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Innovative Environment of High School as a Factor of Modernization of Teacher Education

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Abstract: The origin and the development of innovations in the sphere of education, their influence on development of innovative mechanisms in the educational process and also the current innovative approaches to teaching are regarded. The main attention is paid to the approaches to the theory of modeling the educational process and to the kinds of models of educational institutions.

Key words: Innovation, pedagogical innovation, innovative approaches, innovative modeling, educational

INTRODUCTION

At the end of 20th century education faced with global competition. Part of this process is the free movement of intellectual resources information, scientific paradigms, innovation and their carriers. The transition to an information society creates a new relationship to the problem of human self-realization to education to the choice of profession. The urgency of the problem under investigation by the following factors: the recognition of the republic of Kazakhstan at the global level as a stable and good power required to ensure that the appropriate level of priority education (Fetzer, 1988; Zenobia, 2013).

Kazakh society needs high schools, integrating and adapting the best of national and international experience, cultivating a spirit of innovative educational environment.

In connection with the integration of Western education institutions are actively entering the market, creating serious competition for our schools. Education strategic institute of the state in which frameworks are not only a professional and citizen (Fetzer, 1988).

If earlier higher education oriented towards the needs of society in the long term for 15-20 years it is now updating of knowledge takes place every 5 years in certain disciplines every 3 years and in information and computer technologies every 1-2 years. Therefore, necessary universities operating in this dynamic updating of the educational provision of training of future professionals that meet the requirements of modern innovative educational environment.

Experts say that in the system of innovative training can really put the focus on the formation of free, creative personality, capable of self-education and self-development. Scientists consider innovation as a universal quality of the individual and the willingness to it the main result of the innovative university.

Modern research requirements to graduate high school necessitate changes in psychological and pedagogical concept of the whole process of education (N.V. Amyaga, Y.A. Berezanskaya, V.J. Liaudis, A.Y. Panasiuc, J.C. Shaydurova). Actively investigated "pseudo-constructive" thinking and pseudo-constructive design and predictive thinking (G.P. Generously-Wicko, V.M. Rozin, O.S. Anisimov) play educational and developmental technology (O.S. Anisimov, N.G. Alekseev, B.P. Papchevsky, E.S. Komrakov, V.I. Butorin, V.N. Verhogla-Zenko, A.A. Emelyanov). However, research on the problem of creation and development of innovative educational environment of high school, contributing to ensuring quality training did not receive systemic manifestations and as a result has allowed us to identify a number of contradictions:

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- Between the need to increase the educational potential of higher education to ensure a consistently high level of development and the lack of theoretical and methodological development of the concept of innovative development of higher education
- Between the need to prepare for a competitive market economy capable professional with innovative thinking, professional and social competencies, spiritual and moral qualities and the lack of a conceptual framework of formation and development of innovative educational environment of high school as a factor of specialist training this level
- Between the new conditions prevailing in the country and insufficient knowledge of their effects on the formation and development of innovative educational environment of high school
- Between the need for a holistic and systemic organization of innovative activities of the university to train specialists for the success of not only foreseeable, "unpredictable" future and an acute shortage of scientific and methodological support, training facilities that process
- Between the lack of developed theoretical and methodological foundations of the process of formation and development of innovative educational environment, forming a trainee creative, innovative thinking, high level of spiritual and moral qualities, professional and social competence, a deep understanding of personal, professional and social meanings, encourage continuing education, ability to take responsibility for the decisions

HISTORICAL AND PEDAGOGICAL PRECONDITIONS FOR THE EMERGENCE OF INNOVATIVE PROCESSES IN EDUCATION

Historical and pedagogical preconditions for the emergence of innovative processes in education have its origins in the ancient schools of the world. This is most clearly manifested in the school of Confucius, outdoor living, built on dialogue in which not only taught but also raised. These principles were developed in the concepts and activities of the philosophers of ancient greece and educators who have created the humanistic paradigm and the concept of the teacher and the educability in education (Lee and Therriault, 2013). Plato's academy and aristotle's lyceum be regarded as the forerunners of innovative higher education in the world.

These processes have been developed in the middle ages, especially during the renaissance and were associated with the beginning of the development of capitalism. Renaissance humanism in education claims, characterized anthropocentrism, innovation in pedagogy.

Humanism was interpreted as a way of liberating man from ideological and political shackles of feudalism. In the writings of E. Rotterdam, Descartes, Montaigne and others. Viewed the principle of freedom of choice, democracy and deideologization pedagogy and science. School Vittorino da Feltre became a model of innovative educational institution of the time.

Special role in the development of innovative processes in education plays a legacy Y.A. Comenius. His basic ideas and principles are fundamental in building innovative educational systems (Hung and Choy, 2013).

