INNOVATIVE EDUCATIONAL ENVIRONMENT OF HIGHER EDUCATIONAL INSTITUTION

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The purpose of the research is aimed at the studying an innovative educational environment of higher educational institution, its projecting and modeling in the context of environmental approach and implement this model to a learning process. The main approaches to study this problem are the following: a competence approach which is determined by the need of forming a highly competitive mobile competent specialist, which is ready for a lifelong learning; an environmental approach, based on projecting different virtual educational environments for self-education and mutual education of students. In the research the innovative educational environment is considered as an open system, which accumulates purposely created organizational-pedagogical, technological-procedural information resources as a common learning environment of an educational institution that will allow effective cooperation of all interested parties in the field of future specialists' professional training.

Key words: innovative educational environment, higher education, projecting, modeling, environmental approach.

INTRODUCTION

Policy changes and public priorities in education formed a new paradigm for education and upbringing – the transition from upbringing of the citizen of the country to the citizen of the world, an open human being, democratic and responsible, education, culture and ethics which correspond to the difficulties of the world (Kolesnikova, 2005).

Modern education must prepare the person who is able to live in a highly standardized and dynamically changing world, perceive it as a significant constituent of the mutability of their own lifestyles. Globalization, transformation processes and the constant informational variability make the inclusion of a person in the system of social relationships, require from him the abilities to not standard and rapid decisions (Bugaychuk, 2011).

Innovative education can educate a person who lives according to the modern innovative laws of globalization and who is fully developed, independent, self-sufficient figure, who is guided in life by own skills and beliefs (Vorontsov, 2002).

Education should provide everyone who learns, wide opportunities for the acquisition of such conditions of formation and preparation for life:

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- knowledge of human being, nature and society, which fosters scientific
 picture of the world as a basis and guidance in choosing the real scope of
 the upcoming actual performance;
- the skill of communicative, intellectual, sensitive, physical, occupational
 activity, which promotes the formation of major mental, intellectual,
 organizational and hygienic knowledge and skills needed in everyday life
 for participation in social production, continuing of education and selfeducation:
- the skill of creative activity, which opens the space for the becoming of
 individual abilities of the individual and provides its preparations for life
 in the context of socio-economic and scientific-technical progress;
- social and personal relations skills which prepare the youth for the energetic participation in the national life, family life, projecting individual life based on ideals, moral and aesthetic values of modern society (Voronkin, 2012).

Globalization and society informatization, rapid development of educational technologies put forward new demands to specialists' training, which are able to work effectively in information-rich environments, make their own responsible choices, are ready for constant self-improvement, are focused on advanced innovations and their practical realization (Rakitov, 1991; Khairullina et al., 2016). In addition, in today's society, knowledge is updated every five years; hence, one of the world educational system's trends is transition from traditional education to lifelong self-education.

The necessity of this problem working out is determined by society demand for preparing modern specialists, who are able to work effectively in the conditions of an information-rich environment, to make responsible choices, to be ready for constant self-improvement, to be focused on advanced innovations and their practical realization.

The relevance of our research is grounded in the legal framework (RF Government Resolution № 662 dated 08.05.2013 "Monitoring of the education system", 2013), (Federal Program of Education Development for 2011-2015, approved by Government Decree February 7, 2011 ¹ 61, 2011), (order "Strategy for Russian Federation innovative development for the period up to 2020", dated December 8, 2011 № 2227-p, 2011).

Considerable research has been conducted in the field of professional education, the research results can be seen as a prerequisite for further study of the problem of projecting and creating an innovative learning environment of a higher educational institution. There are two approaches of analysis to the problem:

- Literature on conceptual bases of future specialists' professional training in higher education (Arkhangelskiy, 1974; Krajewskiy, 2001);
- projecting for education (Red'ko & Shumakova, 2010).

Thus, the relevance of designing a university innovative educational environment is determined by the need of bringing the system of higher education in line with information society requirements, as well as the need of providing future professionals with facilities for self-development and self-education.

METHODOLOGICAL FRAMEWORK

The research methodology includes competence and environmental approaches. Since the beginning of the XXI century, a competence approach has been evolved within the system of general and professional education. Purposes, content of education, organizations of educational process are determined by the results achieved by a person at the end of a certain educational level. These results are assessed not in terms of knowledge and skills, as it used to be during the industrial epoch, but in terms of competencies based on educational standards, as integral characteristics of a human being. The evaluation of education effectiveness, the educational environment formation, and the whole learning process of modern higher school are determined by competencies developing process.

The transition from a knowledge approach to a competence approach represents a radical change in education results understanding, which can be called revolutionary. The history teaches that revolutions in education begin with tries to comprehend the ideals philosophy of the educated society, and the educated person, develops new ideas about the school's purposes, about the content and purpose of the learning and teaching processes (Ogurtsov, 2004).

The realization of a competence approach within the framework of projecting an innovative educational environment in a higher educational institution assumes that education should be activity-oriented, should be aimed at core competencies' forming: general culture competence, general professional competence and professional competence.

