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INNOVATIVE METHODS AT THE UNIVERSITY AS A SIGN OF ITS MODERNITY

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Abstract. The article deals with the requirement of transition to innovative education, which is due to today's challenges. The importance of innovative learning in the process of functioning of a modern university as a tool of integration into the world educational space is emphasized. It is emphasized that the innovative orientation of the higher education system, which is implemented through increasing the level of computerization of educational institutions, intensification of research activities, the formation of innovative structures in the Free Economic Zone is one of the strategic priorities. The characteristic differences of traditional and innovative teaching are determined, different variants of existence of innovative teaching methods are investigated, and the main approaches to the choice of innovative methods according to the educational purpose of employment, advantages and disadvantages of use of separate methods. The concepts of «educational innovation», «innovative university» are also specified, some innovative methods of teaching at the university are analyzed.

Key words: educational innovation, innovative methods of teaching in a higher educational institution, innovative university.

1. Introduction

One of the main features of modern society is a strategy of development based on innovation. This process is fully implemented in the field of education, in particular in higher education, as this area largely determines the progressive movement of the economy of each state. Innovative orientation of the higher education system, which is implemented through increasing the level of computerization of educational institutions, intensification of research activities, the formation of innovative structures in universities is one of the strategic priorities of Ukraine (Andrushenko, 2014:9).

Traditional for the past education as a system aimed at passive acquisition and reproduction of knowledge lags behind today the real requirements of the labor market.

Formulation of the problem. The demand for the transition to innovative education is due to today's challenges, especially in the context of integration of the domestic education sector into the European and world educational space. Now higher education institutions face the task of constantly improving the quality of education, modernization of its content, development and implementation of educational innovations and information technologies, creating conditions for training a specialist suitable «for effective implementation of innovative tasks of the appropriate level of professional activity» (Artikuca, 2019:2).

Innovations in education – is the process of creating, implementing and disseminating in educational activities of new approaches, ideas, methods and techniques, technologies aimed at updating, modernizing, transforming the educational process in accordance with the requirements of the time. In particular, the formation of a systematic approach to the analysis of professional tasks, strategic thinking, ability to social mobility, the desire for self-study, self-education and self-improvement throughout the active working life should be decisive for higher education. And this can be achieved, first of all, by transforming the consciousness of university teachers, re-equipping them with new approaches to professional activity within the «model of student-centric learning», constant implementation of innovative methods in higher education as one of the steps in launching innovative universities and stage in the process of internationalization of higher education in Ukraine.

Analysis of recent research and publications shows that the implementation of innovative approaches in higher education are considered in the works of V. Andrushchenko, I. Dychkivska, V. Kremen, A. Kuzminsky, V. Lugovoi, V. Morozov, P. Saukh, T. Turkot, D. Chernilevsky and others. In particular, V. Andrushchenko analyzes the ratio of necessary innovations and the traditional component in education, which requires radical changes in education , I. Dychkivska notes that innovative learning is based on the development of various forms of thinking, creative abilities, high socio-adaptive opportunities of the individual. The essence of innovation in its conceptual, historical and methodological dimensions, as well as the innovative development of education in the context of creativity are considered in a monograph edited by V. Kremen. The combination of traditional and innovative teaching methods in the context of the general principles of higher school pedagogy is considered by T. Turkot and D. Chernilevsky (Vaschuk, 2911:345).

The purpose of the article is to give a generalized description of educational innovations, to identify some features of an innovative university, to clarify the essence and features of certain innovative methods of teaching future professionals.

Presenting main material.

The concept of «innovation», although used in the scientific literature for over a hundred years, but became relevant in the late twentieth and early twenty-first century. The large explanatory dictionary of the modern Ukrainian language explains the word «innovation» as «innovation» (Goncharov, 2011:361).

Wikipedia interprets the term «innovation» as an innovation in engineering, technology, labor organization or management, based on the use of science and best practices, the end result of innovation , ie innovation is the embodiment of scientific discovery, technical invention in new technology or new product type.