The most prominent representatives of Western bourgeois pedagogy (John Locke, Jean-Jacques Rousseau, Henry Pestalozzi, Herbart, Johann Adolf Disterverg) have made a significant contribution to the development of innovative pedagogy, generate the following innovations that lie at the foundation of modern higher school:

- Psychologizing process of training and education, identity formation
- The content and methodology of training as factors of development of initiative and activity
- The need to develop cognitive activity, independence in thought and action based on the interaction with the surrounding life and professional practice
- The purpose of education in the development of humanity in the harmonious development of all its "essential powers" powers and abilities

Innovative ideas and projects of the 20th century are connected with the names of R. Steiner, C. Freinet, Dewey. Historical and educational background of the Russian innovative pedagogy has its origins in the first schools of Ancient Rus-instruction in their native language, personal approach and others. Start humanist tradition in the domestic pedagogy associated with the names of Monomakh, Sylvester, Theophanes Prokopovich and others. In high school, innovative processes developed initiatives MV University and its students. Special stage in their development is associated with teaching ideas and activities N.I. Pirogov, K.D. Ushinskogo L.N. Tolstoy, P.F. Lesgafta, P.F. Kapterev, S.T. Shack, P.P. Blonsky, V.A. Sukhomlinsky were created innovative concepts and educational systems that are in the works of western historians of pedagogy are called "soviet pedagogical avant-garde".

Development of domestic innovative pedagogy associated with the names o f teachers-innovators 70-80th with democratic processes recent history late 20th early 21st centuries and finalize pedagogical Innovation as a relatively independent branch of scientific and pedagogical knowledge (Claxton, *et al*., 2006).

In pre-revolutionary Russia's education system a special role in the development of innovative processes assigned high school (Charter 1804 reform 60's of the 21st century): the importance attached to the principle of continuity it laid the foundation for cooperation of the faculty with students democratization of research activities and others. A classic type of innovative educational institution was Tsarskoye Selo Lyceum.

Commissar A.B. Lunacharsky asserted the principles of democracy and freedom in teaching was sure that in the future need to clean stream education from class, party, give freedom in teaching, in the choice of school and profession.

Study of the development of innovative processes in education leads to the conclusion that they are born simultaneously with the emergence of the first schools which indicates their objective nature of existence and close connection with the democratization and humanization of pedagogy and education.

Under the pedagogical innovations mean new knowledge, reflecting the essential aspects of synergistic processes in education and systemic impact on the fundamental elements of pedagogy, radically transforming their current and future sense-paradigm, concepts, theories, systems, technologies, etc. Innovations form the teachers and students a new way of thinking and acting, thereby generating the identity of citizens and specialist future reference.

An important characteristic of innovative pedagogy advocates stage "generation of pedagogical innovations" in the form of new ideas and knowledge generated in the course of teaching and research in a continuous process of transition from a subjective belonging to the objectification of the new activities of the teacher and innovator. Under the new objectification refers to the materialization of innovative design, its development and transition to the stage of replication, perception and the development of other individuals.

Implemented pedagogical innovations associated with certain procedures design model of the innovation system of education including:

- The development paradigm and the concept of the innovation system as a humanistic oriented type of education
- Justification of logic stages of construction of the innovation process, the introduction of non-traditional technologies and methodologies
- Construction of the algorithm execution of the project developed educational system, its testing, its implementation
- An innovative educational model gives learners a better range of features to meet the needs of their individual, personal development it is realized individualization path of personal development of the student in the process of training
- Formation of innovative educational environment of high school as the main factor implements the concept

Thus, the main characteristics of innovative pedagogy are: openness, dialogue and cooperation, anticipation of the future, variability and individualization of education.

METHODOLOGICAL BASES OF RESEARCH OF INNOVATIVE EDUCATIONAL ENVIRONMENT OF HIGH SCHOOL

A set of approaches that make up the methodological basis of the research include: student-centered, axiological, systematic, innovative, environmental, competence.

Student-centered or anthropocentric approach was adopted in pedagogy Y.A. Comenius and K.D. Ushinskii. The need to create a new paradigm for the school was proved known teachers of that time L.N. Thick, K.N. Wentzel, P.F. Kapterev, V.P. Vakhterov who advocated "autonomous school" for its connection with life, pragmatism, education and others. In the framework of the humanistic paradigm of education that period began intensively to develop innovative search which was based on the principles of alternative: the breech of the state education system opposed to the humanistic concept education, individual author's style of teaching. Systematic approach (and method) can be called one in which the studied objects and phenomena are considered as parts or elements of a specific holistic education. System-oriented approach is characterized by openness, i.e., each organization an open system. Openness is the interaction with the external environment. Therefore, the study of the system would be incomplete without taking into account and its environment or the environment. Often the impact of this environment is so, significant that the functioning and evolution of the system has to be considered in co-evolution with the surrounding system or environment. For example, an innovative educational system, exchanging with the outside world, not only presents itself but also extends its innovative educational experience.

