

УДК 378.4 : 001.895

DOI

THE INNOVATIVE AND ACTIVITY ENVIRONMENT OF HIGHER EDUCATION INSTITUTION AS A LEADING FACTOR IN THE FORMATION OF A STUDENT'S INNOVATIVE CULTURE

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The article analyzes the theoretical and scientific-methodical aspects of the problem of forming the student's innovative culture in the innovative activity environment of a higher education institution. Attention is drawn to the main differences of innovative education, its leading functions and key concepts. The justified necessity and the main requirements for the optimization of the innovative activity environment of a higher education institution, which objectively or subjectively acts on the student with the help of pedagogically controlled action and includes a set of interacting objects united by functional connections. The main principles of the system approach to innovative activity have been highlighted.

Key words: *higher education institution, innovative education, innovative activity environment, innovative culture, innovative knowledge, innovative way of thinking and innovativeness of the student's personality.*

Problem statement. The existing system of education in higher education institutions, based on the transfer (broadcast) of knowledge and facts, has remained practically unchanged for many decades. Meanwhile, the new challenges of the century, new social needs require a change in the educational paradigm – the priority of an innovative activity environment as a means of developing creative potential, innovative knowledge, innovative way of thinking and innovativeness of a student's personality.

The education modernization in Ukraine presupposes the education organization in educational institutions based on the latest approaches and achievements in the spheres of pedagogy and information technologies, which would take into account the students' capabilities and needs and make it possible to organize interaction between all participants in the educational process, which involves “creating an educational environment focused on students' needs and interests of higher education satisfaction, in particular, providing opportunities for the individual educational trajectory formation” [1]. A modern student should be distinguished by creativity, divergent thinking, the desire to use knowledge in the spheres of innovations, innovative technologies in future professional activities. This is one of the important factors in the formation of their innovative culture.

Analysis of recent research and publications. The analysis of scientific sources shows that in pedagogical theory and practice there have already been conducted studies in certain aspects of this problem. Thus, in the research of M. Shevchuk [2], the theoretical aspects of managing the process of forming future teacher's innovative culture have been highlighted. In the works of R. Mylenkova [3], the innovative culture essence as a component of the individual's general culture, innovative culture characteristics and diagnostic criteria of the school, the teacher, and the educational process have been considered. Organizational and pedagogical conditions for the students' innovative

culture formation in a higher education institution have been revealed in the study of A. Hritchenko, K. Kyrylenko [4].

Some problems of ensuring the innovative development of a higher education institution have been presented in the scientific works of I. Kotova and T. Pavlova [5]. The informational educational environment as a component of qualified specialists' training have become the research subject of A. Zabolotna, N. Ilchenko [6], A. Kukh [7], Tsyunyak [8], T. Pyatnychuk [9]. In the works of N. Tkachuk [10], the importance of taking into account the conditions of the innovative educational environment in the educational institution regarding the teachers' professional competence development has been revealed. Innovative methods of educational process development in higher education institutions of Ukraine have been presented in the works of O. Teletov, V. Lazorenko [11]. In the study of V. Zhukova [12], T. Pavlova [13], the main directions of the formation of an innovative model of a higher education institution development in the context of improving graduates' training and competitiveness quality have been determined. In the scientific works of O. Shapran and Yu. Shapran [14], the essence and structure of the innovative educational environment have been considered, the effectiveness indicators of the innovative educational environment functioning and the pedagogical conditions of its formation have been determined.

Recognizing the indisputable theoretical and practical significance of the listed studies, it is necessary to note the insufficient development of the theoretical, scientific and methodological foundations of the investigated problem. At the same time, the analysis of student training quality in higher education institutions, including our own research, shows that students do not possess sufficient innovative competencies, are not always able to navigate the innovative processes that are developing so rapidly in the socio-cultural sphere, they have insufficiently developed innovativeness as a future specialist's personal characteristic. As a rule, student youth do not connect special-subject knowledge of an innovative nature with the issue of their life activities in the future.