The Glossary of the European Education Foundation explains that innovation is a novelty introduced for the first time, but most innovations are related to the transfer of existing approaches to new conditions by adapting them or making gradual changes to existing systems .

The concept of «innovation» is considered in the psychological and pedagogical literature ambiguous. It is well known that the American scientist K. Roger defined that novelty is an idea that is new to a particular person, and it does not matter whether this idea is objectively new or not. Modern domestic scientists consider innovation in education as a process of creating, disseminating and using new ways to solve pedagogical problems with original, non-standard approaches **(**Duchkivska, 2004:115).

Innovative education is understood as an industry that is constantly updated with knowledge, technologies, teaching aids, organizational and managerial approaches. Thus, the innovation of education is a purposeful process of change that leads to the modification of the purpose, content, methods, forms of teaching and education, adaptation of the learning process to new requirements , and education itself becomes an effective lever of knowledge economy, innovation environment , in which students gain skills and abilities to independently acquire knowledge throughout life and apply this knowledge in practice (Dubyagin, 2016: 1).

The Law of Ukraine «On Higher Education» defines the concept of a research university as a higher education institution that provides breakthrough development of the state in certain fields of knowledge on the model of combining education, science and innovation. The criteria of the research university, according to Article 30 of the Law of Ukraine, are the availability of extensive infrastructure and material and technical base, interdisciplinarity of education and science, strong fundamental component of research, ability to implement and commercialize scientific results, number of publications on international scientometric databases and international refereed publications, place in the national, sectoral or international rankings of universities (Artjomov, 2015: 89).

As the highest stage of a research institution, the Innovative University should be the center of innovation processes, where both state and commercial resources are applied and research projects are imple-

mented. It is characterized by the availability of innovation infrastructure, which is formed by technology transfer centers, innovation consulting, business incubators, small innovation companies, science park. He retains the academic component, but works in three interrelated areas – education, research, innovation . Along with the implementation of research projects, the urgent task of the innovative university is quality training of innovation-oriented specialists in priority fields of engineering and technology, dissemination and application of new knowledge in an innovative environment, ie development and implementation of new educational technologies based on competence approach (Kozak, 2014:2).

A component of a holistic pedagogical process is the educational process, which is characterized by innovative features. The innovativeness of the educational process has its own peculiarities – first the philosophy of innovation is formulated, which is then specified in its main elements (target, content, procedural, technological and evaluation). Thus, the target and content component affects the content and structure of the whole industry and a particular set of disciplines. The procedural component determines the structure of educational and cognitive activities of the pupil (student or pupil) and the structure of professional activity of the teacher. The technological element affects the structure and content of methodological work, including textbooks and manuals. The evaluation component affects the system of teaching aids. Innovation is concretized both in each component and in the holistic structure of the educational process (Kochubey, 2013: 1).

Modern psychological and pedagogical innovations in the domestic education system, including higher education, include implemented innovations in:

- content, methods, techniques and forms of educational activities and personal education (methods and technologies);
- the content and forms of organization of management of the educational system, as well as in the organizational structure of educational institutions;
- means of teaching and education;
- personal attitudes of the teacher, as the educational process should be a dialogue of personalities of the teacher and the student, which significantly improves the motivation of students to learn.

Thus, the main criterion for the innovation of education – a change in goals, ie content education and its results as the main components of the teacher and learner.

Can the improvement of traditional approaches to the educational process aimed at better assimilation of reproductive knowledge be considered an innovation? Such improvement does not imply qualitative changes, so it can be interpreted as an improvement, not an innovation.

A characteristic feature of innovative education is personality-oriented learning, which is subject to the following laws (Luhovyi, 2011: 29).