As a result of a systematic approach are explained mechanisms of self-organization, self-preservation and self-reproduction of innovative educational systems. In the 60 years of the 20th century, a new concept of

self-organization, later called synergy. The essence of this process lies in the fact that under the influence of the social environment defined its particles (those most active and forward-thinking) start to "oscillate" (think) in the same field, phase and ideological plane. As a result, established between them coordinated interaction which leads to their corporate behavior, ultimately to self-organization. Since, the open system interacts with the environment and due to this lack of equilibrium increases, it leads to the destruction of the old order and the structure, i.e., to a new system. This process Prigogine sees as the emergence of order through fluctuation. The system can evolve only interacting with the environment and therefore, in turn affects the corresponding ones of which constitute environment. Therefore, we can reasonably talk not only about the evolution of the system but also its environment that is co-evolutionary system with the environment surrounding it. It is such an impact in the end and has helped innovative education system. Innovation processes are considered in three main backbone areas: socio-economic, psychological and organizational management. Innovations process (all its three subsystems) is not spontaneous but a consciously controlled character. For this reason, rightly highlight the major problems of innovative education:

- Formulation of a new paradigm, the creation of the concept
- Formation of a new educational content of its organization and management
- Development and implementation of innovative learning technologies; creating conditions for the development of amateur beginning students (self-knowledge, self-development, self-determination, self-organization, self and so on)
- Formation of a new type of motivational sphere of the student where the motives of self-actualization, co-creation, self affect the overall student creativity and contribute to the creation of the new position of the person
- Search for like-minded teachers as well as a change of style to their academic work and thinking
- The development of creative thinking by reconstructing a whole, rather than individual pieces
- Innovative teaching cannot be other than a socially and personally meaningful to the learner

These symptoms are system-oriented approach innovative education underlies our research. They allow you to isolate the core of the innovative educational environment of high school, the mechanism of the interaction of all elements of its interaction with other external systems.

Educational environment a relatively new concept which became part of the pedagogy in the last decade. It characterizes the complete description of the general and specific features of a particular educational institution.

By definition, Y.S. Manuylova, environmental approach is to examine the process of development of the individual, depending on environmental conditions and human interaction with it. He envisions a system of such actions with the environment that would ensure its transformation into a diagnostic tool and design of educational results. Environmental approach is associated with the idea of inclusion educational institution in the environment and vice versa.

In preparing students for future careers should take into account the influence of environmental factors. On the one hand it gives an opportunity to better understand the personality of the student, on the other to create conditions for him to his artistic development and finally to provide quality training him as a future specialist. In the most general sense, can be regarded as environment interacts with a particular subject. According to LP Buoys environment includes material and spiritual components. In this case, it is formed from the interaction of factors that reflect the level of social consciousness and its constituent content, forms, tools and methods of influence on the person in the education system. Based on the well-known interpretation of education as a form of practice culture, P.G. Schedrovitsky talked about the possibility to consider the cultural environment as both cultural and educational. A modern interpretation of the term "cultural-educational environment" is based on the idea of Pavel Florensky who identifies with the culture medium which raises and nurtures personality. These were the starting position in the use of environmental approach to research.

Innovative pedagogical environment an educational space educational institution, combined corporate culture, a complex effect on personal development, promoting pedagogical creativity, the formation of unconventional thinking. Creating innovative educational environment is ensured by cooperation and co-creation of teachers and students this general direction of its formation and development, providing an opportunity to innovative learning paths.

One of the fundamental requirements of the dialectical method is the requirement to consider the system of education in unity with the surrounding culture medium as a component of the social structure, material, spiritual reproduction. Innovative educational environment of high school a student-d eveloping environment. It is an educational space containing educational, scientific, cultural, ethical and other values.

The essence of the concept of "innovation" is associated not only with the creation and distribution of policy innovations but with transformations and changes in the way of activities, the style of thinking of the teacher and the student who associated with this image. Innovation in this aspect is directly linked with the development of specialists creativity in solving problems of traditional teaching with the creation of innovative systems and concepts in which its rightful place are the ideas and principles of innovation systems of the past.

Innovation the discovery of the past, present and future. For professionals this means that from the past is always possible and necessary to take what is good what was there already attained by previous generations, regardless of ideological beliefs that professed a particular teacher. The paradox of innovation is that it solves the current problems on the basis of the unity of traditional and innovative: innovation towards the future and is largely fed by the ideas of the past. The main features of an innovative approach "anticipation", "collaboration" and "co-creation".

The existence of mechanisms of self-preservation and self-development in innovative concept is explained by the fact that it meets the criteria dialectic it is a system that meets the basic laws of dialectics, functions and develops according to these laws which is the foundation of its internal consistency the basis of the mechanism of self-reproduction and self-regulation in the new historical conditions. However, this does not mean that the innovative concept of the past can be reproduced in the same form that they automatically give a high pedagogical effect. Objectively developing course of historical progress dictates its terms to the possibility of applying the ideas of the past (Zakharova, 2007; Polat, 2009).

