THE USE OF BLENDED LEARNING INTERACTIVE TECHNOLOGIES IN THE EDUCATIONAL PROCESS IN THE CONTEXT OF EUROPEAN INTEGRATION PROCESSES IN UKRAINE ON THE EXAMPLE OF HUMANITARIAN SPECIALITIES

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Abstract: The article examines the modern specifics of the formation of the use of interactive learning technologies in the process of modernization of the educational process. The changes taking place in the education standards of many countries, which provide for the expansion of teaching methods for students of humanitarian specialties, including due to the intensive implementation of interactive learning technologies, have been determined. The task of training specialists in the conditions of the introduction of modern innovative technologies into the educational process has been defined. The role of the teacher in the process of learning with the use of interactive technologies, as well as the principles of his interaction with students under new conditions, were studied. It is proposed to implement the model of mixed learning in the educational process based on the use of computer-oriented learning tools.

Keywords: Interactive learning technologies, Soft skills, Blended learning, Educational communications.

1 Introduction

Modern world standards in education require the training of highly qualified specialists capable of integrating theoretical knowledge and practical skills into a coherent system, mastering new technologies, etc. For the successful realization of the personal potential of each student in the educational process, conditions must be created for the formation of such personality qualities as mobility, the ability to integrate into a dynamic society, critical thinking, the ability to generate new ideas, the knowledge allowing making non-standard decisions and bear responsibility for them, communicative skills, the ability to work in a team, the ability to model educational situations, etc. The use of interactive learning technologies contributes to the solution of such tasks. New forms of education also develop new relationships between teacher and student, and new subject-subject relationships. Namely the group form of work has gained popularity in educational institutions, as it contributes to personally oriented learning, which requires the development of scientifically based content and methods of organizing the educational process. Therefore, modern pedagogical science is in search of such learning technologies that would ensure the comprehensive development of the individual. As it is known, learning technology is a complete system, the main structural element of which is the learning situation, characterized by such components as the purpose, content, methods, and means of learning, the activities of the subjects of education, the form of organization of the learning process, and technical support.

Therefore, it can be argued that modern tasks of training qualified specialists in the system of higher education are usually solved by introducing innovative interactive technologies into the educational process. Therefore, the specified problem takes one of the first places in the theory of pedagogy and the practice of training students in higher education. At the same time, future specialists must possess a wide range of basic soft skills used in various spheres of life – emotional literacy, critical thinking, coordination and interaction skills, etc. Thus, the relevance of researching the problems of effective implementation of interactive learning technologies in the educational process is quite high at present. In addition, interactive technologies become important in the context of the strengthening of European integration processes in Ukraine after its acquisition of the status of a candidate for EU membership, which requires the adaptation of the national system of training specialists to European requirements.

2 Literature Review

The study of the principles of the use of interactive learning technologies proves that in the world`s leading psychological and pedagogical research and developments there is a sufficiently significant amount of work for reflection and own searches in relation to this issue. At the same time, in most cases, interactive technologies are considered an important component of the entire educational process for students of higher education. It should be noted that modern pedagogy studies and practice develop ways of using interactive learning technologies in the context of educational activity research taking into account the dialogic construction of content and learning technologies themselves and considering it as one of the aspects of pedagogical communication. In this context, it is necessary to note the research of such scientists and practitioners as M. Atkins [1], M. Gysels [4], A. Khan [7], Y. Kolisnyk-Humeniuk [8], L. Lebedyk [10], O. Pavelko [13], R. Tori [19], G. Volpe [21], S. Voloshyna [22], and others

In addition, it is worth noting a number of studies on the application of the most optimal interactive methods of training future specialists based on the organization of the educational process in an interactive mode and increasing the opportunities for an informal discussion. In this aspect, the most relevant are the works of such researchers as I. Balaniuk [2], Y. Chaliuk [3], S. Hennessy [5], M. Kademiia [6], T. Koval [9], N. Lokhman [11], D. Ostapchuk [12], M. Radchenko [14], V. Redko [16], N. Semenyshena [17], M. Violante [20], I. Yakoviyk [24], O. Zubenko [25] and others

At the same time, it should be noted that in modern conditions, when there is a need to adapt the Ukrainian higher education system to the requirements and criteria of the European Union, there is an objective need to improve existing methods of interactive learning based on the implementation of best practices of EU countries.

