Innovative Approaches to the Organization of the Educational Process in the Higher Educational Institutions

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Currently, under the conditions of the rapid development of information technologies, in all areas of activity, the need arises to change approaches to the organization of the working process. The purpose of the research lies in studying the efficiency, distribution and features of using innovative approaches in the organization of the educational process at HEIs. Results. In the course of the analysis, various types of classification of innovative research methods were studied and data on the effectiveness of approaches to organizing the educational process in higher educational institutions were obtained in the form of the survey results.

Keywords: approaches to learning, educational technologies, interactive methods, the educational process of higher educational institutions, innovations in education

INTRODUCTION

In the modern educational process, the issue of the effective application of innovative teaching methods remains one of the most relevant in the world. However, in the context of transformational changes in higher education, the tools for organizing the educational process should be carefully studied, scientifically and practically justified for the most effective application.

Despite the labour-consuming nature of teachers' work, the requirements towards the content of the disciplines are changing rapidly, leading to the inevitable lag of educational institutions from the requirements of the modern society Tararuk & Brick (2022). In order to solve this complex problem, a number of pedagogical innovations are used, which will contribute to the effective training of future skilled workers.

The content of educational innovations today includes as follows:

- scientific and theoretical latest developments;
- new effective educational technologies;
- effective innovation and educational experience, ready for implementation Altbach & De Wit (2020).

Problems of innovative technologies and teaching methods in modern higher education are relevant, forasmuch as there is a growing tendency towards humanization of the content of technical education, approval of new disciplines. Consequently, the demand for specialists who can offer innovative approaches to the educational process in accordance with existing trends is also increasing. At the same time, it is extremely important to ensure the ability of teachers to develop and implement their own innovative methods in accordance with the needs of the educational process.

LITERATURE REVIEW

According to the viewpoint of Ridey & Tolochko (2017), the innovative policy of higher education comprehensively covers the activities of higher educational institutions, promoting their development and increasing competitiveness. The diversity of its formation and implementation is subject to certain formative principles ensuring the effectiveness of innovative development.

Summarizing the different approaches to the interpretation of the concept of "educational innovation", it can be said that this category is defined as a means of introducing something new, as a process of implementing this novelty in practice, and as a result (final educational product or service) of the process of creating new changes and achievement of educational goals Jandrić, Ryberg, Knox et al. (2019).

As a prerequisite for the competitiveness of higher educational institutions in terms of providing quality educational services, scientists have identified the types of innovations as follows:

- innovations related to the content of academic disciplines offered by the educational institution;
- innovations adjusting the pedagogical process;
- innovations changing the organizational structure of higher education;
- innovations in joint activities and relationships between teachers and students;
- development of cooperation with partners;
- innovations in the field of international cooperation with higher educational institutions.

It is important to emphasize that innovations in education are classified by the following aspects, namely:

- 1) the object of influence (pedagogical, social-psychological, organizational and managerial). The results of pedagogical innovations are qualitative changes in the educational process of the younger generation. The introduction of innovations in the social-psychological field contributes to the improvement of the microclimate of the educational environment, forms a high interpersonal culture among future specialists. Organizational and managerial innovations offer the introduction of modern forms and methods of management; help to overcome stereotypes of conservative management style, and promote the formation of new partnerships.
- 2) the spreading level (system-methodical and local). Innovative changes in the nationwide system involve the use of system-level innovations. The local level of technological innovations includes approbation of personality-oriented innovative methodological systems in some educational institutions Webster & Whitworth (2019).

The processes of introducing innovative processes and technologies in higher education are studied by numerous scientists and educators, in particular by Munoz & Mackay (2019). The scientific works of these scholars are devoted to general theoretical and scientific-practical problems of the innovation paradigm in higher education, and the practical application of some modern educational technologies, features of pedagogical experience and prospects for its use in educational practice.

The investigations of Gast, Schildkamp, van der Veen (2017), and Hodge (2020), are devoted to technologies of quality management of new higher education, based on the integrative application of systematic and qualitative approaches, as well as innovative didactic tools, the work of modern specialists.