Competence-based approach related to the content and organization of educational process, forms the basis of professional competence which is understood as the sum of its interrelated components a key, basic and special. Key competencies involve a set of generic skills and knowledge necessary for any profession (communication, information, language, legal, intercultural), basic a specific occupational certain professional activities, special-specificity particular subject area.

By social competence refers to the ability to flexible specialist occupational mobility, the possession of innovative thinking, providing the ability to find the right solutions to complex issues of choice of activities as well as generating innovation in both extreme and everyday life. The main components of the social competence of the expert are:

- The ability to predict and simulate the decisions taken in the social environment, to be responsible for their consequences
- Ecology of the decision
- High spirituality and morality in the profession
- Stability in an ever-changing socio-psychological and economic situations, conditions of professional activity
- The ability to correctly represent their professional and personal qualities
- Knowledge of the traditions and ideals of their ethnic group, their profession
- High level of education and broad-minded
- Active life position, self-education and self-actualization
- Development and maintenance of physical and moral health

Considering the problem of creative thinking as a key task of innovative education, becomes more urgent study of the phenomenon of innovative thinking, contributing to finding unconventional and effective ways to solve problems, create a new educational paradigm associated with the prospects of the development of education. This problem we investigate the pedagogical aspect. The mechanism of formation of innovative thinking involves four closely interrelated steps:

- Cognitive: the process of emergence of innovations in the subjective reality of the teacher, the student flowing in thinking through the knowledge of the meaning of a new generation of knowledge and innovation
- Projective (modal): knowledge of the subject based on an interdisciplinary, integrated approach, first of all, the various philosophical constructions, epistemology, psychology, pedagogy
- Instrumental-stage technological innovations generate innovative teachers in practice
- Correctional in which educators and innovators performs fine-tuning innovations in teaching practice with the aim of effective replication. On this basis, we can make a model of the functioning of innovative thinking as a process (the movement of thought to create innovation in the form of a brand new product thinking) were born in the bosom of the subjective consciousness of novelty for the objective, the real world

Thus, innovative education can be presented due to the following scheme (Fig. 1):

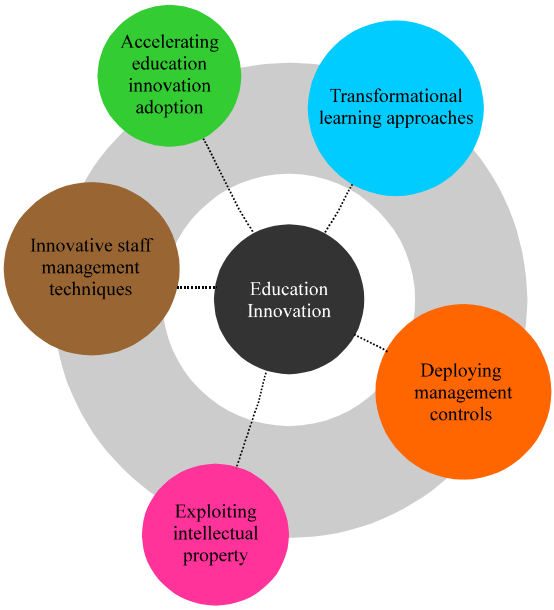

Fig. 1: Education innovation

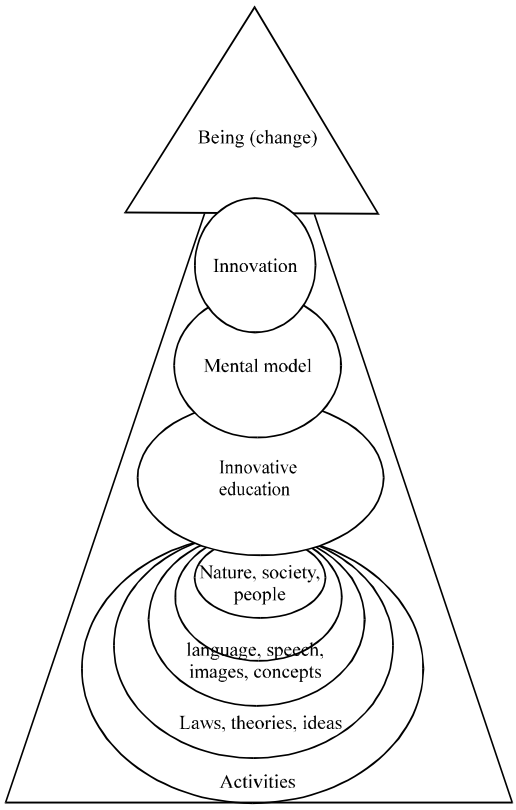

Fig. 2: The concept of mental of innovative thinking

Our proposed concept is based on the study of mental models (Fig. 2) which is a kind of mental analogue associated with a consistent, holistic development of the situation in a different way to build our perception of the world, data processing and storage, self-determination of the person in it. Epistemological aspect of the mental model is as follows. Mental model it is our map of the world or a part thereof. It is reflected in the subject's knowledge about the object in the form of information and energy metabolism (A. Medvedev, A.M. Gerasimov, A.M., I.P. Loginov) (Kovalyov, 1970).