3 Materials and Methods

The study of the process of introducing interactive and computer-oriented technologies into the educational process was carried out using the following research methods:

- Monographic method, which was used for a comprehensive and deep study of individual phenomena, processes and identification of cause and effect relationships in the educational process. This method is important in the detailed study of individual observations selected as the object of a special study;
- Systems thinking – a direction of research methodology, which consists in the study of an object as a whole set of elements in a set of relations and connections between them, that is, consideration of an object as a system model. This method was used to assess the impact of computer-oriented technologies on the educational process;
- Generalization – a method of scientific knowledge, with the help of which the general features and properties of a certain class of objects are fixed and the transition from singular to general, from less general to more general is carried out;
- Abstraction - a method of scientific knowledge, which consists in mentally highlighting the essential, most essential features, relationships, aspects of the subject. With its help, the formation of interactive images in the learning process was studied.

4 Results and Discussion

Learning technology, as defined by UNESCO, in general terms means a systematic method of creating, applying, and defining the entire process of learning and assimilation of knowledge, taking into account technical and human resources and their interaction, which aims to optimize education. Educational technology is also often interpreted as a field of application for a system of scientific principles to the programming of the learning process and their use in educational practice with an orientation to detailed learning goals that allow for their evaluation. This branch is focused more on the person who doing training, but not on the subject of training, on the verification of the developed practice (methods and techniques of teaching) during empirical analysis and the wide use of audiovisual means in education, which defines the practice in close connection with the theory of education [9].

The accumulated experience of training students in higher education convincingly shows that interactive learning methods significantly contribute to the intensification and optimization of the educational process. In particular, they allow students to:

- Make the process of acquiring knowledge more accessible;
- Acquire the skills of formulating own opinion, expressing it correctly, proving own point of view, arguing and discussing;
- Learn to listen to another person and respect an alternative opinion;
- Simulate different situations, to enrich own practical experience through inclusion in different life situations and experiencing them;
- Learn to build constructive relationships in the group, determine own place in it, avoid conflicts, resolve them, seek compromises, and strive for dialogue;
- Analyze educational information; creatively approach the assimilation of educational material in the learning process;
- Find a joint solution to the problem;
- Develop the skills of project activity, independent work, and creative work [25].

Separately, it is necessary to highlight the latest computer-oriented teaching methods, which belong to the interactive ones, the main purposes of which are used in the process of training students of higher education:

- Development of attention, fantasy, imagination, observation, non-standard thinking, and interest in learning;
- Formation of a multicultural personality;
- Education of systematic, logical, critical, and creative thinking, as well as work capacity, inquisitiveness, cognitive independence, and persistence in achieving the set goal;
- Activation of educational and cognitive activity of students;
- Filling gaps in knowledge, skills, and abilities;
- Development of self-learning skills, self-development, and self-improvement;
- Formation of the ability to think, create, independently acquire and assimilate knowledge, skills, abilities, etc. [9].

As it is known, in the context of interactive learning, knowledge takes on a different form. On the one hand, this knowledge represents certain information about the surrounding world, which students receive not in the form of a ready-made knowledge system, but in the process of their own cognitive activity. On the other hand, in the process of interaction with other students and the teacher, the student masters the system of proven methods of activity in relation to him, society, and the world in general, and learns various mechanisms for finding knowledge in individual, group, or collective work. Therefore, the knowledge acquired by students in this way is at the same time a tool for their independent knowledge acquisition [14].

Thus, the goal of interactive learning can be defined as the teacher`s creation of such learning conditions under which the student himself will discover, acquire, and construct knowledge and his own competence in various spheres of life. This is the fundamental difference between the goals of interactive learning and the goals of the traditional education system currently operating in Ukraine.