1. Academic discipline is not a fragment of the content of education, but an event in the life of the individual, which gives a holistic life experience in which the acquired knowledge is its element, part.
2. The design of the educational process is the subject of joint activities of teacher and student, the way of their life as subjects of education.
3. The educational process takes the form of research, search, educational games, which become a source of experience.
4. The functions of interpersonal communication between teacher and students are changing: the teacher becomes a facilitator (a person who ensures successful group communication) of educational and cognitive activities of students, one of the sources of information.
5. Development of «I-concept» of subjects of educational activity is carried out through awareness of integral vital activity, which provides imitation-role reproduction of life roles and situations, design and organization of educational material in such a way that the student can choose the content, form and type of educational -cognitive activities and means of self-control.

Hence the possibility of conducting a comparative analysis of the basic principles of innovative and traditional learning according to table 1:

Table 1

Comparative analysis of the characteristics of teaching methods in higher educational institutions

Characteristic criterion	Features of training	
	traditional	innovative
The place and role of the teacher	An entity that defines all aspects of the learning process – leading person	The entity that initiates and organizes the learning process stimulates the transformation of the student into an active participant in this process
Place and role of the student	Perception, assimilation and reproduction of information provided by the teacher – a passive role	Active assimilation and generation of knowledge obtained from various sources
Type of information presentation	Defined and managed by the teacher information, knowledge is presented in a ready form	Multi-channel system that generates information between teacher and students and provides information interaction between them
Learning process management	Authoritarian or totalitarian	democratic
The level of creativity in the work	Creativity is possible only in the work of the teacher	Creativity of the teacher is shown in various forms, activity of the student has creative character
Form of educational activity	Mostly lectures	Dialogue, interactive, project and other forms
Solving learning problems	Some problems are stated, the ways of their solution are described	Learning takes place through a joint search for a solution to the problem, partial search or research methods are used, skills and abilities to solve problems are formed
Learning outcome	The set of knowledge, the use of knowledge to obtain grades	The set of knowledge, practical skills, readiness for their creative use in practice

Innovation in the educational process leads to a change in the relationship between teachers and students. If in traditional learning there is a subsystem «subject» – «object», in which the student is given a passive and dependent role, then in innovative learning the student becomes an important educational entity involved in active, creative collaboration with the teacher, interested in gaining deep and relevant professional knowledge. The focus on subject-subject, dialogic interaction requires the implementation of the educational process through a combination of traditional and innovative methods and forms of learning.

Thus, innovations in the content of education should be supplemented and implemented through the mastery of innovative methods and forms of learning (dialogue, diagnostic, active, interactive, distance, computer, multimedia, telecommunications, training, design), as well as through the introduction of alternative educational technologies , such as algorithmic, individualized, differentiated, modular, collective (in small groups), etc. (Morozov, 2014: 37).

In educational theory and practice, there is a certain conceptual and terminological complexity in distinguishing between forms, methods, learning technologies and so on. Article 50 of the Law of Ukraine «On Higher Education» defines the forms of organization of the educational process as classes, independent work, practical training and control activities, and the main types of classes in higher education institutions are lectures, laboratory, practical, seminar, individual lessons and

consultations.. V. Luhovy also distinguishes between the concepts of «types of training sessions» and «teaching methods / technologies», understanding the first term the specifics of the organization of educational activities, and the second – ways and means of processing educational (pedagogical) information for learning (Luhovyi, 2011: 29). The scientist proposes to use two categories of educational activities: methods (techniques, methods) of teaching, which means the types of classes and partially (independent work, practical training) forms of organization of the educational process, and types of educational activities – educational tasks developed by the teacher.

In the scientific and methodological literature there are different approaches to the classification of innovative teaching methods.

Morozov V. divides them into design, laboratory and integrated (Morozov, 2014: 37). Under project methods (project method), the scientist understands the organization of learning, according to which students acquire skills and abilities in the process of planning and performing practical tasks – projects. Laboratory system (research), in his opinion, is based on the principles of individualization of learning, independent research work in laboratories. Integrated (complex) methods are the implementation of training on certain topics-complexes that contain materials of related subjects. All these teaching methods are used in cooperation, mutual understanding, unity of interests and aspirations of participants in the educational process.