In the Russian education system since the beginning of the twenty-first century, competencies have been viewed as a new approach to educational standards constructing. Educational standards are a kind of consensus between the state as a customer of education services, the society, including an academic community, and citizens. The standards define education purposes, curriculum requirements for a certain education degree or training course, conditions for curriculum realization. A. V. Khutorskoy (2013) distinguishes the concepts of "competence" and "competency" as a general and individual. 'Competence' implies some external standards - "a kind of alienated, preassigned requirement for a student's educational training", as for developing a set of interrelated personality traits, gaining knowledge, mastering abilities, skills, and means, necessary for effective performance. The term "competency" the author uses to refer to inner qualities of a person, "being competent includes a person's attitude to this fact and to the subject of their activity". The researcher presents the classification of competencies

(key, universal, meta-subject, subject). Along with the approach to pupils' competencies' diagnosis and assessment, the typology of competences can be a basis for real changes within the educational environment.

The environmental approach is a theory of indirect environmental influence on students' identity development. According to the environmental approach as a theory of indirect management, projecting an innovative environment of higher education institutions is determined by methodological principles of the environmental approach as a pedagogical activity. An environment is created by forming certain trophic niches. The negative niches are destroyed or neutralized. The environment is supposed to create conditions for a positive lifestyle. The main methodological line is indirect environmental influence on a student's identity development.

Within the environmental approach, the education is seen as an open, self-organizing, non-linear, dynamic system. In this sense, an environmental approach is a contrast to a system approach, according to which the professional training is a complex multicomponent educational system. This system is stable, unchanging, and strictly organized; it consists of such components as training, educating, researching activities of teachers and students, and links between these components. However, the research on the problem does not provide a holistic approach to interaction between a professional training process and a learning environment. In contrast, in the framework of an environmental approach learning efficiency depends on coherence, mutual enrichment, co-development, complementarity between an environment and students. The environmental approach to future specialists' training can be a key factor in achieving openness, dynamism and competitiveness of higher education institutions (Manuilov, 2002).

According to environmental approach, participants in the educational process are: student, teacher, environment, with the main task of the teacher to make environment of his assistant in education and upbringing. The object of research is the process of personality development, depending on the characteristics of environment. Environment is interpreted this way – all that, among which dwells the subject of development and through which he sells himself as a personality. Such an understanding of environment provides opportunities as actors in education (students), and control subjects (teachers) who are equally important and pedagogically significant. In addition, within the framework of the approach at environment is meaningful, but intermediate between the subjects of education and management. Principles of approach, which allows the environment, its transformation and change in the desired direction, are: the principle of type trends, variativity, manufacturability (Manuilov, 1997).

Traditionally the main positions on environmental approach in pedagogy are considered: 1) differentiation of educational (upbringing) environment; 2) dialectic of developmental and formative functions of educational environment. For the

disclosure of the first position turn to the studies of J. S. Manuilov (1997), who proved that environment can become any space of human life when it is mediated by its purely personal meanings and values, that is, there is only environment in the ratio of "subject-environment. According to this provision, educational environment is not so much the conditions conducive to the fulfilment of the objectives of teaching, how much a particular result education strategy, a special modality of education (Yasvin, 2001). Education is always a environment environment, providing educational opportunities for self-development complex participants of educational process.

As regards the second position on environmental approach, its essence lies in the continuity of the training and capacity development training environment. External expression of this relationship acts exactly individual mediation standards and values, cultivated environment. Even when an individual breaks from environment, it was her influence. That is why, talking about the systematic organization of educational provision on environment, is the unity of its educational and formative functions. Educational environment should operate so that socially significant personality of trainees were formed without obstacles to their individualization (Shek, 2001).

The process of modernization implies the introduction in educational process of the latest achievements of science and innovation. The study author proven the innovative nature of environmental approach based on such conclusions: 1) this approach is in the full sense is the scientific interdisciplinary modern opinions on the pedagogic validity; 2) its study is interdisciplinary functional approach complex self-organizing systems theory (Synergetics), philosophical linguistics, ecological theory, co-evolutional strategy, modern logic, hermeneutics, developmental psychology, theory of social control, the historical phenomenology.

Thus, environmental approach is the theory and technology of indirect management of educational process in which the emphasis is on enabling the internal activity of the student, his learning, self-education and self-development; training environment is the condition and the factor of success or failure of the student; the intrinsic characteristics of the implementation at approach to language training of future specialists are:

- co-evolutional of educational environment and society (Gershunsky, 1998), their timely reaction of teachers at the slightest social, economic and scientific changes in society;
- mediated, volumed, nonlinear effect on the student;
- educational environment provides the ability to obtain necessary for student information, data, information, the ability to consume information and transform it in the learning process;
- educational environment is a means of diagnosing, designing and producing results, as well as the updating of the internal world of the student;

- environment selection, i.e. the opportunity to build your own trajectory of foreign language education on the basis of ability to provide contingency environment development of educational process;
- the student is not a consumer of knowledge and co-author of educational environment;
- sources of information and knowledge in the educational teaching materials are the environment networking community group, all participants in the educational process;
- the ability of environmental education be a micromodel of communication and informational culture of mankind;
- the ability to manage the process of projecting educational training environment on the part of students;
- curriculum environment is a special personal space cognition and development, where each student develops according to their individual peculiarities.

