The Implementation of New Educational Technologies as a Tool for Innovation Management

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Abstract

Social engineering, being innovative educational technology, aims at the development of socially significant mental and physical, moral and intellectual characteristics of graduates. In the article the preconditions and challenges impeding the implementation of social projecting in a modern educational system are formulated, the ways of this problem solving are outlined. The approaches of problem-oriented, object-oriented, subject-oriented nature to social projecting are examined. The state of society requires radical socio - economic and political changes, more and more demonstrates the urgency for the further improving of innovative processes institute management that perform the most difficult task of conscious, purposeful transformation of all forms of public life. Today the need for the professionalization of social engineering subjects is increasing with a great acceleration. The scale of the reforms carrying out in the country, affecting all spheres and levels of life, requires special efforts to focus on the implementation of social and engineering researches and the development of science-based projects, the optimal organizational forms of social relations. This specialization is more and more necessary, since the implementation of design and research are not the same. The development of social projects requires not only specific knowledge, but also a special way of thinking, and thus requires appropriate knowledge and skills, necessary for social engineering. The basic knowledge of social engineering allowes a future specialist to be competitive and meet the requirements of society.

Keywords: *Innovation, education, social projection (engineering), technology.*

1. Introduction

The education sector is one of the most innovative sectors. It is largely determined by the creation of innovation climate and the competitiveness of the economy on the whole. During the implementation and dissemination of innovations in the field of education a modern system of education - the world system, open, flexible, individualized, which builds knowledge, continuing education throughout a person's life is formulated and developed (Glushak, N.V., Muravyova M.A., Nazarova O.G., Rebrina T.G. & Silaeva V.V., 2015).

The system of professional training in a specially created network of institutions for the organization of the transfer of the accumulated social and cultural development of the individual is a phenomenon that can provide the assimilation of reproductive knowledge and skills of students, as well as create the conditions for "launching" the mechanism of self-development of the individual, the formation of his personality. Thus, the modern development it the educational sector, primarily due to the expansion and the improvement of content and technology training, creating the basis for the "construction" by the means of reproductive techniques, provides a productive and creative development of high school students, their culture and self-development.

2. The Objectives, Methodology and Stages of Research

2.1 The object of the study

The object of the study is to examine the main socio - economic and political changes taking place in the country, demonstrating the actuality of the development of innovative processes institute management that perform the most difficult task of conscious, purposeful transformation of all forms of public life.

The methodological basis of the study are the principles of the dialectical relationship between subject and object, the process and the result of one, specific and general unity of the traditions and approaches in the management of innovation in education.

To achieve this, the methods of theoretical knowledge: analysis, synthesis, analogy, comparison, generalization, classification, systematization, abstraction, interpretation, analysis and synthesis of scientific literature, documentation, practical experience and so on were used in the study.

2.2 The stages of research

The carried out research contains the following stages:

- the first stage – the searching one - is aimed at achieving the objectives of the study of existing scientific literature on the introduction of new educational technologies, on formulation on the basis of the carried out research the theoretical and methodological base, on determination of the goals and objectives of the study;
- the second stage - the stage of direct analysis and generalization of the main provisions of the study; the stage of the implementation of the selected methodology to the analysis of the risen problems of research;
- the third stage - the stage of the determination of the conditions assisting in the introduction of new educational technologies as a tool for innovation management.

3. Results and Discussions

The state of society requires radical socio - economic and political changes, more and more demonstrates the urgency for the further improving of innovative processes institute management that perform the most difficult task of conscious, purposeful transformation of all forms of public life.

We can say that the transition takes place in the world oriented on knowledge (the main task is to help students to understand the content of education) and on a person-centered (the main task is the development of the personality and individuality of students) educational paradigm. The nature of innovation in education is related to the following areas:

- humanization of education (and professional training and education);
- personal orientation of the educational process, differentiation and individualization of education and professional training;
- increase in the degree of freedom (democratization), the ability to take initiative, self-selection, implementation;
- dissemination of technology training and education, approaches to the structuring and definition of the inclusiveness of the educational process aimed at the formation of the students thought that put it in an active position and at the same time the value of the sphere of the psyche;
- aspiration for technologizing in the educational process, providing teachers with more freedom in the choice of methods, forms of organization, training and education;
- introduction of new information technologies and computerization in the educational process, necessary for extraordinary optimizing of the performing of the routine components of educational activity and its personalization, for the alteration of the role and place of teacher and student as a partner in the scientific work;
- search for the ways of life university organizing aimed at preservation and development of the basis of students (Rebrina T.G. & Silaeva V.V., 2013).