The aim of the article is the authors' coverage of the theoretical and scientific-methodical aspects of the problem of forming student's innovative culture (innovative knowledge, innovative way of thinking and innovative qualities) in the innovative activity environment of a higher education institution.

Presenting main material.

In the conditions of socio-economic reforms, education system continuous renewal and development under the influence of scientific, technological and humanitarian progress, competition in the labor market and educational services, innovations are becoming a vital element of the activity in higher education institutions, a necessary condition for success in education and personnel training.

The concept of "innovative education" in the scientific literature is considered as a bipolar construction: some scientists consider innovations from a philosophical point of view [4], others describe the rationalization of the educational process due to the use of modern innovative methods and teaching tools [11]. However, the meaning of educational innovations lies in the formation of innovative knowledge, an innovative way of thinking and innovative personality as components of the graduate's innovative culture in a higher education institution. It is the university that is called upon to develop mechanisms and technologies for ensuring a high level of student's intellectual, personal and spiritual development, creating conditions for him to master the skills of an innovative style of thinking, teaching the methodology of innovations in the socio-economic and professional spheres.

Formation of future specialists' innovative culture is an activity aimed at students' mastery of professional assets in the sphere of development and implementation of progressive educational transformations. It has a dual nature, which is characterized by the spontaneity or controllability of this process. In the conditions of permanent changes in modern education, the controlled formation of the individual's innovative culture acts as a specially organized management process, which provides for the change's achievement in the managed object thanks to purposeful rational volitional actions [2].

Studies have proven that the main and most effective organizational and pedagogical conditions for the formation of students' innovative culture in higher education institutions are:

1. Educational process orientation on increasing the level of general culture and moral and ethical qualities of student youth.

2. Creation of an information space of modern innovative socio-cultural knowledge, involved in promoting the development of students' innovative potential based on the system-synergistic paradigm of science and education fundamentality.

3. Formation of an innovative activity environment aimed at the development of innovative knowledge, an innovative way of thinking and the innovativeness of the student's personality.

4. The development of a student's positive motivational and value attitude towards the "new" as a basis for constant self-improvement and self-realization in the process of future professional practice and for the purpose of life self-determination.

5. Didactic support for the principle's implementation of the content unity, process and motivational and value aspects of educational and cognitive activities of an innovative nature by means of interdisciplinary interaction based on the idea of emergence, development and implementation of professionally oriented interdisciplinary didactic complexes [4].

Innovative education focuses on both the student and the teacher, considering them as subjects of the educational process. Their interests – spiritual, intellectual, cultural – serve as a prerequisite for the professional thinking formation, and therefore are brought to the center of attention of such education. Anthropocentrism as a property of innovative education implies a high level of student's independence, their ability to self-govern, a high level of pedagogical competence, initiative and technological functional literacy is required from the teacher.

A student's awareness of himself as a professional affects the outcome of the educational process, as it activates the motivation for self-development, which turns the learning process into a source of personal needs satisfaction. As a result, the student makes a real transition from a formal and legal state (a student as a subject of education) to a state of actual anthropocentrism (a student is a subject of his own life activity).

It should be noted that innovative education builds the educational process as a movement from social and general cultural knowledge and skills of one's profession (from profession to culture) to technological ones, which gives him an understanding of the ways and methods of solving professional tasks, and from them to methodological ones, which allows monitoring the dynamics of change qualities of one's professional activity (from technology to innovative thinking).

Innovative thinking is formed in a student if he,

firstly, is actively motivated in learning, realizes the requirements of self-management, individual self-governance for life goals;

secondly, if the educational process reflects the full life cycle of professional activity with its innovations and contradictions.

The main differences of innovative education are: development of logical conclusion skills and independent formulation of concepts definitions; the ability to isolate significant material for the development of classifications and typologies; skills formation of independent modeling of phenomena and processes; the ability to solve non-standard tasks that involve the independent search for additional information, the development of new approaches to the analysis of a problem situation and contribute to the development of a systemic vision of the research object.