Chernilevsky D. and Lutsky I. Innovative technologies are understood as technologies of active, modular and problem-based learning, as well as didactic games (Chernilevskiy, 2010: 127).

Researchers note that the most promising are personal pedagogical technologies that are interrelated with modular learning.

Goncharov S. refers to interactive learning technologies cooperative, collective-group, situational modeling, discussion issues, each of which is implemented through separate methods and techniques (Goncharov, 2011:361).

Turkot T. analyzes credit-module and module-rating technologies as innovative, and group work of students, group trainings, «brainstorming», didactic games, case method, micro-teaching, method «Talk show», «Circle of ideas», «Aquarium» considers innovative methods (Turkot, 2011:502).

Artikutsa N. considers as innovative for legal education methods of specific situations, role play, problem-solving, «brainstorming», individual and group training, interview method and others (Artikutsa, 2019:2). and Kochubey A.V. considers interactive methods of training future engineers to be imitative, motivational, cognitive and regulatory, which are based on dialogic interaction and «make the intellect and soul work» (Kochubey, 2013: 1).

Let's analyze the characteristics of some teaching methods, which in modern scientific and educational literature are considered innovative.

Active or interactive teaching methods are distinguished on the basis of changing the role of the teacher (instead of the role of the informant, the role of the manager) and the role of the student (information is not a goal but a means to acquire skills). Interactive learning («inter» – mutual, «act» – to act) – is a special form of organization of cognitive activity, which involves creating comfortable learning conditions in which the student feels his success and intellectual ability (Siladiy, 2011: 78). A characteristic feature of interactive learning is the constant, active interaction of all participants in the learning process. Analyzing their actions and the actions of their partners, everyone can change mdepartment of their behavior, more consciously acquire the necessary knowledge and skills, feel in conditions as close as possible to future professional activities. The most common among such methods are the project method, group discussions, «brainstorming», business and role-playing games, basketball method (method of learning based on simulation), training, practical experiment, etc. (Smolanka, 2015: 6).

The essence of interactive methods can be expressed in the words of the Chinese philosopher Confucius, expressed more than 2.5 thousand years ago:

What I hear, I forget
What I see, I remember,
What I do, I understand.

Studies by American and European scholars confirm that interactive teaching methods increase the share of learning material, because they affect not only the student's consciousness but also his feelings and will, namely: lecture – 5% learning, reading texts – 10%, video / audio materials – 20%, demonstration – 30%, work in discussion groups – 50%, practice through action – 75%, teaching others and applying the acquired knowledge – 90% of mastering.

Based on the systematization of teaching methods according to the Tuning project, V. Lugovyi determines that the main teaching method should not be a lecture, as considered in the domestic higher school, but individual, research, project work, supplemented by independent (supervised), group research, seminar and practice (Luhovyi, 2011: 29).

To simplify the use of certain interactive methods, the teacher must consider the following points:

- interactive interaction requires a change in the organization of work, a significant amount of time for preparation, so it is advisable to start with the inclusion of some elements of these methods (pair work, «brainstorming», etc.);
- it is necessary to hold organizational meetings with students, to determine the «rules of work in the classroom», to adjust them to serious preparation for classes;
- the use of interactive methods is not an end in itself or self-promotion, it is a means of creating an atmosphere of cooperation and mutual understanding in the academic group.

Active (interactive) methods are divided into simulation and non-simulation.

Non-imitation methods do not involve the creation of a model of process or activity, and activation is achieved through the selection of problematic content of learning, which ensures the dialogic interaction. Non-imitation methods in the scientific literature include a problem lecture, a seminar-discussion with a «brainstorming», field trips, term papers and dissertations, internships without official duties. These methods provide an opportunity not only to provide students with certain information, but also to promote the development of certain professional skills and abilities.