The analysis of domestic and foreign scientific literature has showed that the basic attention of most publications is focused on the analysis of innovative technologies and teaching methods. In particular, Rebuha, Ch. Zhunkhao (2021), Geist (2019) and other scholars study the implementation of innovations in the educational process and education, in general. Many authors believe that the most important innovative areas of education are related to improving the traditional pedagogical process (modernization, modification, rationalization), or a thorough transformation of the existing traditional educational process, that is, radical transformations and complex changes.

The concept of "educational innovation" is used to determine the mechanisms of influencing the transformation of higher education on various aspects. Therefore, the categorical content of innovation can be defined through a dual context, in particular, as a process of large-scale or partial changes in education and related activities, as well as changes in its finished product, that is, expected outcomes.

Innovations in learning are connected with an active process of creating, disseminating new methods and tools (innovations) for the application of didactic methods of training specialists in a harmonious combination of classical traditional methods and the results of creative search, using non-standard, advanced technologies, new original didactic ideas and forms of educational process (Guàrdia & Maina, 2018).

According to the viewpoint of Fawns (2019), innovation can be considered in two aspects: as a phenomenon and as a process. In the first case, the concept of innovation is understood as an idealized or improved state achieved through development, transformation and change. In the second case, innovation is a specifically structured series of measures that are gradually being implemented to achieve improvement. The innovation system includes an algorithmic sequence of innovation processes in its development: from the concept to the result of its implementation in the educational process (Gubenko, 2017).

It should be noted that innovations in the field of education are considered at the national, regional level, as well as at the level of a specific institution or organization.

The classification of educational technologies, which are known in pedagogical practice and most often used nowadays, is given in Table 1.

TABLE 1
PEDAGOGICAL TECHNOLOGIES THAT ARE MOST OFTEN USED IN THE ORGANIZATION OF THE EDUCATIONAL PROCESS IN THE HEIS

№	Type of technologies used in the organization of the educational process	Features of the technological approach
1.	Structural and logical technologies	Stage-by-stage organization of the training system, which contributes to the logical sequence of setting and solving didactic tasks based on the selection of their content, forms, methods and teaching aids at each stage of the process, taking into account the stage-by-stage diagnostics of the results.
2.	Integration technologies	Didactic systems ensuring the integration of interdisciplinary knowledge and skills, various activities at the level of integrated courses (including electronic).
3.	Professional and business, gaming technologies	Didactic systems of using various "games", during which the ability to solve problems on the basis of compromise choices (business and role-playing games, simulation exercises, individual training, computer programs, etc.) is formed.
4.	Training technologies	A system activity for working out of certain algorithms of the decision of typical practical problems by the computer means (psychological trainings of intellectual development, communication, the decision of administrative problems).
5.	Information and computer technologies	These technologies are implemented in didactic computer-based learning systems based on human-machine dialogue through a variety of educational programs (training, control, information, etc.).
6.	Dialogue-based technologies	A set of forms and methods of teaching based on dialogic thinking in interacting didactic systems of the subject - subject level.

Source: compiled by the author according to the data (Rebuha & Zhunkhao, 2021).

Innovative methods of active and interactive learning are widespread in the modern market of educational services nowadays. Due to the fact that the role of the creative image component grows significantly, the role of all participants in the educational process becomes more active, and the creative and exploratory independence of students also increases. Along with this, the relevance of the concept of problem-based and interactive learning connected with the use of computer systems is especially increasing. In the course of organizing this type of the educational process, the student is able to communicate directly

with the teacher, demonstrate the results of tasks performed, form analytical and critical thinking, independently acquiring knowledge and searching for information (Hodges, Moore, Lockee, Trust & Bond, 2020).

From among the interactive methods, forms and techniques most frequently used in the work of the HEIs, the following should be emphasized, namely: error analysis; audio-visual teaching method; brainstorm; Socrates Dialogue; "Decision tree"; discussion with the involvement of specialists; business (role) game (students in the role of legislator, expert, legal adviser, notary, client, judge, prosecutor, lawyer, investigator); commenting, assessment (or self-assessment) of participants' actions; conducting a master class; procedures for analysis and diagnostics of the situation; interview method; design method; problem (problem-search) method; public speech; work in small groups, etc.