LITERATURE REVIEW

An innovative educational environment of higher education institutions is understood as a common educational environment of an institution that allows all interested persons to cooperate in the process of future specialists' training; as a system of teaching methods and tools, aimed at the organization and comprehensive support of both learning process and scientific research at university. An innovative educational environment is an open system, which accumulates organizational, educational, procedural, technological, information resources; a system of teaching methods and tools, aimed at innovation and comprehensive support of both educational process and scientific research in higher education (Hrapchenkova, 2011).

Complicated innovation processes in modern society require theoretical understanding and qualitative renovations of teachers' professional training at all stages of continuous pedagogical education. Innovations in professional training and upbringing attracts attention of educators, sociologists, philosophers and psychologists. The basic meaning of the term "innovation" refers not only to creating and to implementing innovations, but also to transformations and changes in course of actions, style of thinking, which is directly linked to these innovations (Slastenin, 1997).

An innovative training was interpreted as a process focused on a person's adaptability for rapidly changing society, for an uncertain future, a readiness based on creative abilities, various forms of thinking and an ability to cooperate with others. The main features of an innovative training are "anticipation" and "participation".

The second half and the end of the XX century is known as a period of "global innovations" in the fields of culture, economy, technology, social and individual life. Innovations transform the entire system of relations between human beings and between a human being and the world. Global innovation processes are accompanied by a rapid development in all aspects of social life, and that exacerbates and deepens the contradiction between the pace of public and individual socio-cultural development. An innovative learning creates a new type of educational process, liberating personalities of the teacher and the student. Most researchers view an innovative training as both a process and a result of a learning activity that fosters innovative changes in culture and in social environment in general (Yusufbekov, 1991).

An innovative teaching strategy involves mobilization of all social, communicative reserves for organizing and self-organisinf of learning process. The main innovative teaching functions are: consious analysis of professional activities based on one's motives and dispositions; finding problems and conflicts of reality; critical attitude to norms; reflection and meaning construction; openness to an environment and to professional innovations in particular; creative attitude to the world, going beyond regular tasks; an ambition for self-realization in professional sphere; giving some personal meaning to all elements of content (Akhmedzyanov, 2010).

Thus, an innovation is, above all, transparency, openness to opinions different from yours. One of the key factors in personality development is education. Highly educated people are able to realize their potential better than others. The qualification level determines a professional and social status of an individual, his position in the social hierarchy, the quality of life. In this regard, such quality as *readiness to learn throughout life* is increasingly essential, that is, on the one hand, people should be able to learn, on the other hand, it is necessary to develop their habit of learning. In the context of integration changes in society, choosing new social priorities in the development of a personality is getting progressively important. The modern information society requires rapid development of high technologies, and at the same time increases demand for an effective training process, including the field of education. The aspects contributing to the formation of new core competencies and mobility are of critical importance, which in turn place new demands for a higher intellectual level of society, improved education system and lifelong learning.

Despite the fact that the environmental approach is not new in the world of educational practice, and his study focused on work as domestic researchers (Artyukhina, 2007; Kozyrev, 1999) and foreign (Abowd, 1999; Hutchinson, 2003), interest in research at approach contrasts with the degree of knowledge of the problem.

Analysis of scientists' works showed that attempts to articulate the basic provisions at the environmental approach were undertaken not only to teachers, it

was considered in psychology, sociology, philosophy of education. So, in the philosophy of education we are talking about projecting of new educational environment as the multidimensional space, adequate to the needs of students and the relevant trends and dynamics of contemporary culture. As well as a projecting of a flexible environmental approachis aimed at not only to the objective subjective world, but also on the development of the world communication, linkages and relationships between the world educational systems, associations of educational institutions and their educational environments, their integration into a single communicative cultural space (Meng, 2008). In sociology under conditions of environmental approach traditionally examines human relationship environment. Psychologists seek to analyse and use of environmental education as a factor, condition and means to build the educational process (Ivanova, 2014); questions of overall comprehensive psychological analysis of educational environment are devoted to scientists research (Panov, 2004; Shek, 2002). Written by G. G. Shek (2001) instead of the term "environmental approach" operates the synonymous term "indirect management in pedagogy" and leads this definition: original theory and technology of treatment environment in the management tool or another tool of mediated control formation of the student's personality.

Innovative educational environment includes several components: information and pedagogical educational environment, information and pedagogical environment, information and educational environment.