Simulation methods are divided into game and non-game, which involve working with a model of the situation in the process of simulation.

The method of analysis of specific situations as a non-game method is to study, analyze and make decisions in a situation that has arisen or may arise under certain circumstances in a particular organization. This method stimulates students' analytical thinking, forms a systematic approach to solving the problem, allows you to identify options for hypotheses to solve the problem, helps to establish business and personal contacts, resolve conflicts.

Game simulation methods include internships, simulation training, business and role-playing games. These methods provide the maximum possible approximation of the educational process to the production conditions. Active teaching methods (discussions, didactic games, modeling of production situations, etc.) are a kind of training ground where students develop professional skills and abilities.

Each of the innovative teaching methods has its advantages and disadvantages. For example, the case method involves students making a specific decision in a proposed situation. In order to use this method effectively, the information that makes up a case must reflect a problem in a future professional activity that can be solved in several ways. As a result of the discussion, each group of students offers their own solution to the problem, justifying it based on the acquired knowledge of the discipline. The teacher, preparing for such a lesson, systematizes the course material, complements it with interdisciplinary links, directs students to a professional rather than everyday approach to situation analysis. (Terletska, 2014:85).

There are advantages and disadvantages of the case method. Advantages: the ability to identify, analyze and calculate each step significantly complements the theoretical aspects of the problem;

creates a unique opportunity to study complex professional issues in an emotionally favorable atmosphere of the educational process; the communicative nature of the method provides an opportunity to have a quick but thorough assessment of the issues under discussion and proposed solutions in the presence of relevant knowledge.

Disadvantages: in a similar real situation, a young specialist without the support of the group is unlikely to be able to quickly recall the experience. This can lead to frustration in the future; time constraints may not allow the group to develop objective and effective ways to solve the problem. This can lead to dissatisfaction with the method. Low student activity reduces the effectiveness of the method. Students may feel uncomfortable if they do not feel supported by a teacher or classmates.

The choice of methods, forms and means of teaching is influenced by the peculiarities of the discipline, the nature of the study material, the amount of time spent studying the material, the level of general training of the group, features of the educational material base and many others. The choice of method is largely determined by the number of students, as most methods are most effective with a small number of student participants. But first of all the choice of method is determined by the didactic goals of the lesson, the type of information that is mastered, ie should be adequate to the properties of educational information and educational goals (Turkot, 2011:502).

Didactic goals and corresponding teaching methods. Didactic goals: generalization of previously studied material; productive presentation of a large amount of material; development of skills and abilities of self-learning; increase learning motivation; consolidation and systematization of the studied material; application of knowledge, skills and abilities; Reliance on students' experience in presenting new material; modeling of future professional activity; Mastering and consolidating personal communication skills; effective creation of a creative project; development of group work skills; Acquisition of skills to act in a stressful situation; development of decision-making skills; development of active listening skills.

Teaching methods: group discussion, «brainstorming»; «Brainstorming», business game; business or role play, analysis of practical situations; training; basketball method (learning method based on simulation of the situation).The effectiveness of innovative teaching methods in higher education institutions should be assessed not only on the basis of quantitative indicators of student achievement, but also taking into account changes in the minds of both students and teachers.

Students develop readiness for constant acquisition of new knowledge, mobilize their talents, abilities and talents, strengthen skills to take responsibility, defend their position, cooperate, develop a new type of motivational sphere, where self-actualization affects the overall creativity of the student, promotes personal creativity (Kremen, 2008: 345).

To implement the tasks of innovative education and training, the teacher must interest each student in the work of the group with a clear motivation, encourage students to speak freely and correctly without fear of wrong answer, to show high professionalism in work. Teacher's innovative activity can be interpreted as a creative process and creative result, as a personal category, where the basis is reflection – the individual's understanding of their own search and creative activities, creative and transformational activities and co-creation (Harkivska, 2014: 257).