Education mental model is a transformation of certain energy subject of knowledge in the course of structuring information in various forms. Mental model is a subjective reality of the individual which has basically any integrity or part of objective reality. In operation, mental models as subjective realities in the course of reflection (in the process of reflection and self-examination of the individual) can be formulated new ideas, new structures, diagrams, models, different from analogues that have occurred in the objective world.

Innovative thinking, creates a previously unknown mental models. It creates a whole new subjective reality, generating innovations with the possibility of producing and objectification in practice. The emergence of mental models of innovative character due to several factors:

- Dissatisfaction with traditional approaches, the presence of obsolete paradigms educational goals
- Non-standard approach to the construction of training and education, reveals to the student the basic meanings of personal, social, professional and national existence
- The level of professionalism and competence of teachers, continuous improvement
- The ability to systematically and continuously producing the subject information in the development of the study of the problem
- A sense of intentionality motivation education, initiative and creativity is not so much focus on the adaptation and integration of acquired knowledge but rather on the development, search unconventional, new, not previously existed
- The inner meaning of the moral imperative is to focus on the rise of the whole complex of properties of man and citizen
- A high level of criticality with respect to the existing theories and to their own judgment
- Openness to different ideas and models

The formation of mental models is based on general knowledge of being (ontology, logic and methodology), constituting the wireframe and a filled with knowledge of specific sciences, life experience based on productivity (and to some extent reproductive) thinking practice.

Created by the mind noumenon (new model based on a new quality of information) is that previously did not exist for a person and is the basis, the essence of the phenomenon of innovative thinking. Noumenon the product and the object of thought, intelligence, intelligent multidimensional construct. According to Kant's critique of the concept of "pure reason" noumenon applies only to the sphere of thought but not to the objective reality. This concept without an object: noumenon is something just mentally, materially hand he has nothing; noumenon naked notion of reason.

Noumenon in our study is samo transgender chaya subjective reality as a phenomenon of new knowledge, the resulting reflection of the individual which is formed from the construction of different mental models, in turn, the content consisting of objective and subjective reality in the process of understanding, prediction and simulation of present and future meanings of existence. Form of subjective reality of the phenomenon of the noumenon can be defined as the noumenal mentality. Noumenal mentality a fundamental principle of innovative thinking individual are an adequate understanding of the world through the generation of innovation in the social being in the form of objective knowledge. Noumenon as a new mental formation of subjective reality, more and more closer to the ideal, embodies the reality of its further movement in the form of generation of innovations, thus carrying out the process of objectification of knowledge and increasingly changing environmental reality.

Innovative thinking is an individual (or group) that is able to create and produce noumenal mental models, due to the innovation process and aimed at a qualitative change in the existing picture of the world from the standpoint of humanity, truth and beauty.

Innovative thinking is creative thinking in its highest stage. Both types of thinking are inseparable and interrelated but not identical. Innovative thinking is formed and developed on the basis of creativity and in turn, can not exist without it. However, not every creative thinking can be called innovative but all that is inherent in creative thinking is the basis of innovative thinking, although with its own characteristics.

- Level 1: opening "for himself" what is already known
- Level 2: rationalization (improvement)
- Level 3: combination (complex modernization)
- Level 4: the actual creative (creation of a new node, subsystem)
- Level 5: innovation the creation of a fundamentally new model theory, a system that is accepted for further development and implementation of a social practice

Thus, innovation is systemic in nature systematically converts this or that phenomenon, process. Creativity can be of different levels-from the partial transformation subsystem changes (technique, technology, content, etc.) to change the system as a whole (Comenius, A.C. Makarenko). So, innovation and creativity are common in nature-transformation, change, innovation.

Their difference lies in the nature and extent of these changes: innovation radically changes the target installation in education and thus entails a fundamental change in all its components. Innovation occurs, usually in the form of unconventional ideas-images of the future changes, then realized in the theoretical design and structure, decorated the ultimate in concepts, theories, systems. Creativity can also have reconstructive (cosmetic) character, does not affect the fundamental principles of the system. However, creativity can "grow" to innovation. It is in this sense of creativity-adequate innovation this term is used in the study.

Innovative thinking a free search subject (including collective) objective truth in order to improve the personal and social life.

Paradigm (the model) is central to the system of concepts. It should reflect the priorities and broad enough communication with other sciences that affect the process of formation and development of innovative educational environment of the university. It should be recognized by all team of associates (teachers and students). It is based on the philosophy of pedagogical constructs and defines the innovative concept of the university. For the university it is expressed in the target setting the formation of a citizen of a professional possessing creative thinking and is reflected in its motto: "innovative education as a semantic system that forms the innovative thinking of the trainees."

The term "concept" is treated as a system of beliefs, ideas, ideas for some phenomenon process. In this case, this position is deployed in the trinity "goal the idea the principle" which is the theoretical basis of pedagogical concept.