Specific trends in education are shown in large-scale distribution and occur in complex projects and initiatives that combine education and educational events of different social structures.

Innovative processes in the modern education system are linked with a number of ideas (and laws and principles, corresponding to them) and practice-oriented approach, actively developing in pedagogy and related sciences. The most important of these are:

1. The idea of social, cultural and historical conditioning and constant updating according to the requirements of society, the content, objectives, means of teaching and education. It includes the training of a person for him to join changing social order in today's society of accounting and realization, which is not only formalized in policy documents, but also in unofficial sphere, closer to the real needs of man.
2. The idea of individual and personal orientation as a key priority in a democratic society and its academic and educational subsystem. Such a level of needs and possibilities of the person, of his right to self-realization of personality, autonomy and free development meeting is the main criterion of the success of a form.
3. The idea of the activity approach. It means that the personal development hides in person's own activities, including new elements for a student. The most suitable objectives for the development of education and professional training structure, the task and educational work of the leadership largely share with the students the search and the formulation of cognitive and practical problems and provide them with tools and opportunities (information, samples, leading questions, tips, error analysis, promotion) to solve these problems.
4. The idea of creating the role of relations in moral and emotional development of the individual involves their humanistic nature of mutual respect, collaboration and co-creation of the teacher and students. The emotional meaning of the ratio to the novelty of various subjects, moral values, other people, himself (self-awareness, self-esteem, character and level of claims) - all these attributes are assigned to individual relations; human qualities are included in the educational reality, especially in a developing individual student.
5. The idea of change and the freedom of choice, methods and forms of realization of the ideas of a strategic educational nature, for both teachers and students. Variability and the real freedom of choice cannot be limited in the required amount of education, in the minimum acceptable standards of its quality, and in the real possibilities of an educational institution.
6. The idea of multidimensionality learning. Any one-dimensional assessments and approaches in educational theory and practice such as forgetfulness, neglect of collective relations, social interests as well as the prospects for the development of society, the collective and individual damage to the educational process are unacceptable and defective. Pedagogy is largely the science of measures achieving on the way of the harmonious of opposing trends in the educational process: management, self-management, centralization, decentralization, action, algorithmic art, normativity, freedom, personal, social, sustainability and the dynamism of personality.
7. The idea of achieving a complex and integral educational institution. This idea is related to the many aspects of pedagogical problems, of interconnection and interdependence of internal areas and components of personality and of discrete-time limited education.
8. The idea of the unity of optimization and creative approaches to the content and the organization of educational process. This is the approach of the optimizing of the production and the use of algorithms to choose the most economical method and demonstration activities; the creativity is for the algorithm of rules and regulations, it is the constant search with hypothesis of non-standard ideas and plans, mental expectation of a better result using. Creativity grows at the basis of algorithmic operations, even far beyond its borders, and in this sense stands against it. Creative ideas and ideas that are brought to life can reach the stage of algorithmic technology which allows only their widespread implementation.
9. The idea of the commonness and the continuity of the content, objectives, methods of education at the level of the federation and the region, and in some respects - also at the level of the educational institution that ensures the integrity of the education system, a common educational space.

The development of the educational system, due to the deepening of the general, permeates all the aspects of the education system of innovative trend – the democratization, the liberalization and the humanization of personal orientation, the development of education as a character to meet the educational needs of the population in a particular area, the region and the society on the whole, psychological and social comfort with improved qualitative characteristics of each of its components, with a higher level of integrity as the fundamental properties of the system. These processes and trends can be seen as the most general principles that help to establish meaningful targets and the design of social and educational systems.

Innovative technologies in the education system are actively growing. The tendency to think, create, move is constantly growing, increasing the flow of scientific information. An educated creative personality depends on the development and the education of students, on content, process and motivational aspects of learning. The unity of material and procedural methods of education involves the active mental activity of students, which is aimed at self-dependent search for a new knowledge and methods for their purchasing. However, the changes in the nature and the

content of the component of the educational creativity and intellectual training increasing, requires individuals to work.

The dramatic social, economic and political changes taking place in our country, reflect the urgency for further improvement of the institute of the innovation process, which solved the problems of a conscious, purposeful transformation of all forms of public life. Under these circumstances, the objective social engineering, which is even more often seen as a special subject of science, knowledge and specific technologies, as well as an effective tool for the management of innovation processes in the society is of a great role.