Innovative educational of higher educational institution environment must have certain characteristics:

- built on values, norms of the Russian society, moral benchmarks adopted by a Community of higher educational institution;
- be legal environment, where is fully applied the substantive law of our country-the Constitution of the Russian Federation, the laws governing educational activity and work with the youth, University Charter and internal regulations;
- be highly intellectual environment which promote the innovative capacity
 of the students and the arrival of young gifted people in fundamental and
 applied science;
- supported by modern information and communication technologies;
- be an environment of high communicative culture, tolerant dialog interaction of students and teachers, students with each other, students and employees of the University;
- remain open to cooperation with employers, with various social partners, including foreign;
- focus on psychological comfort, healthy lifestyle (Blyumin, 2001).

RESULTS

Modern paces of volumes growth of scientific information require from a modern teacher ability to learn throughout life. Preface information civilization puts forward values update. Not the number of collected wealth will determine the rank of the human being and society, but culture level, education level and logical content management, provides the economy of renewable and reproduction of the most important renewable sources. The teacher in the formation of democratic culture of personality plays extremely important role. The metamorphosis of glances about morals education from "education for the whole life" to "education throughout life."

Typically, the learning process is focused on the acquisition of knowledge. These inclination indicate that the main function of education is the formation of human being and his culture. Education should provide everyone who learns big opportunities for the acquisition of such formation conditions and preparation for life as:

- Knowledge of man, nature and society, contributing to the formation of the scientific picture of the world as the basis of the real world and orientation in choosing areas for future practical activity;
- Communicative skills, intellectual, sensitive, physical work, contributing
 to the formation of major intellectual, organizational and hygiene
 knowledge and skills which are needed in everyday life for participation
 in social production, continuing education and self-education;
- The skill of creative activity, which opens the space for the becoming of individual abilities of the person and provides its preparations for life in the context of socio-economic and scientific-technical progress;
- The skill of social and personal relationships, which prepare the youth to
 participate actively in the life of the country, creating families, projecting
 the individual life based on ideals, moral and aesthetic values of modern
 society on the creative assimilation, the amount of knowledge of students.

Education forms young people as the "assimilation" ready knowledge. They get used to this role easily and rapidly, and consequently the current education brings up, as a rule, people-externals, who are vigorously to work only under the authority and with the encouragement of external factors. Young people, filled with "ready skills", mostly don't know how to work, neither creatively nor independently only in environments where cognition require rapid updates. At the same time, human being of future hould be the creator, and not only be a buyer earlier benefits. It should be understood that the main buyers of foreign intellectuals rapidly are marginalized socio-economic development. The main factor of the social progress of the current civilization lies in science and education. For the youth who learns, you want to focus on social and cultural formation of the individual,

which would be not only a specialist in chosen specialty, but also culturally developed, highly educated man and the bearer of new knowledge (Abakumova, 2007).

Innovative educational technology is a dedicated, systematic and consistent implementation in practice of authentic, innovative methods, methodologies, tools and educational activities covering holistic learning process by identifying their targets to the projected results.

Pedagogical innovation is the result of creative search of unique, unusual solutions to the various objectives of education.

Innovations of direct products include: the latest technology of comprehension, unique educational thoughts, forms and methods of cognition, creative approaches to management.

Innovations in education divided into the following groups:

- Innovation of contents education (curricula, textbooks, manuals, etc.);
- Innovations in technology of educational and upbringing processes;
- Innovations in the educational process;
- Innovations in education management system;

Depending on the method of innovation realization, they are divided into two main groups:

- Systematic;
- Random or spontaneous.

Depending on the depth of innovative change innovations are divided into:

- Massive, large, indigenous, fundamental;
- Small, private.

Under the innovative formation of education, you should understand the complex of made and introduced organizational and substantive innovations, the formation of a number of factors and conditions that are required to build the innovative capacity of the educational system. Such difficult psychological-pedagogical process requires a clearly planned systemic action on the part of all educational structures, which in its generality are the backbone of innovation policy.

In its content, forms and methods, education is not sustainable, hardcore phenomenon, it responds to the new social challenges, realities, considering the tendency, the prospects of the formation of society, national life of people. However the update of educational practice, for various reasons, often lags behind the pace of civilization development, public education requirements. For a long time solely on the early stages of society, this task was not so acute as in industrial and postindustrial (information) era. Invisibly it was updated at the end of the second half of the 20th century, due to a terrific breakthrough in scientific and technological establishment, radical change of traditional perceptions about the world, life and values, and the future of civilization.

At the present stage it is increasingly clear that the traditional school, focused on the transfer of knowledge, skills and knowledge from generation to generation, from teacher to student doesn't kept the pace of their developing. A substantial part of the knowledge that pupils are taught was taken society 200-400 years ago. The modern school doesn't develop well the abilities for its graduates to independently find their way in a globalized and extremely dynamically changing world, make informed decisions about their future, be energetic, competitive and mobile subjects on the market of activities. The main disadvantages of normal educational system is its conception of the inability and unwillingness of children to learn actively, not well-formedness value relationship for their own formation, education and society in General (Vayndorf-Sysoeva, 2010).

Education is such public instrument through which are passed and implemented basic cultural values and goals of society becoming. Education is an active driving force of cultural change and reforms in social life and in the individual.