Models that transform the education character in relation to its essentially and instrumentally important characteristics are considered innovative as: target orientation; the nature of the interaction between the teacher and the student and their position during the learning process; effective organization of the educational process, in particular, using modern information and telecommunication technologies, etc [13].

The formation of students' innovative thinking in the context of innovative culture and innovative education development reflects direct and inverse relationships that determine the mechanism of effective innovative activity of its subjects.

In the innovative thinking architecture, two main components are distinguished, i.e., interests and stereotypes. The individual interest structure, which meets the modern requirements of society

development, should be formed under the innovative culture influence. The purpose of such an influence is to help build a balance between professional and economic interests with the former's predominance, targeting the individual for self-realization in innovative activities. As for the influence of innovative education on individual innovative thinking, it should form a system of stable ways of thinking ("generating" stereotypes), which is the basis for the emergence and reproduction of flexible, creative forms of thinking.

Innovative pedagogical technologies provide future specialists with the opportunity to think creatively in the professional activity sphere even during professional training. If the content of innovative pedagogical technologies used during the future specialists' professional training will be aimed at their awareness of innovative activities relevance and students' assimilation of relevant experience, then, provided that the conceptually thought-out, systematic and professionally implemented use of these technologies in the educational process is possible, the formation of future specialists' readiness for innovative professional activity, which is the basis for the further development of their innovative culture [13].

The formation of the future specialists' innovative culture will, on the one hand, contribute to the implementation of successful innovative activities, thereby ensuring an economic effect at the macro level, on the other hand, it will contribute to the reproduction and enrichment of the value-normative basis of innovative social culture.

All that has been said allows us to conclude that the leading functions of innovative education can be considered:

- creative development of the student's and teacher's personality;
- democratization of their joint activities and communication;
- the educational process humanization;
- focus on creative teaching and active learning and the student's initiative in shaping himself as a future professional;
- modernization of means, methods, technologies and material training base, which contribute to the formation of future professional's innovative thinking.

To implement the set tasks, it is necessary to optimize the innovative activity environment of the higher education institution, which objectively or subjectively acts on the student with the help of pedagogically controlled action and includes a set of interacting objects united by functional connections. The main requirements for the optimization of the innovative activity environment in the educational institution are:

- Telecommunications – the possibility of prompt information exchange between various subjects.
- Information openness – availability of the entire amount of information that circulates and is stored in the environment.
- Simulation modeling – replacement of real innovative environmental activity with its simulation models.
- Adaptability – the possibility of flexible organization of the innovation activity environment in accordance with professional goals and solved tasks.
- Training time regulation – the possibility of conducting training activities at a pace determined by the target setting.
- Multi-level – the possibility of building the necessary innovative activity environment at all levels.
- Hierarchy – the possibility of delegating authority to all participants of educational events, according to the levels established by the hierarchy; and each level uses the services of a lower (in the hierarchy) level and delegates its powers to a higher (in the hierarchy) level.
- Information integrity – the possibility of ensuring the guaranteed preservation of the innovation space under any actions.
- Information availability – the possibility of ensuring unhindered access to the information space of participants' innovative activity environment in the educational process.

- Information confidentiality – a fundamental possibility of demarcating access to the innovation space by establishing appropriate powers for the educational process participants.
- Homogeneity – the possibility, on the one hand, of information objects formats consistency both in the structure of the innovation space and in the hierarchy of the participants' information space structures in the educational process, and on the other hand, the toolkit that ensures the execution of arbitrary functions of processing information objects.
- Cost-effectiveness – a fundamental costs reduction for educational activities to increase their rationality.

The innovative activity environment optimization is based on the principles of: purposeful educational activity; problem-creative orientation and interactive organization of educational and cognitive activity; innovative educational and cognitive activity, which involves the constant updating of acquired knowledge, abilities and skills with the aim of acquiring new cognitive experience; innovative skills formation determined by the content and features of students' professional training; innovative orientation of students' activities in classroom and extracurricular work.

It should be noted that the main goal of creating an innovative activity environment in a higher education institution is an attempt to maximally develop the creative potential embedded in an individual, to stimulate the need for further self-discovery, creative self-development, to form his objective self-evaluation.