As the review of the literature on the subject matter of the research has shown, currently, in the scientific works on the issue outlined, there is no critical assessment of the existing innovative teaching approaches in terms of the effectiveness of their individual types in the organization of the educational process. The list of methods that are more suitable for technical and humanitarian specialties also needs to be clarified (separately).

AIMS

The purpose of the research lies in establishing the features of innovative approaches to the organization of the educational process in higher educational institutions, identifying the most common innovative methods used in education, as well as assessing the effectiveness of their application from the standpoint of teachers.

MATERIALS AND METHODS

In the course of the research, analytical, bibliographic methods for studying scientific literature on the application of innovative approaches to the organization of the educational process in higher education have been used, as well as the analysis and synthesis, deduction, induction, generalization of information obtained from literary sources; the method of extrapolation has made it possible to disseminate the conclusions obtained as a result of the analysis. For a practical study of the issue raised, a questionnaire survey of teachers of higher educational institutions located in Kyiv (Ukraine) was used. The survey questionnaire was developed by the author of the research and contains 4 blocks of 10 questions in each; the survey results for each block are represented in the figures of the present academic paper. The survey was conducted in coordination with the administrations of the educational institutions, on the basis of which it was carried out. The questionnaire contains questions providing for the consent of survey participants to publish the results of the present research.

519 teachers of humanities and technical specialities of higher educational institutions of Ukraine took part in the survey, namely: Kyiv National University of Economics named after Vadym Hetman, Educational and Scientific Institute of International Relations of Taras Shevchenko National University of Kyiv, Institute of Higher Education "International Scientific and Technical University named after academician Yuri Bugai", Open International University of Human Development "Ukraine". The age, gender, and territorial distribution of the teachers who took part in the survey are shown in Table 2.

TABLE 2
CHARACTERISTICS OF THE RESEARCH SAMPLE

Place of	Age, years			Gender, persons		Place of residence, persons		
permanent work or base of scientific activity	Up to 35 years old	From 35 to 45 yeras old	Over 45 years old	Males	Females	The city of Kyiv	Kyiv region and other regions of Ukraine	Total, persons
Kyiv National University of Economics named after Vadym Hetman	29	81	36	25	121	83	63	146
Educational and Scientific Institute of International Relations of Taras Shevchenko National University of Kyiv	31	105	36	13	159	94	78	172
National University of Kyiv, Institute of Higher Education "International Scientific and Technical University named after academician Yuri Bugai"	11	72	9	21	71	74	18	92
Open International University of Human Development "Ukraine"	14	76	19	25	84	71	38	109
Total	85	334	100	84	435	322	197	519

As it can be seen from Table 1, the vast majority of respondents are females. The age of 334 out of 519 survey participants (about 64 %) is between 35 and 45 years old. Most of the research participants live in Kyiv.

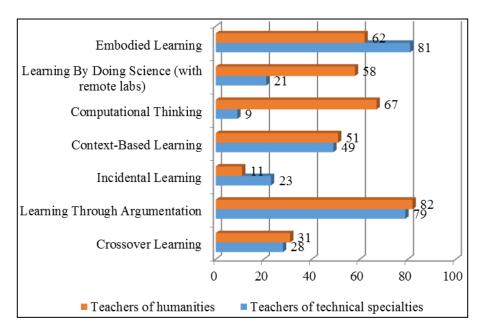
RESULTS

In order to study the quality of innovative approaches to learning, it is expedient to evaluate the effectiveness of their application. For this purpose, respondents (teachers of higher educational institutions) were asked to provide their subjective assessment of the effectiveness of the most popular approaches in

percentage terms from 0 to 100 %, where 0 is not an effective method at all, and 100 % is the most effective one.