Education is a method of socialization and continuity of generations, communication environment and bringing to the world the values of science and technology. Education speeds up the process of formation and development of human being as a person, and the subject of individuality, provides education spirituality in human being and his real, value orientations and moral principles.

Education system as a part of the social system is influenced by many factors, some of which require structural changes in it, others are more extensive, technological improvements.

The condition of education and its perspectives of its becoming substantially depend on State policies in this area. In many countries public educational policy considers the high professional and common cultural level of population as a significant prerequisite for socio-economic development, the preservation and increase of competitiveness of the national economy in the world markets, security and social stability.

Innovation should be considered not only as the mood of perception, production and use of a new and, above all, openness and democracy in the educational system. Regarding the personal factor of pedagogical activity this means:

- The teacher's openness to dialogical interaction with students, which provides the equality of psychological positions of both sides;
- The openness for the culture and society which manifests itself in teacher's gravitation to change the reality, to learn tasks and to prefer optimal ways to achieve them;
- Openness of own "I", your inner world, i.e. organization of such pedagogical environment that would promote education and formation of the "I" image.

Innovation as a rule in pedagogy provides data of becoming shape, exercise their right to personal creative contribution, to a personal initiative, to the will of self-development and to achieve their own and social purpose.

It should be noted that in the current school and in real actual educational activities often reigns simplified, pragmatic understanding of innovation processes. Together with that, the current real situation confirms that an innovative phase of the global community does not equal improvement processes of functioning systems and innovations cannot be perceived only as a means of improving them. This occurrence is high the other models of the world and a new generation with a different philosophy of life characterized by dynamism, flexibility in addressing the different challenges, attraction to increase linkages not only with native objects and designs, but also building new information and energy firm movements. Systemically, forming the integrating factor becomes the innovation that provides for the transition of society and shape in a new State, in return for guarantees optimization of balance (Denisova, 2010).

The realization of projecting and creating of an innovative of educational environment of a higher education institution will help to introduce innovative programs and technologies of training, advanced training and professional development of teachers. Scientific and methodical theses, practical recommendations and approaches on formation a cluster technology on realization of the teacher education concept and projecting an innovative educational environment of a higher educational institution can be used for creating a model of continuous teachers training education.

The scientific significance of our research is determined by the following results: comprehensive and systematic study of the development process of an innovative educational environment of higher educational institutions; determining functions, organization and content of an innovative educational environment at university; identifying main directions and tendencies of an environment development; projecting strategies and tactics of an innovative educational environment at university.

The practical significance of our research lies in the fact that we introduced innovative programs and technologies of training, advanced training and professional development of teachers. We also created the following facilities: the Resource Centre as an innovative component of the university environment; the Center for pedagogical skills and creativity development; the Distance Educational Centre; innovative platforms in school and preschool facilities as a part of the career guidance program. We prepared theoretical and methodological recommendations on the cluster technology in teachers training and on projecting an innovative learning environment in higher school. Our conceptual statements, practical recommendations can be used in the cluster of humanitarian, ethnocultural and educational researches.

Projecting and creating an innovative educational environment at university includes the following steps:

- 1. Introduction a continuous teachers' training model, forecasting opportunities to improve the effectiveness of teachers training system, planning effective management activities in the field of teacher education.
- 2. Approbation of individual plans, curriculum content; publication of textbooks and manuals.
- Implementation of research, innovation and education programs and projects in cooperation with strategic partners, involving their personnel, technological and intellectual resources in the practice-oriented training of students.
- Establishing a resource center, accumulating teaching tools and electronic resources for secondary school teachers. The resource center functioning of and using teaching tools and electronic resources by secondary school teachers.
- 5. The functioning of Moodle learning platform and websites for Master's programs and professional development courses for teachers; conducting training seminars and master classes.
- 6. Providing services of distance education and professional development courses for teachers of secondary and higher schools on a contract basis.
- 7. Creating and implementation of educational models and systems for schools, kindergartens, supplementary education institutions of different forms of ownership; effective transferring of innovative technologies, implementation and commercialization of intellectual activity results, establishing innovative educational institutions.
- 8. Modernization and effective use of classroom fund and laboratory facilities: classrooms with audio-visual presentation support, classrooms equipped with video conferencing systems; computer classrooms, providing students with free access to the Internet.
- 9. Functioning the Center for pedagogical skills and creativity that would provide effective methodical, logistical and resource support for projecting an innovative educational environment.
- 10. Conducting an internal expertise of an innovation system of a higher education institution and monitoring an effectiveness of innovative educational environment.

Commercialization of the project includes the following:

- creating the bank of teaching resources and electronic resources for teachers of secondary schools;
- creating a Moodle learning platform and web-sites for Master's programs and professional development courses for primary school teachers;

- providing services of distance education and professional development courses for teachers of secondary and higher schools on a contract basis;
- publishing textbooks and manuals;
- completing orders on development and implementation of educational models and systems for schools, kindergartens, supplementary education institutions of various forms of ownership.