Social engineering as an innovative educational technology aimed at socially significant psychological and physical, moral and intellectual development of students and at the increase of their instincts and abilities, vocations, at graduates including in a future successful career and the system of universal moral values; creation of conditions for self-determination, creativity, self-expression and continuing education; at the development and satisfaction of their cognitive and activity needs and requests (Nasonova T.G., 2006).

In the course of works on social projects students must use their knowledge from different fields of science and expertise. It develops logical thinking skills, initiative, self-reliance, creativity; team adaptation, the ability to see problems and make decisions. This issue includes the independent learning skills of communication.

Common object-oriented and problem-oriented approaches to social projects are related, first of all, with the advent and implementation of large projects in which they can be effectively used in certain circumstances. But if we are talking about small projects and micro-projects (with a minimum number of participants and a small amount of activity, often individual), the main provisions of these approaches are inadequate or in need of special interpretation.

We stick to the subject-oriented approach to social engineering, which allows theoretically to summarize diverse experience of social planning at the level of the development and the implementation of large and small projects, micro-projects. Another name for the approach - is a thesaurus - and associated mechanism of social and cultural orientation, based on the similarities and differences of people thesauri.

The thesaurus is the full systematic structure of directions and information (knowledge) in a particular field of life, allowing to navigate in it.

The thesaurus is complete when it is not a chaotic conglomeration of information and readiness, but a hierarchical system with a plan of orientation in the environment. So, different people with different thesauri are not equal, they are not the same in personal qualities, means of subsistence. The thesaurus reflects the hierarchy of the subjective views of the world. It can be viewed as the part of reality. The thesaurus possesses a special property, information structure: the hierarchy of knowledge in it is not built from the general to the particular. It tells thesaurus from the hierarchy of knowledge from research. The knowledge in the thesaurus is connected to the directions, implemented in accordance with the laws of the value-normative system (Rebrina T.G., 2006).

"Self - someone" or "my - another" – is the most accurate value of the ratio, acting as a social orientation. It was originally a social character of "my" - something that belongs to me, but at the same time and the same extend "his" - out of the circle, to which I belong, "your" - one of those things, properties or relations, due to me (my security, pleasure, happiness, etc. depends). In logical terms the antonym for "them" – is "no", but in terms of value – it is "foreigner".

"Alien", "exterior" – marks something not only located outside of their "own", but in contrast to "own" – it means the enemies. This theory of "mine – smb.'s else" is perceived as a reality of a person, a group, the community. The types of unity of its independence - is "someone else". It forms the core of the thesaurus and gives him social importance. It creates a "world view" that gradually, in the process of socialization, the acquisition of social identity of individuals, systematized their minds.

The consequences of subject-orientated approach to live contains, first, various subjective domains (consistency is observed only within a limited range of parameters and within certain limits); second, it mainly adjust the value of social action (the transformation of all the factors and determinants of such behavior); third, it adjusts the importance of the activities of the social behavior of the subject in the social environment. Until now the circumstances of the theory of social planning are poorly understood, but there is a chance to see a special value of the project creator (author, initiator, developer) not only as a "reflection" of the particular of social needs, but also as a means of the realizing of their own interests, corresponding to his thesaurus.

Subject-oriented approach to a social engineering is based on the recognition of the creator of the project thesaurus as a main source of design ideas. This does not diminish the importance of objective factors for the development and implementation of the project (urgent social problem, the high demand for the services of the order, the availability of resources, etc. granting). In particular, the fact is that as a new social object turns to be the result of the project. Subject-oriented approach to a social engineering does not eliminate the causes and conditioning of the projects and the activities of the project; the idea of the thesaurus does not mean the loss of the connectedness of the social environment. In contrast, the subject-orientated approach enables one to prove the diversity and the multi-level character

of socio-project activities, to understand the motives of the design and execution of non-compliance, the failure of the "strong" and the success of the "weak" projects.

In a social engineering, it follows that

1. At the present time such planned social changes are permissible that:
   a) limited in scale;
   b) limited in resources;
   c) limited in time;
   d) meet community accepted valuable and regulatory requirements.

The desire of the project, comprehensive results differ from in the characteristics of the modern world.