Teachers of humanitarian and technical specialities of 4 leading institutions of higher education of Ukraine have assessed the efficiency of innovative approaches to the organization of the educational process as follows (Figure 1).

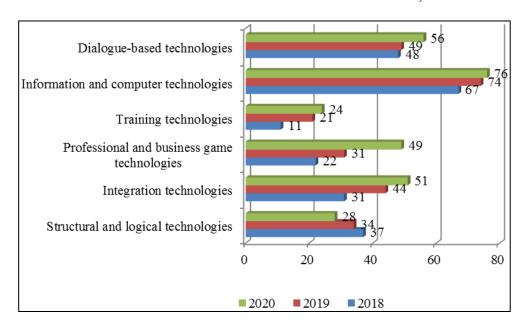
FIGURE 1
THE EFFECTIVENESS OF INNOVATIVE APPROACHES IN THE EDUCATIONAL PROCESS ACCORDING TO TEACHERS OF HUMANITIES AND TECHNICAL SPECIALITIES OF 4 LEADING INSTITUTIONS OF HIGHER EDUCATION IN UKRAINE, %



As it can be seen from Figure 1, teachers of technical specialities consider that Embodied Learning, Learning through Argumentation and Context-Based Learning are the most effective in their work. At the same time, teachers of humanities consider the following approaches as the most effective in the educational process, namely: Learning Through Argumentation, Learning by Doing Science (with remote laboratories), Context-Based Learning, Computational Thinking.

In order to estimate the dynamics of the intensity of using innovative approaches in the organization of the educational process, teachers of higher educational institutions were asked to assess the degree of application of various types of innovative approaches in their work during 2018–2020 (Figure 2).

FIGURE 2 DYNAMICS OF APPLICATION OF INNOVATIVE APPROACHES DURING THE ORGANIZATION OF EDUCATIONAL PROCESS,%



The study has shown that the use of information and computer technologies during the educational process is most in demand. It is worth noting that from 2018 to 2020, the percentage of approval of this indicator, according to respondents' viewpoints, has increased from 67 to 76 %. It is also important to use dialogue and integration innovation tools.

FIGURE 3 THE IMPORTANCE OF INNOVATIVE APPROACHES IN THE ORGANIZATION OF THE EDUCATIONAL PROCESS AS A CRITERION FOR SELECTING A HIGHER EDUCATIONAL INSTITUTION BY APPLICANT FOR STUDYING AND TEACHERS FOR PROFESSIONAL ACTIVITIES, %

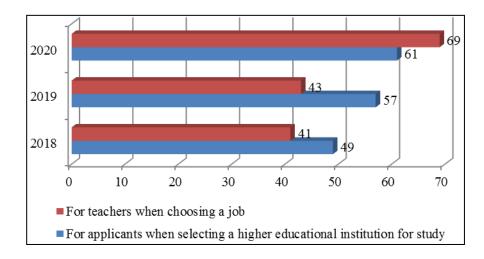


FIGURE 4
ASSESSMENT OF THE EFFECTIVENESS OF APPROACHES TO THE ORGANIZATION OF SEMINARS DURING THE EDUCATIONAL PROCESS AT HEIS FROM THE STANDPOINT OF HIGHER EDUCATION SEEKERS, %

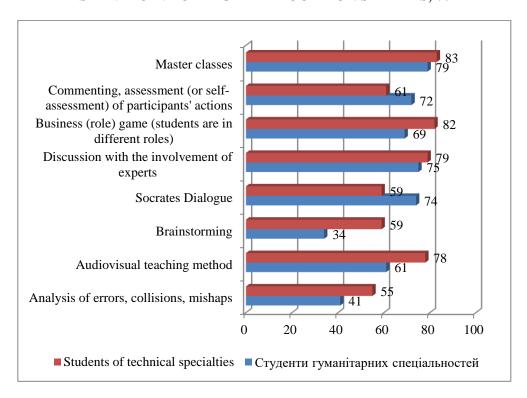
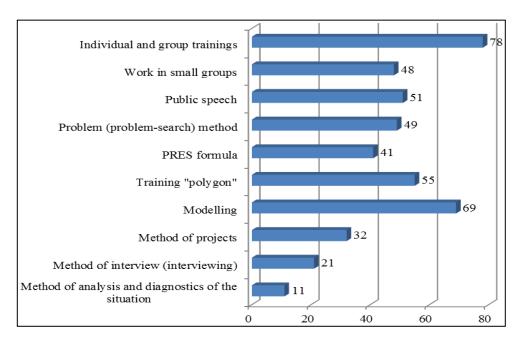