DISCUSSIONS

An educational environment is characterized as a unity of cultural, social, and special psycho-pedagogical conditions created in educational institutions. All the conditions are aimed at a personality's development.

According to researchers, "innovation is a process of creating important, relevant and self-organizing units that appear on the basis of diverse initiatives and inventions, and become promising for the evolution of education and have a positive influence on its formation" (Vilandeberk 2015).

The modernization of education emphasizes the role of professional and educational environment that motivates a teacher to use innovations. This fact helps to see an innovative environment as a kind of professional and educational environment. The emergence of innovative educational environment is associated with non-functioning of the current education system, where students are not satisfied with the learning process and are interested in something new (Fominikh, 2015).

The literature on the problem indicates that an innovative environment is a means of professional growth of a teacher since the environment presents a teacher with special research, cognitive, motivational, communicative and reflective opportunities. Such opportunities are created in different structural units: teachers associations (centers of innovation experience, problematic groups, temporary creative teams, educational workshops) (Castells, 2000).

An innovative environment encourages a teacher to experiment, to do research, stimulates their creativity, self-expression and self-assertion, desire to demonstrate their achievements, to cooperate with colleagues (Lepsky, 2010).

A learning environment and its innovative nature is of great importance in the process of professional competence developing. Nowadays educational institutions can be divided into two groups - ordinary and progressive (innovative).

Traditional educational institutions are characterized by stability, strict adherence to the training program and curriculum. Innovative educational institutions are characterized by a searching mode, i.e. by developing and introducing new teaching technologies, new content for educational programs and by their continuous updating. Thus, professional competence developing should include professional activities (Shubina, 2015).

Overview of current trends in innovative activities of universities in Russia allows us to identify the following types of activities that contribute to the formation of an innovative educational environment of a higher school.

The first type of activity, contributing to the formation of an innovative environment is evaluating the quality of educational programs. The evaluation includes testing and surveys conducted with learning process's participants and with future employers. No less significant is introduction of rating systems of a structural unit's evaluation. It is also important to develop criteria for quality evaluation system that will take into account employers' needs.

Another type of activity is projecting innovative programs of an institute's development, namely, improving a human being resources policy through increasing teachers' qualification level. It also includes organizing research work of teachers and students and optimization of the education management. A special type of innovative activities of a higher school is future teachers training, developing their creative thinking skills and ability to adapt to innovations.

The most important part in projecting educational environment based on the concept of developmental education in the space of culture researchers consider the defining of the degree of unity environment and, as a consequence, communication models and relationships of its actors. To the specified array of problems V.I. Slobodchikov (1997) identified the following ways of organization of educational environment:

- environment, organized according to the principle of uniformity: in this
 environment dominated by administrative trust and relationships that are
 defined by one entity the power, indicator of the specified type
 environment's structure seeks to the maximum;
- environment, based on the principle of diversity: in such a communication and relationship environment have a competitive nature, however, since you are fighting for various types of resources, autonomy in educational systems, a single educational space in such circumstances is destroyed, the indicator structure tends to a minimum;
- environment, organized according to the principle of variability as a unity
 of diversity, where communications and relationships have co-operating
 nature, the unification of various kinds of resources within programmes
 providing different trajectories diverse entities: individuals, communities,
 educational systems, the rate structure tends to optimum.

According to the ideas of humanistic, concept educational environment implies humanistic character of networking among participants of educational process, which is focused on the content of their harmonization, that is building between the subjects of truly humanistic relationship (Gomoniuk, 2009). G.A. Gushchina (2002) interpret the humanistic educational environment as

environment which enables a person to survival and success in certain sociocultural environment.

The authors of the concept determined humanistic educational environment in three dimensions: 1) in wide sense it is the space that is adequate to the current needs of the individual and corresponds to the trends in the development of modern culture; 2) in the narrow sense it is a specially constructed environment covering the totality of conditions for enrichment of the student's individual during training, nominating in the first place the humanistic dimension of human being; 3) educational pedagogical sense is the space of humanistic communication (dialogue or polilogue) that attracts subjects of the educational process to the absorption, consumption, distribution, exchange of humanistic values that are updated in the subsequent behaviour of the individual, as socially significant. Thus, a central position in the humanistic educational environment took the man being, his needs and interests, this environment promotes education complex personality traits of the individual calls the relationship of people to each other, society, nature, itself based on a common culture of personality.

The most effective in the context of our research we consider socio-cultural, personally-oriented and information concept training environment. Within the framework of socio-cultural concepts, training environment was an integral part of the overall cultural environment pupil, which suffers from substantial elements of spontaneity and even chaotic. This encirclement is full of lots of information sources, where is concentrated the certain public experience that absorbed every student in accordance with his inclinations, abilities, interests and needs. Through this process of getting public experience is carried out human education, shaping his personality.