The concept, first and foremost a theoretical component, the core of the educational system which determines its essential characteristics orientation and perspective. Conceptual bases in collaboration ideas (as the highest form of knowledge) and principles (as a scientific regulatory knowledge) to create a system basis for all major components of pedagogy at all levels the methodological, theoretical and technological.

The concept is a few ideas: on the basis of ideas Y.A. Comenius' teach all around, we believe that all students (to varying degrees) the ability to create, generate innovations; innovative educational environment of the university is able to deduce the future

specialist to the level of creative thinking; the main result of work-change of identity, i.e., style and type of its thought and action as innovation and creative thinking is a way to express individual freedom.

The ideas are based on a set of principles: transparency (horizontal and vertical); timing of reality; systematic; synthesis of tradition and innovation; corporate and others.

Generalized formulation of the concept of innovative education is defined as a semantic system, integrating teaching, research and production and other achievements, the ability to shape the identity of a creative thinking, professional and social competencies to be successful not only today but well into the future. Innovative education an unconventional organization functioning of the educational space of the university, developing a strategy vector of global trends and builds on the basic national values.

The concept provides a general description of the future of innovative education in all its innovative educational environment and provides: the generation of innovative technologies, content innovative educational complex, the research activities of teachers and students, the formation and development of corporate culture of the teaching staff, the functioning of democratic student bodies, interaction with the production, business and the public. It is structurally includes: a paradigm constructs design mission of the institution that defines its raison d' tre, its differences from other schools:

- Prediction of innovative educational environment the system description of the main components of the model of the educational environment of the university, forming creative thinking
- Design of the main objectives of innovative educational process of its development
- The set of ideas and principles of innovative education
- Structural model of innovative educational environment of the university
- Directions of development of innovative educational institution, forming creative thinking
- Pedagogical maintenance of innovative education
- Pedagogical bases of formation of innovative thinking

To the base of the formation of innovative thinking we graduate are:

- Activation of amateur beginning
- The ability of forecasting and modeling
- Spiritual and moral development, hard work, charity
- Congruence
- Reflection
- The unity of rights and responsibilities
- Enterprise
- Leadership and others

Creativity is considered as a basis for the process of self-education and self-education throughout life as a semantic construct.

These are the basic concept of the innovative environment of the university as a factor in the modernization of teacher education. Social and personal meaning for innovative education.

Graduate school aims to provide not only knowledge and skills of professional activity but also a profound assimilation of the student picture of the world, social and personal meaning of life. This involves the design and development of the educational environment of the university, the establishment of the way of life (spirit) of the institution to ensure the development of the student's knowledge of the purpose of the system of objective processes and motivation of personal meaning in his professional and social activities.

The aim of innovative education is to prepare highly spiritual and moral personality with professional and social competencies specialist; owns a scientific style of thinking that is capable of generating innovation in addressing extreme crisis situations as well as in solving problems of daily activities.

The task of innovative education is to graduate was able to competitively in their professional field, so that he was an active participant in it the creator and the creator.

Innovative educational content is qualitative performance of state standards in bringing in elements of each course forecasting and modeling, knowledge of the genesis and history of the problem being studied and consideration of its position as a civilizational character and ethnic identity, national identity. Contents of innovative education is built into the system of knowledge and pedagogical support perception of corporate values and traditions of the institute and also includes training in independent work, motivation to actively self-development, self-knowledge, self-improvement, studying the history of the region, "small homeland" and developing a strong sense of patriotism. Pedagogical maintenance of innovative education content is to create a program of courses, study disciplines but is not limited to the sum of knowledge assimilation and is aimed at obtaining a student of advance information, laying the foundations of a personal creative professional working experience. Principles of innovative education:

- The principle of informed and active learning
- The principle of cycling
- Training relying on a professional and life experience of the student
- The principle of openness and access to information
- Proactively reality in theory and practice
- The principle of continuity and perspective
- The principle of competition and cooperation
- The principle of innovation and technology
- The principle of systems
- The principle of pragmatism (communication training with the needs of production, business and administration of the region)

The innovative education focused on:

- Integrated development of the individual student and the teacher as a citizen and professional
- Democratization of their activities, communication and relationships
- Humanization of the educational process
- The development of creativity, initiative and student activity in the formation of his future as a professional as a citizen
- Modernization of the means, methods, technologies and facilities for the development of the educational environment, forming innovative thinking of the future professional

The system of these components of the educational environment of the university innovation to successfully solve the problem of harmonization of personal and public interest in the training of future professionals. In our opinion, this is the foundation of civilization guaranteed future of the country, stability and prospects of its development.

Corporate culture is seen as a factor in the functioning of the innovative educational environment of high school. The essence of the corporate culture is to identify employees, teachers, students themselves as part of the organization which is expressed in the recognition, maintenance and development of the core values of the institute. Analysis of the core values of both domestic and foreign universities shows that the effect of consolidating provide values such as: the trappings, rituals, symbols, traditions, symbols and slogans, etc. as well as professionalism, competence, self-realization, initiative, responsibility, flexibility, creativity, healthy lifestyle. To the listed values we add the ability to work in a team, co-creation, "the principle of a tie," spirituality, morality, patriotism, ability to take responsibility, mutual aid and others.