2. The design in a social sphere should not only give the meaning for a certain result achieving. The process of developing and implementing the project is also important.. Procedurally a design in most cases comes out on top.
3. In a fragmented and chaotic world of the social integrity of the socially significant actions, the thesaurus is provided by the active half of a society.

Social projects as the organization of living space is best suited as the restrictions and requirements of modern times. On the basis of subject-oriented approach of a social engineering highly specialized scientists and theorists and the multilateral and multilevel methods of work, armed with simple working processes within existing resources and the social impact of the proposed innovations are not considered as the activity.

Thus, we believe a social engineering to be the prediction of an individual, group or organization of actions aimed at social objectives achieving and for a specific location, time and resources.

This paper also presupposes the place for theorists, but these projects for the mast part are in the demand of the basic knowledge of the applied nature.

On the basis of subject-oriented approach to social planning, to the definition of the social project we define the nature of its value and the main role of the subject of the activity on a project. Granting this, a social project is built by an initiator of a social innovation, which aims to create, update or service to the changed situation of material or spiritual values, which are limited by space, time and resources, which effects on people are considered to be positive in their social value.

But at the same time, the need for organization of the system of social planning, including specialists training for its implementation is now felt particularly strongly at the national level, as it became clear that the success of the restructuring of society is largely characterized as the indicators of future research, being defined by a more modernized state organization of public relations. Currently, the process of social engineering involves mass.

Social engineering is frequently act in the conjunction with the accounting of the social development plans, preparation of guidelines for different tasks. There is no research which is theoretically and methodologically organized without a methodological problem of social planning, and also without the special engineering design of the project characteristics of various types of public objects.

Today in students training the need for the training of the future specialists of the theory and practice of social planning is very pronounced. This is reflected in the satisfaction of social needs in the field of reproduction of highly qualified personnel of modern configuration.

The carried out analysis makes it possible to draw the conclusion that the urgency of the problem examined accrues from the prevailing contradictions:

- between existing methods of university students teaching, on the one hand, and between the dynamic requirements of employers to completing their training as to future professionals - on the other;
- between the nature of labor and market relations. In the transitional Russian context of mobility and competition the problem solution is complicated by the lack of an integrated concept of the new quality of education in higher education institutions;
- between the demands of society in the formation of man, willing to work in high productive innovative social conditions, to effectively carry out his professional functions and the lack of sufficient social experience to successfully adapt to the dynamic market conditions.

Designated contradictions revealed the urgency and importance of social planning in the process of high school students training.

One of the most important considerations that contribute to the formation of social engineering is the emergence of a class of innovative problems in the field of economy, culture, urban planning, design and so on, that cannot be achieved by using prevalent traditional methods and techniques. In the examples relating to the town planning project – it is the task of new forms and cultural activities, systems and network services (recreation centers, social, cultural and

community centers, and so on) development; in economy – it is the development of projects of institutions and enterprises on the principles of self-government, self-financing and self-supporting running; in design – it is the design and development of the so-called design - programs; in the sphere of culture – it is projects for the preservation and development of regional cultures ("Russian North", "Ural", "Siberia" and others) in the system of an industry, culture and so on management. In terms of design for all these tasks the following features are typical:

1. The lack of theoretical and technical knowledge needed for the description and development of the basic processes that make these objects.
2. Not in the form of project the implementation area sometimes leads to success, stretched over time, means modernization or rejection of most of the characteristics of the original project. Basically, the design selected objects showing its involvement in the wider systems and structures as a result becomes an important issue of the designing.

Social projects of all sizes, from the staff to the country on the whole are put forward. At the same time often encountered projects, social projects are very far from the requirements of scientific, economic viability, although the intentions of their creators are very good. The whole "personality", organized by designers, needs the skilled care of specialists. This is an important factor, which requires extensive organization of social engineering.

Social project of the object on the whole cannot be developed without taking into account its components. The challenge of social engineering in many subsystems of society is qualitatively as possible to solve it in the first place through its own development teams, but based on the organization of professionals in the field of social development. The involvement of all labor groups in social engineering plans a precise definition of problems at what level, with the help of which resource the problems are solved most efficiently and how engineering readiness of the participants is necessary for this purpose.

At the present stage of development the societies undergo fundamental social and economic innovations. Scientific and technical progress, the conditions of the market economy left its mark on all areas of human activity. Therefore higher requirements to the level of creative abilities of the individual as a university student, who can independently solve various problems arising in the course of professional activities and the preparation for it are put forward.