With a goal to reduce an elemental informational influence of environment on a man being to a minimum, and to accelerate and enhance the exchange of information has led to the need to create artificial learning environment, focused on the transfer of youth to the most important information for the preservation and development of social experience. In addition, there is another prerequisite for the emergence of artificial learning environment. According to the contemporary philosophers today on Earth formed two interconnected world: natural and artificial. As a consequence, people increasingly surrounds himself with artificial environment (Danilova, 2007), so for the modern individual is enough to carry out its activities, including educational, artificial environment.

CONCLUSION

This research was aimed at creating an innovative educational environment of a higher educational institution in order to provide modern teachers with effective training, which would match the labor market needs.

It has been established that the innovative educational environment is considered in the article as an open system, accumulating purposefully created organizational and pedagogical, technological, procedural information resources; learning system and methods of their operation aimed at innovation and comprehensive support of the educational process and scientific research in higher education. Projecting and creating the innovative educational environment of the higher educational institution, on the basis of the postulates of the theory of environmental approach is determined by the contents of its methodological principles as pedagogical activities.

According to the student-oriented educational concept, environment is defined as human being learning opportunities, identifying and developing his abilities, identity, self-worth, personal potential of each individual.

The content of this article can be useful for teachers adapt to the new conditions of professional activity in the field of education for education professionals, focused on the training of modern professionals.

Implementation of the teacher education concept, introduction of innovative programs and technologies for training, advanced training and professional development of teachers are aimed at improving the quality of teachers training, its consistency and continuity. Teachers and university experts, with skills in the field of innovation and an innovative educational environment, will be able to improve the quality of educational services, using innovative teaching technologies.

Inculcation of the model of an innovative educational environment of higher educational institutions, theoretical and methodological recommendations on the model's technologic realization and the teacher education concept will enable a higher education institution to create an innovative educational environment.

Creation and cooperation between Pedagogical skills and creativity centers and Distance education, experimental educational sites on the basis of secondary schools and preschool institutions will contribute to the professional development of educational institutions practitioners, teaching staff of higher educational institutions. An innovative educational environment of a higher school will attract more students to higher education.

Creating a Resource Centre, as a component of an innovative educational environment of a higher educational institution, which accumulates a bank of learning tools and electronic resources, will improve quality of teachers training, and ensure effectiveness of learning process.

Distribution and use of the developed teaching materials will provide employees of higher educational institutions and educational institutions of different types with a constant methodical assistance in creating an innovative educational environment. Preparing and publishing such manuals as "An innovative educational environment of a higher educational institution", "Modern teaching technologies"

will allow teaching staff and students of higher educational institutions navigate innovative educational technologies.

In the process of the research work there were new questions and problems that need to be solved. It is necessary to continue the research on the development of individual trajectory of future teachers' professional formation.

Further researches should include developing of the didactic-methodological support content and creating a resource base for projecting an innovative educational environment of higher educational institution.

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References

- Abakumova, N.N. (2007). Competence approach in education: Organization and diagnostics. Tomsk: Tomsk Stated University.
- Abowd, G.D. (1999). Classroom 200: An experiment with the instrumentation of a living educational environment. *IBM Systems Journal*, 38(4), 508-530.
- Akhmedzianov, D.A., Dudareva, N.Iu. (2010). An innovative component of modern higher education for engineers. A young researcher, 1(2), 239-243.
- Arkhangel'skii, S.I. (1974). Lectures on learning theory in higher school. Moscow: Vysshaia shkola.
- Artyukhina, A.I. (2007). Educational environment of a higher educational institution as a pedagogical phenomenon (based on the design of the educational environment of the Medical University). Thesis of Ph. Dr. pedagogical Sciences: 13.00.08. Volgograd.
- Blyumin, S.L. (2001). Models and methods of decision making under uncertainty. Lipetsk: Lipetsk Ecological Humanity Institute.
- Bugaychuk, KL (2011). The Teaching Personal environment: First attempt to understand. Information technologies and means of teaching, 5 (25). [Electronic resource]. Access: http://journal.iitta.gov.ua/index.php/itlt/article/view/550/445#.UoiMsi c5_ow (17.04.2015).
- Danilova, N.A. (2007). Teaching natural science study as a learning environment. Thesis of Ph. Dr. Pedagogical Sciences: 13.00.02. St. Peterburg.
- Denisova, L.V. (2010). Hypermedia educational learning environment as a means of professional training of physical education and sport: author. Thesis on competition of the Sciences. Ph.D. of Pedagogical Sciences: 13.00.04. Kiev.
- Federal Program of Education Development for 2011-2015, approved by Government Decree, February 7, 2011 № 61 // rg.ru>2011/03/09/obrazovanie-site-dok.html
- Fominykh, N.Iu. (2015). Designing a computer-oriented environment in foreign language professional training programs of future Information technologies specialists. Sevastopol': Ribest.
- Gershunsky, B.S. (1998). Philosophy of Education of the XXI century (in search of practice-oriented concepts). Moscow: Perfection.