FIGURE 5
DESIRABLE, BUT NOT OFTEN USED APPROACHES TO THE ORGANIZATION OF SEMINARS AND LECTURES DURING THE EDUCATIONAL PROCESS AT HEIS, %



As it can be seen from Figure 2, in general, there is a rapid increase in the percentage of using all innovative approaches without exception, in relation to which the opinion of teachers of higher educational institutions has been studied. By the way, the dynamics of applying information and computer technologies, integration and gaming approaches is especially noticeable. Along with this, particular attention is drawn to the fact of reducing the use of structural and logical technologies in the process of educational activities.

As it can be seen from Figure 3, the availability and activity of using innovative approaches to the organization of the educational process is an important criterion for applicants in the process of selecting a higher educational institution for studying, as well as for teachers when selecting an institution for professional activities. As the survey has showed, the importance of such approaches is increasing from year to year; in particular, in 2022, 69 % of applicants and 61 teachers have assessed this indicator as significant and influencing in their choice of HEIs.

An interesting result of the research was revealed in the process of establishing the difference in the assessments of the effectiveness of approaches to the organization of seminars during the educational process at HEIs by students of technical and humanitarian specialities (Figures 4).

According to the results of survey, master classes, business games, audiovisual methods and discussions with the involvement of experts turned out to be the most effective for higher education seekers of technical specialities. In contrast, for humanitarian students, in addition to the above, commenting and Socrates dialogues are useful.

The opinion of the higher education seekers regarding the desired approaches to organizing seminars and lectures during the educational process in higher educational institutions is also of particular interest (Figure 5).

As it can be seen from Figure 5, public speaking, small group work, and project methods are relatively important preferred approaches to organizing classes.

According to teachers' standpoint, the participants of the educational process increasingly frequently express a desire to more actively use work in small groups and modelling tools.

DISCUSSION

The issue of applying innovative approaches to the organization of the educational process in institutions of higher education is actively discussed in the scientific works of scholars around the world.

In particular, as S. Sysoieva notes, interactive teaching methods make it possible to activate the process of understanding, acquisition and creative consolidation of knowledge by writing practical tasks (Yefremova, 2020).

The technology of experimental interactive learning developed by H. Dean also emphasizes the importance of reflection during the application of interactive methods in the educational process. As the scientist emphasizes, taking into consideration the fact that interactive learning provides the possibility of communication with the teacher and students, cooperation in the process of cognitive and creative activity, then a system of control over the acquisition of knowledge and methods of cognitive activity in various situations, as well as the ability to apply the acquired knowledge can be built on the basis of operative interactive feedback, which monitors knowledge and skills and is more thorough, flexible and humane (Yefremova, 2020).

It should be noted that the interactive construction of self-directed learning technology takes into account the influence of external and internal factors on the educational process, which change it depending on the situation and circumstances. The technology of self-directed learning with orientation to personal responsibility (Personal Responsibility Orientation) developed by Brockett and Hiemstra is the example of hereof (Yefremova, 2020).

In the modern market of educational services, there are innovative methods of active and interactive learning. Taking into consideration the significant growth of the creative component of educational activity, the role of all participants in the educational process is intensified, the creative and exploratory independence of students is stimulated, and the concept of problem-based and interactive learning related to the use of computer systems becomes of particular relevance (Ching & Baldwin, 2018).