We have identified four stages in the formation of students' innovative culture:

The first stage is the development of the student's creative individuality, the formation of the ability to identify, formulate, analyze and solve creative tasks, use creative search technologies: independent transfer of previously acquired knowledge and skills to a new situation, the problem vision in a familiar situation, a new object function, a structure object definition, the alternative solution vision or its method, combining previously learned activity methods in relation to solving a new problem, innovative thinking development.

The second stage is mastering the innovative activity basics. Students get acquainted with the social and scientific prerequisites for the innovations' emergence, creatively interpret alternative innovations, get acquainted with various types of innovative activities, etc.

The third stage is the mastering of innovative activity technology. Students get acquainted with the methodology of drawing up an innovative activity project, the implementation stages, analyze and forecast the further innovation development, the implementation difficulties.

The fourth stage is practical work at the experimental site for introducing the innovation, making corrections, tracking the experiment results, the innovative activity self-analysis.

The education content as a condition for the effective innovation and activity space functioning should be formed taking into account general didactic principles, in particular, the principle of education content compliance with the social development needs; the principle of the content unity and procedural educational aspects; the principle of structural unity of educational content at different levels. An interesting way to modernize the professional training content is the creation of fundamental disciplines "designed" for future professional activity or teachers' construction such student activity methods that would imitate their future professional activity, that is, contribute to the development of students' mental qualities: the ability to analyze, interpret, systematize, generalize, which will ensure their professional training, and scientific knowledge assimilation.

The presence of innovative values implies an individual's positive attitude to the objective innovative conditions of his life, an understanding the need for constant knowledge replenishment, the new approaches use, the desire to avoid any stereotypes, an interest in the development of one's own personality, society.

Summarizing scientific approaches to the analysis of the concept of "innovative activity environment", we can conclude that it is formed in a higher education institution due to the systemic interaction of such factors:

- internal and external policy of the educational institution;
- organizational and management activities;
- resource provision;
- psychological climate.

The internal and external policy of the educational institution, aimed at the formation of an innovative environment, consists in promoting the development of students and teachers' innovative culture, orienting the educational process to the implementation of the main principles of innovative state policy.

The internal policy of the educational institution, focused on the innovative environment formation, is revealed in a complex of principles and methods that ensure a high level of organization innovativeness. The innovative policy goal is to increase innovative activity in the educational institution, which ensures future graduates' competitiveness in the modern labor market, contributes to the development of the country's economy and innovative culture at the society level.

Organizational and managerial activities aimed at creating an innovative activity environment should be based on the understanding of a modern educational institution as an open research and production system in which innovative activities are carried out. Such activity requires organizational and managerial support, namely:

- ensuring the functioning of a holistic interaction system between subjects of innovation processes (management – teachers – students);
- creation of innovation laboratories and the innovation coordination center at the educational institution;
- innovative management implementation.

When designing and implementing the tasks of the innovative activity environment in a higher education institution, it is necessary to adhere to the systematicity principles. Some of the main principles of the system approach to innovation activities are modified in this way:

- primacy of the whole in relation to its component parts. For the innovative system as a whole (an essential characteristic of which is novelty), its parts are old, modern and new. It is the dynamic unity of the old, modern and new that is primary in relation to each of these elements that ensures optimal functioning of the innovation complex as a whole;
- non-additivity principle (the non-equality of the entire system properties and the sum of its constituent elements properties) in relation to innovation is manifested in the non-identity of the characteristics of the old, modern and new, as parts of the innovative object, to its dominant characteristics as a whole;
- synergy principle (the unidirectionality of the system elements actions increases the efficiency of the entire system) determines the need to find a balance of old, modern and new goals in a single innovative complex while preserving the essential difference (novelty);
- emergency principle (incomplete coincidence of the system goals with its components goals) during the implementation of an innovative project requires the construction of parameters hierarchy for the system as a whole and each of its components;
- when designing innovative systems, multiplicativity principle should be taken into account, which means that the effects of the components functioning in the system (positive and negative) have the property of multiplication, not addition;
- structurality principle assumes that the optimal innovation structure should have a minimum number of components; at the same time, these components must fully perform the specified functions and preserve the dominant properties of the innovative system (which ensure its novelty);
- alternative principle, according to which it is necessary to develop several interchangeable innovative versions;
- continuity principle requires the opportunities provision for the productive existence of the old in the corresponding innovation space and, conversely, the effective functioning of the new in the conditions of storage of the old.

