessment of the development of personal creative qualities: curiosity, originality, imagination, creative thinking, intuition, emotion and empathy, sense of humour and creative attitude to the profession, the evaluation of a creative individual psychological profile of 85 teachers of the medical school using the test 'Creativity' (Vishnyakova N.F.). We have found that in the investigated selection the most developed are imagination, intuition, emotions, empathy, and the least formed are curiosity and the sense of humor.

Comparison of the two images of creativity 'I – real' and 'I – ideal' allows to assess the creative and creative potential of a person; it will serve as a reference point during its further implementation. The usage of the test in the student groups at the beginning and at the end of the study will help the teacher to assess the effectiveness of his own creative efforts, to identify the problem areas and the areas of possible improvement of the pedagogical process.

People who develop their creativity, constantly grow creatively and reach professional success. Creativity is influenced by many factors. Among them are the knowledge about the ways of creative thinking, the sense of control over the circumstances, confidence in the ability to generate new ideas, open-mindedness, positive experience of people who used creative thinking to solve problems, the study of models of behavior.

A creative person and the ideas and products produced by him are often subjected to a severe ordeal. The way from offering an innovative project till its implementation has many difficulties in its path both ideological and bureaucratic ones. Famous astronomers Giordano Bruno and Galileo suffered because of their creative beliefs. Antonio Gaudi did not live till the implementation of his idea of building the highest Catholic church in Barcelona, Alexander Gustave Eiffel was criticized because of the criticism about of a giant metal structure in the center of Paris which is nowadays recognized as its symbol.

In current medical practice a creatively thinking doctor very often can't apply an individualized approach to a patient and has to correspond to the strict rules of the 'Procrustean bed' of the standards and protocols to avoid penalties when choosing a treatment strategy and management of the patient. Despite all obstacles and barriers, truly creative teacher, scientist, physician, with necessary patience, can be able to achieve the recognition and realization of his ideas for the benefit of the further development of society and civilization.

Development and comprehensive support of a person's creativity in all the spheres of human activity

is the key to the prosperity of science, the quality of higher education and practice.

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