The effectiveness of the professional activities of university teachers is determined by his active interaction with students, the implementation of appropriate psychological and pedagogical influences that contribute to the quality of students' mastery of modern professional knowledge, skills and abilities, as well as the formation of personal qualities and qualities and public life. In order to increase the effectiveness of professional activities of university teachers, it is necessary to improve each of the components of this effectiveness (teacher management of educational process, set of pedagogical skills and qualities, relationships with students, professional orientation, motivation to implement tasks of educational process, professional reliability) .

In our opinion, improving the quality and intensity of the educational process in higher education will contribute to the organic combination of innovative methods with classical, traditional, thoughtful and harmonious combination of different methods for each discipline and each class depending on their purpose and specificity. Highly productive and promising is also the synthesis of classroom and extracurricular work, which helps to form an alloy of professional skills and skills with an active public position of the future specialist. To implement such approaches, as well as for the active implementation of innovative teaching methods, the teacher must not only improve the teaching and methodological complexes in certain disciplines, but also to master new teaching aids. To this end, it is advisable to create a special scientific and methodological structure for the organization and coordination of this work, to equip the relevant classrooms with technical means that will enable the implementation of innovative teaching methods in the pedagogical process.

Their internship in leading higher education institutions abroad, as well as participation in the process of academic mobility can play a crucial role in the mastery of innovative technologies and methods by teachers of domestic universities. It is necessary to change outdated stereotypes about teaching, which should be an incentive not only to thoroughly study a foreign language, but also to use individual, research, project, practical methods of pedagogical interaction. Such approaches can be optimally implemented in the framework of pedagogical activities or internships in international programs that are part of the process of internationalization of higher education in Ukraine. In order to obtain the status of an innovative research university, a classical higher education institution must formulate its own strategy, choosing innovative development models, transforming its activities through commercialization of knowledge, conducting problem-oriented interdisciplinary research and training highly qualified new generation based on the latest socio-economic trends. and thereby increasing the competitiveness of their institution. Creative implementation of innovative methods in the educational process is an integral part of this transformation (Chernilevskiy, 2010: 127).

Conclusions. The main vector of development of modern higher education in Ukraine is determined by the general focus on the process of entry of domestic higher education into the European and world educational space.

Based on the analysis of scientific research and methodological literature on the implementation of innovative teaching methods in higher education, it is shown that:

- the priority of the national concept of reforming and modernizing higher education is to create an innovative educational environment in higher education through the promotion of progressive innovations, including the implementation of innovative teaching methods as part of the formation of innovative (entrepreneurial) university;
- the application of a wide range of the latest teaching methods will be one of the features of innovative universities and will start the process of internationalization of higher education in Ukraine;
- in modern pedagogy there is a variety of innovative teaching methods aimed at quality learning by students, the development of their intellectual activity, the formation of skills and critical thinking of professional problems, the ability to independently process information, acquiring qualities that will be useful in future professional life;
- each higher education institution creates its own base of the most frequently used innovative methods, taking into account the specifics of the teaching staff, the contingent of students, the peculiarities of specialties, specialists from which prepares a particular university, logistics, etc. The combination of these methods forms the methodical treasury of the national higher school, which testifies to the serious and painstaking work on the establishment of European qualities in higher education in Ukraine.

Successful implementation of innovative teaching methods requires systematic work, which requires:

- to review the content and direction of training and retraining (internships) of teachers in order to form their professional readiness to work in innovative learning;

- to promote the participation of teachers in the process of academic mobility, in particular in international exchange and internship programs;

- to introduce a system of material incentives for teachers who actively and effectively implement innovative methods in the educational process.

An important area of further coverage of the topic is the study of the problem of training specialists based on research in the context of the competence approach, as well as the study of the most effective innovative methods that can be used to train specialists in the humanities or natural sciences.

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