Economic, socio-political and spiritual-ideological reforms taking place in a modern society are directly marked by a paradigm shift of social development, by the principal novelty of social and personal request to the educational system in general and liberal education in particular.

Currently, the task, in addition to the mastery of all mandatory knowledge, of directed development of students creative imagination, of students teaching how to acquire self-knowledge, generate new ideas are put forward in the forefront of professional educational institutions. In order to become competitive, a student - worker should possess solid moral principles, high general culture, be broad-minded, easily adapt to new socio-economic conditions and be quite competitive in the labor market. For it it is necessary to develop their creativity and the means of social action design development.

The education system in a specially created network of institutions for the organization of the process of transferring the knowledge of the individual, accumulated in society and culture, and phenomena that can not only provide reproductive assimilation of knowledge and skills of students, but also to create the conditions that cause the self-development and the formation of his personality. The modern development of the education sector is primarily related to the expansion and improvement of the content and the technologies of learning, which form the basis for the construction of reproductive methods, broadcast, ensuring productive and creative development of students and their cultural self-development. It requires the state of society.

The 21th century – is the century of student learning, when the whole world is acutely aware of humanity as something lost, fragile, which must be protected and cherished by every following generation.

The development of consciousness and experience of the learners is in the socio-educational situation, which is characterized by the fall of the totalitarian ideology urging people to deal with human values.

The past confrontation of Soviet and foreign cultures, goals and objectives of learning, education, education has undergone significant changes. It creates a new form for the entire planet of pedagogical tradition. New pedagogical consciousness needs a complete image of the world of the individual, his art and process.

The most important qualities of future specialists of social responsibility and economic literacy are the index of economic, the professional and personal maturity of the students of the University of Economics. It is a social responsibility, social position. Socially responsible students are psychologically and practically prepared for the diversification of an independent life, to the future professional work.

In the process of the social engineering the educational interpretation of the concept of "strategic plan" and "civil society" will be combined into one.

If a society is an indicator of the ability of human society to live internally accepting the rules and not being imposed by outside norms of its activity, the strategic plan-form of the organization of human society will stick to these rules. On the basis of this social engineering specially organized educational activities for self-actualization of economic community potential is considered.

The results of the project largely depend on the designer. After all, social engineering is, above all, art, in which object of design has to rely primarily on its knowledge, experience, intuition, strength, determination, endurance, motivation, needs, attitudes, beliefs. The nature and social action, the subjects are closely linked. The designer must be creative and must have a well-developed intuition and the ability to analyze, that allows to achieve the goal based on the situation analysis and useful ideas synthesis consciously and systematically

Capacity building, the design inventing by a university student as a subject of social engineering, industrialization is impossible without mental work, informational activity activization, computer culture increase, organizational creativity formation, based on the knowledge of the laws of design process harmonization.

Thus, we can say that a modern student as future expert must possess a high level of creativity, economic literacy, should be able to see the problem on his own, to transfer knowledge and skills in new situations, to see a new side of a familiar object and be able to combine, synthesize previously known and new ways of working.

So, today the task, in addition to the mastery of all mandatory knowledge, of directed development of students creative imagination, of students teaching how to acquire self-knowledge, generate new ideas are put forward in the forefront of professional educational institutions.. This is done in order to be competitive employees, to possess solid moral principles, high general culture, be broad-minded, easily adapt to new socio-economic conditions and be quite competitive in the labor market. Social engineerings are functionally related to each other with operations, the systems and ways of project creation. Each of these operations requires knowledge on the subject of design, not only in sociology, but also in economics, psychology, management, ethics, as well as the ability to see the problem and system on the whole.

4. Conclusion

The authors believe that today the need for professionalization of social engineering subjects increases with great acceleration. The scale of the reforms carrying out in the country, affecting all spheres and levels of life, requires special efforts to focus on the implementation of social and engineering researches and the development of science-based projects, the optimal organizational forms of social relations. This specialization is more and more necessary, since the implementation of design and the implementation of research are not the same. The development of social projects requires not only specific knowledge, but also a special way of thinking, and thus requires appropriate knowledge and skills necessary for social engineering. Basic knowledge of social engineering allows future specialist to be competitive and meet the requirements of the society.

Thus, the new educational paradigm of the Russian education system is based on innovation and innovative technologies based on the latest achievements of economy, science and educational thought. The innovative principles of the management of the system of higher education suppose the implementation of the full innovation cycle from the acquisition of new knowledge to their commercialization in the relevant markets.

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