- Gomonyuk, O. (2009). Gumanlstic educational environment main condition of forming professional-pedagogical culture of future social educator. *Bulletin of Lviv University*, *edition*. 25(1), 160-168.
- Gushina, G.A (2002). Humanistic educational environment as a condition of adaptation to the training of non-state college students: Thesis. ... Ph. Dr. of Pedagogical Sciences: 13.00.01.
- Hutchinson, L. (2003). Educational Environment: ABC of learning and teaching. *BMJ*, 326, 810-812.
- Iusufbekova, N.R. (1991). Trends and laws of innovative processes in education. *New researches in pedagogical science*, 2, 6–9.
- Ivanova, N.V. (2014). Psycho-pedagogical study of the educational environment of school: Trends and Prospects.
- Kastel's, M. (2000). The age of information: economy, society and culture. Moscow: GU VShE.
- Khairullina, E.R., Makhotkina, L.Yu., Kiryakova, A.V., Baranov, V.V., Maksimova, O.G., Khrisanova, E.G., Piralova, O.F., Masalimova, A.R. (2016). The real and the ideal engineer-technologist in the view of employers and educators. *International Review of Management and Marketing*, 6(1): 134-138.
- Khrapchenkova, I.V. (2011). Pedagogical innovations. Novosibirsk: Publishing House of NGPU.
- Khutorskoy, A.V. (2013). A competency-oriented approach to education. Moscow: Publishing House «Eidos».
- Kolesnikova, I.A. (2005). Pedagogical designing. M.: Academia Publishing Center.
- Kozyrev, V.A. (1999). The theoretical basis for the development of humanitarian educational environment of pedagogical university: Thesis for Ph.D. of pedagogical Sciences: 13.00.01. St. Petersburg.
- Kraevskii, V. V. (2001). The content of education: forward to the past. Moscow: Pedagogicheskoe obshchestvo Rossii.
- Lepskii, V.E. (2010). Reflective and active environments of innovative development. Moscow: Publishing house «Kogito-Tsentr».
- Manuilov, Iu S. (2002). An environmental approach to upbringing. Moscow; N. Novgorod: Publishing house of Volgo-Viatskaya Academy of Public Services.
- Manuilov, Y.S. (1997). Environmental approach in education: Thesis for PhD. pedagogical. Sciences: 13.00.01. Moscow.
- Meng, T.V. (2008). Environmental approach to the organization of educational process in the modern university. News RGPU. A.I. Herzen, 52 [electronic resource]. Access: http://cyberleninka.ru/article/n/sredovyy-podhod-k-organizatsii-obrazovatelnogo-protsessa-v-sovremennom-vuze (29.07.2014).
- Modern problems of science and education, 3. [Electronic resource]. Access: www.science-education.ru/117-13042 (29.07.2014).
- Ogurtsov, A.P., Platonov, V. V. (2004). Education images. Western philosophy of education. The 20th century. Sankt-Petersburg: RKhGI.
- Panov, V.I. (2004). Environmental Psychology: Experience in methodology. Moscow: Science.
- Postanovlenie Pravitel'stva RF $\[Moldots$ 662 ot 05.08.2013 g . RF Government Resolution $\[Moldots$ 662 dated 08.05.2013 "Monitoring of the education system" // rg.ru>2013/08/19/monitoring-site-dok.html

- Rakitov, A.I. (1991). Philosophy of the computer revolution. Moscow. Politizdat. 287 p.
- Red'ko, L.L., Shumakova, A.V., Veselova, V.G. (2010). Designing an integrative learning environment of a teachers training institution: a monograph. Stavropol' : Stavropol'skii gos. ped. in-t.
- Rubtsov, V.V. (2002). Designing developing educational environment of school. Moscow: Publishing House of Moscow State Psychological-Pedagogical University.
- Shek, G.G. (2001). Environmental approach as a pedagogical innovation and development conditions: Thesis of Ph.D. thesis: 13.00.01. Yelets.
- Slastenin, V.A., Podymova, L.S. (1997). Pedagogics: innovative activities. Moscow: Publishing House Magistr.
- Slobodchikov, V.I. (1997). Educational Environment: implementation of the goals of education in the area of culture. *The new value of education*, 7, 177-185.
- The order "Strategy for Russian Federation innovative development for the period up to 2020", dated December 8, 2011 № 2227-r // garant.ru>Produkty>Praim>Dokumenty lenty praim>
- Vayndorf-Sysoeva, M.E. (2010). Technologies of organization of monitoring the use of new technology software and hardware innovation in education. Moscow: Moscow State Open University.
- Vilandeberk, A.A., Shubina, N. L. (2015). Educational programs via networks: analysis of advantages and risks. Sankt-Petersburg: Knizhnyi dom.
- Voronkin, A.S. (2012). The philosophy of psycho-didactic training concepts in the information society. Philosophical Problems of information technologies and cyberspace. *Pyatigorsk*, 1, 55-65.
- Vorontsov, V.G. (2002). Humanities research bases of the educational environment. Cultural and historical foundation of creation and development of the educational environment. Saint Petersburg: Saint Petersburg University Art of Teaching.
- Yasvin, VA (2001). Educational environment: from modeling to design. Moscow: Meaning.