Resource support is a necessary component of the process of creating an innovative activity environment in a higher education institution. Formation of the appropriate level of students' innovative culture depends on the availability and condition of such resources:

- highly qualified personnel with high innovation potential;
- material and technical base (financing, equipment, information and communication systems, equipment, premises);

- information support necessary for innovative activity (scientific, scientific and technical, legal and information on the theory and practice of innovation implementation, in particular in the sphere of students' future self-realization) and an established searching system for such information.

The most important task of scientific and methodical support is in:

- teachers' awareness of the need to introduce pedagogical innovations in their own practice;
- awareness of innovative pedagogical technologies, innovative methods knowledge;
- orientation towards teachers' creation of their own innovative products;
- readiness to overcome difficulties related to the innovative activities content and organization.
- creation of information resources, etc. [10].

The formation of students' innovative culture in the innovative and active educational environment in a higher education institution is facilitated by taking into account the following criteria:

1) conceptual and content orientation, the main indicators of which are the presence of the latest educational and methodological complexes, educational and work programs of an innovative nature; use of the domestic and international market of educational innovations; scientific substantiation of prospects for future specialists' professional training;

2) activity, which consists in students' ability and readiness to reproduce scientific, methodical, organizational, administrative requirements as necessary for the successful implementation of the innovative program tasks and the ability to present innovative experience using modern pedagogical technologies and scientific and pedagogical opportunities;

3) information and communication components are a provision of scientific and methodical literature, periodicals and specialist publications, free and stable access to global educational networks, an electronic education system availability, distance learning models implementation, electronic training manuals preparation;

4) professionalism is the ability to produce and implement new approaches to educational activity in terms of content, forms, and methods; self-assessment and self-control of own and collective innovative search [8].

The psychological climate creation favorable for innovation is also a necessary condition for an innovative activity environment. The main strategy consists in building such a nature of interaction between organizers and participants of innovative processes in an educational institution, which encourages the creative potential disclosure, self-discovery, self-development, best practices research. Necessary conditions for a positive psychological climate are the fulfillment of psychological equality principle of the innovation process subjects, which consists in cooperation, partnership and complementarity with the aim of developing innovative knowledge and replenishing the innovative experience of both parties; creating relationships of co-creation and individual's creative freedom at the expense of relationships openness in the team; formation of assimilation sphere of success and satisfaction experience from the results of creative and innovative activities [3].

The conducted research indicates that solving the problems of forming an innovative culture of student youth in higher education institutions depends on a productive innovative activity environment, oriented both on the process and on a certain result – the future specialists' desire for self-actualization, which involves the realization of all their abilities and talents.

Conclusions. Targeted formation of innovative knowledge, innovative way of thinking and innovativeness of the student's personality as components of his innovative culture in the innovative

activity environment of the higher education institution is possible under the conditions of optimal system selection of management, teaching and communication methods. Students' specified qualities development should provide for the full-scale inclusion of psychological mechanisms of personality integration in the innovative and active environment of the higher education institution, self-realization and high motivation of all participants in the educational process, information space promotion in the innovative and active environment of the higher education institution, students' innovative potential development, which requires rethinking the very essence of the educational process.

The article does not cover all aspects of the investigated problem. Prospective directions of scientific research can be: formation of student's positive motivational and value attitude to the "new" as a basis for self-improvement and self-realization in the process of future professional practice and life self-determination; didactic provision of students' innovative educational and cognitive activity by means of interdisciplinary interaction of professionally oriented interdisciplinary complexes, etc.

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