A significant number of scientists, such as: Jandrić, Houlden & Veletsianos (2020), consider the concept of "innovative teaching method". This definition is multicomponent, forasmuch as all new and effective ways of learning, in fact, contributing to the intensification and modernization of the educational process, develop a creative approach and personal potential of students, as well as expand the capabilities of the higher educational institution.

The classification of educational technologies suggested by Bates (2019), also deserves to be highlighted. The scientist has grouped them as follows: by direction (to optimize the activities of students and teachers); by the purpose of training; by subject, content and means of the educational process; by technical means used (audio and video, computer technology, etc.); by the way of organizing the educational process (individual, collective) and methodological tasks.

When studying the ways to optimize active teaching methods for higher educational institutions, it is also necessary to pay attention to the social-psychological optimization of the educational process. In concordance with this type of optimization, the main principle is the active position of each participant, as well as the main types of classes that should be built on "feedback", focusing on the expression by each participant of his own opinion on certain issues of the lesson. It is also worth considering the inclusion of active forms of learning in the educational process, in particular, psychological training, which significantly affects the development of professional and personal qualities of the future specialist.

The informatization of the society, being emphasized in the works of Bendahmane, Falaki & Benattou (2019), involves as follows:

- active use of intellectual potential, which is constantly expanding; it is concentrated in the printed fund, the results of scientific, industrial and other activities of its creators;
- integration of information technologies with scientific, production processes, initiating the development of all spheres of social production, intellectualization of labour activity;
- high information service, accessibility of a member of the society to reliable information sources;
- visualization of the presented information, truthfulness of the used data.

Changing policies and social priorities in education have formed a fundamentally new paradigm of education and science – the transition from educating a citizen of the country to educating a citizen of the world, open to people, democratic and responsible, which in terms of the level of education, culture and morality corresponds to the complexity of the globalized world.

The survey conducted within the framework of the present research has proved the importance of applying innovative approaches to the organization of the educational process, outlining the most popular and effective from the point of view of both teachers and students of leading higher educational institutions of Ukraine.

Modern education should prepare a person who can live in a dynamically changing world and perceive its variability as a significant part of his lifestyle. Globalization, transformational processes and the continuous variability of information lead to the fact that the inclusion of a person in the most complex system of social relations requires the ability to make non-standard and quick decisions (Bates, 2020).

Only innovative education can educate a person, who lives in the modern innovative laws of globalization; who is a comprehensively developed, independent, self-sufficient; who is guided in life by his own knowledge and beliefs.

CONCLUSION

Therefore, the conducted analysis has showed that the nature and structure of innovations in the educational process in higher educational institutions should correspond to the nature and speed of social change in the society, high European values in order to create competitive professionals. The modern content of higher education should focus on the use of information technologies, interactive e-learning methods, providing access to digital resources and the practical application of innovative approaches in the educational process.

Taking into consideration today's realities, the educational process is impossible without the use of the latest technologies or, in other words, the intensification of modern teaching methods as a means of enhancing the cognitive activity of higher education seekers.

In the course of the present research, it has been established that currently there is a need for significant changes in educational tools for training highly qualified specialists. The transformation of the educational process should take place through more active use of innovative teaching methods and techniques that allow providing the student not only with a thorough theoretical training, but also with the effective implementation of practical skills.

As a result of the survey conducted, the most effective methods and forms of innovative technologies have been identified, as well as approaches to organizing training in higher educational institutions, while those that require wider application in the organization of the educational process have been singled out.

The present research has made it possible to establish that such types of interactive technologies as Embodied Learning and Learning Through Argumentation proved to be the most effective in terms of improving the efficiency of the organization of the educational process and the quality of the knowledge acquired by education seekers. With the help of the survey, it has been also found that currently, both in the study of humanitarian and technical specialities, the use of such approaches to organizing seminars and lectures as trainings, business process modelling, "training ground" and problem-oriented learning is not active enough. Considering the foregoing, the prospects for further research include a more thorough study of tools and the latest methods in the application of trainings, modelling of business processes and problem-oriented learning during the planning and organization of the educational process, as well as the development of separate methods based on the specified types of organization of the educational process for humanitarian specialities.

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