Corporate culture is formed and manifested in practice through the developed system of corporate core values accumulated in the concept of the university under the motto: "innovative education forming innovative thinking" learned and adopted by all the staff of the Institute.

In this study, we study the problem set due to the production of the university and the public. Established in universities pedagogical system software includes versatile connection with the production of an educational institution, business and public organizations. Elements of the system are: freelance employment agency and support relationships with alumni:

- Conduct studies, project development, industrial practice implemented directly in the workplace organizations and firms
- Conducting joint "round tables", meetings with business leaders, businessmen, entrepreneurs, deputies, heads of local government and administration
- Participation in joint conferences with the heads of enterprises organizations and firms
- Establishment at universities Boards of Trustees which include heads of enterprises and organizations
- Due to the small and medium enterprises
- Individuality in the preparation and implementation of the company's management requests
- Communication with the office of the employment service, the office of youth policy of the administration of the region, with community organizations and so on
- Student participation in fairs, job city, exhibitions, contests, competitions
- Ability to self-realization, resume posting graduates in the corporate media
- Research for the benefit of the company organization, firm

Each element of this system is its innovative organizational and substantive nature of the corresponding structures in the educational environment of the university.

Model of innovative educational environment in theory and practice should reflect the specific institution. The basic idea on which operating model of innovative learning environment was the idea of a comprehensive implementation of an innovative educational process of high school the basic principles of innovative pedagogy, based on axiological, innovation, environmental and system approaches in social and personality-oriented

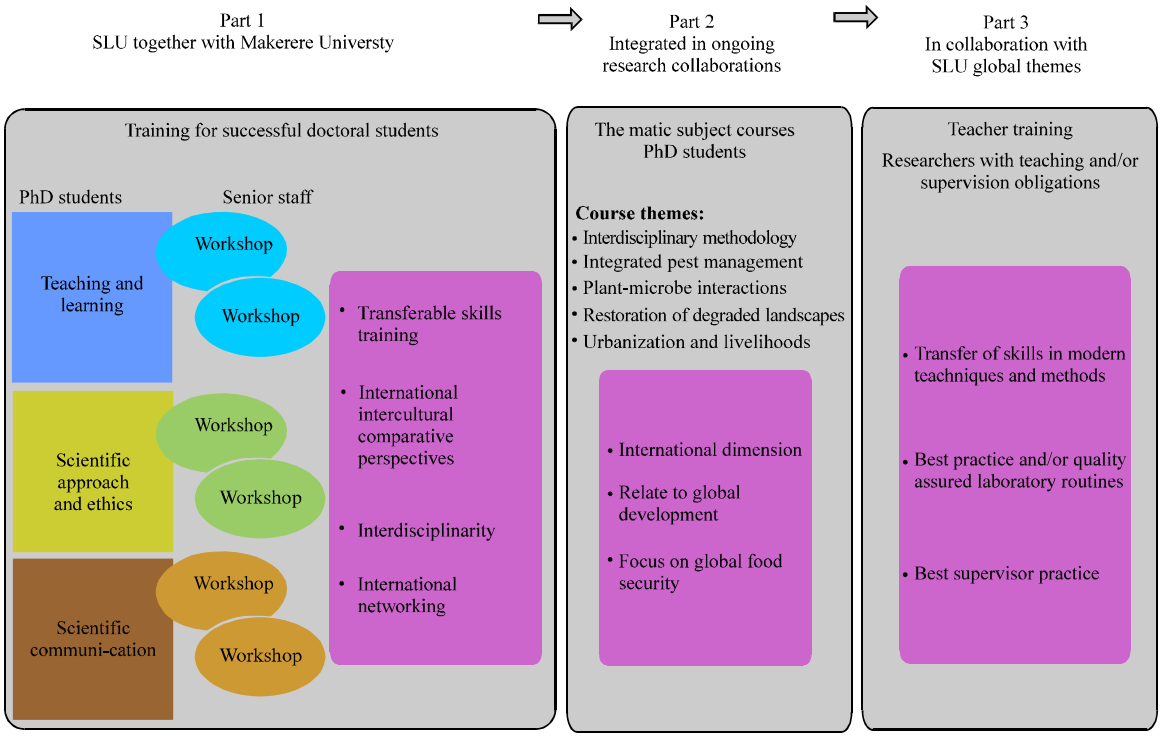

Fig. 3: Structural model of the innovation environment of high school as a factor in the modernization of teacher education

training with the thrust of the formation the graduate creative thinking a guarantee of successful solutions to them professional and social problems in the future.

Structural model of the innovative environment of the university as a factor in the modernization of teacher education is presented in Fig 3. Its creation involves substantial characteristics of the following stages: a critical-analytical and generation of educational innovation; definition paradigm and the creation of innovative concepts; objectification of new and pedagogical support; preparation of (achieving) the phenomenon of "innovative thinking"; monitoring quality in training and the needs of industry and business specialists.

The first stage involves analyzing the state of the country's education system and higher education as its component, identifying the causes of the crisis of the system, an appeal to the innovative experience of the past, find a way out of this crisis-identifying and finding innovative ideas and principles the generation of pedagogical innovations that can comprehensively solve crisis the situation and have the potential prospect of action.

The fifth stage is associated with the creation of advanced monitoring the quality of training at the university, the needs of the labor market, providing a stable relationship with internal and external structural components of the educational environment and allows you to quickly and flexibly respond to changes in the operational situation on the labor market needs for specialized professions and specializations, retraining specialists, etc.

The sixth stage is connected directly to the development of innovative educational environment of the university. Structural model of innovation innovative environment of high school as a factor in upgrading teacher education includes internal and external environment of the university. Innovative educational environment of high school it is an open system that allows you to establish productive contacts and communications with organizations, institutions, administration, scientific community, etc.

Its structure makes it possible to target the allocation of graduates to enter into contracts with employers target, making them design studies to record and analyze the success of the activities of graduates, the study of the needs of the region and others.

Office of the educational environment consists of five blocks. The first unit the organization and planning of the educational process. Second unit a quality management

Table 1: Towards the achievement of integration in the innovation environment of the university

Kind of integration	Social	Economic
Education, science	Guaranteeing graduates in obtaining a quality education as the foundation of a stable position in the labor market The reproduction of scientific personnel in the economy Implementation needs and self-actualization graduate in accordance with its intellectual potential The demand for graduates, resulting in a reduction in the level of unemployment in the economy Establishing an effective social partnership between universities and the labor market (the science and business)	Go to the innovative development model Increase the potential productivity through self-realization and self-expression of the graduate Improving the efficiency of the innovation process Development of scientific and technical potential.Technology Commercialization Balance the education market, market innovation and the labor market in the context of professions, qualifications, level of competence

of the educational process. The third block is represented by the control of the educational process. The fourth block management psycho-pedagogical support of the educational process. The fifth block automation interaction in the information management of innovative educational process. In this context, groups of criteria innovation of high school:

- Academic affairs
- Educational works
- Research project
- The educational work
- Participation in national and regional programs

Based on the selected blocks, a system of aggregated indicators of the innovation environment of high school describing integration processes each block and direction (Table 1).

The list of indicators to measure in practice may vary, supplemented depending on the purpose of analysis and the availability of the necessary information as it indicates the most effective ways of integration processes in the innovation environment, identifies the internal resources and constraints.

Developing directions of development of innovative education, we distinguish four types of study in high school. The first type is the actual research and development related to the development of subject content (objective reality) of a science. They are engaged in individual scientists and teachers.

The second type is a research related to improving the educational process as well as the content of academic disciplines.

The third type is the research activities of students. The fourth type is research activities to implement the orders of production, business and administration, bringing together all relevant actors in it. The presence of these types of research to create a rich background of the educational environment of the university in all major areas and components.

CONCLUSION

In the development paradigm and the concept of the university permeates the constancy of the annual research topics of fundamental problems as well as technology innovative pedagogy aimed at developing creativity and innovative capacity of the teachers and learners as well as innovative search modernize the content of the subjects taught. At a given angle of the problem is realized first type of research activities at the university.

Main research results are doctoral and master,s works, produced monographs, educational and teaching aids, scientific articles and publications, dissertations and even coursework. Annually scientific and practical conference of teachers and students.

The second type of research is research that is related to the improvement of the educational process as well as the objective content of academic disciplines.

The third type of research should be understood as an important preventive and strategic direction of improving the quality of training of future professionals, the formation of their creative thinking. He carried out:

- In the process of teaching and research work of students
- In the course of research students
- In the course of independent scientific work of students search

The first two areas are carried out under the guidance of teachers and the third is an independent search and mature knowledge of scientific truth, obtaining significant scientific results by the students themselves.

The fourth type of research is in the development stage and is associated with the execution of orders and projects employers participating in grant competitions and projects of various ministries and departments.

The most important factor in the formation and development of the educational environment of high

school work of the teacher acts as an innovator. Methodological bases its innovative pedagogical culture must be considered from the standpoint of the unity of professionalism and ethics, the objective nature of the creative teaching. We have identified the following elements of the innovation culture of the teacher and innovator: the theoretical foundations of system knowledge pedagogical innovation; spiritual and moral national and corporate mentality; the ability to predict and simulate innovation; the ability to create a comfortable creative environment; rich intuition, foresight; continuous self-development and others.

Analysis of the implementation of the principles of innovative education pointed to the experience of the formation and development of a particular educational institution that made on these basis conclusions and positions correspond to the goals and objectives of the study.

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