During interactive learning, there is mutual learning, where both the student and the teacher are equal, equivalent subjects of the educational process. During interactive training, the teacher acts as an organizer of the learning process and a consultant. Interaction between students and cooperation are the main factors in the learning process. Learning outcomes are achieved through the mutual efforts of participants in the learning process; students take responsibility for learning outcomes. In the process of communication, students learn to solve complex problems based on the analysis of source data, identify contradictions, express alternative opinions, make balanced decisions, participate in discussions; simulate different social situations, and enrich their own social experience through inclusion in different life situations and experience them. They learn to build constructive relationships in the group, determine own place in it, avoid conflicts or resolve them, seek compromises, strive for dialogue, find a joint solution to the problem, and develop the skills of project activity, independent work, the performance of creative works.

It is important to consider that each learning subject needs to use an individual method because some can read by themselves, others – in a group, some need general silence, while others can study in a team. Some prefer the visual presentation, others perceive learning material by hearing, touching, or moving. Some have excellent visual memory and memorize printed text, while others perceive learning more easily in communication in an interactive group. Interactivity is also a characteristic feature of modern information and communication technologies, which contributes to the establishment of subject-subject interaction between the teacher and students based on the activation of processes of empathy, reflection, compassion, etc. Signs of interactive learning are the following:

- Focusing on the needs and self-worth of the individual;
- Prioritizing individuality;
- Cooperation and co-creation between students and teachers;
- Improvement of pedagogical relations [8].

It should also be noted that interactive learning technologies include a planned expected learning result, separate interactive methods, learning tools that stimulate the learning process, mental and learning conditions, and procedures, with the help of which the planned results can be achieved [6]. The essentiality of modern interactive learning technologies lies in determining the most rational of its components to achieve the ultimate educational goal. At the same time, the educational process should be considered comprehensively as an integrated system, and one should not limit oneself only to the analysis of its elements. Therefore, interactive learning technologies represent a holistic and integrative system of the learning process, which, by the goals and content of learning, provides for the complex application of interactive methods, means, and forms of learning selected according to the principles of expediency of implementation and mutual complementation to achieve a pre-planned educational result.

The effective conduct of educational interactions in a mixed form of education depends on the creation of an atmosphere of friendliness and attention to each student. An unconditional rule is an interesting attitude towards students when they feel that the teacher listens to everyone with equal attention and respect for both the individual and his point of view. One of the most difficult problems is reacting to errors [23]. An absolute rule of interactive learning is to refrain from any praise or criticism. At the same time, the teacher should not ignore the illogicality of reasoning, obvious contradictions, unsubstantiated statements. It is necessary to use tactful remarks to clarify statements or given factual data, to support the expressed opinion, and encourage to think about the logical consequence of the expressed ideas. During a long discussion, an intermediate determination of the results of specific interaction is carried out – summarizing the

results of the discussion at the current moment so that the participants can better orient themselves in the directions of further discussion [22].

An effective type of group activity in a mixed form of education is the "Jigsaw" method developed by E. Aronson in 1978. In the created educational situation, students act as a teacher, passing on the learned information to each other. The educational activity is carried out in groups of 6 people to work with certain parts of the educational material, which are combined into blocks according to content and logic. Each member of the group works on his part of the material, and then representatives of different groups that studied the same issue meet and exchange information. Such an exchange is called a "meeting of experts". After that, the "experts" teach their own groups what they learned. In turn, other members of the group similarly process their own part of the material like the 'teeth of the same saw'. Mastering the material and getting a holistic view of the phenomenon being studied is possible only by carefully listening to colleagues and making appropriate notes, so students will be interested in conscientiously performing their own and joint parts of the work. It is interesting that each individual and the group as a whole report on the topic. At the final stage, the teacher offers any group member a question on the topic. All these aspects make it possible to involve and attract to activity even passive students with low motivation or insufficient level of proficiency [25].

At the same time, it is necessary to understand that there are certain difficulties that hinder the instant, quick, and effective application of interactive methods. First of all, studies show that most teachers themselves do not know the content of the methods and ways of organizing students` interactive cooperation. This toolkit still remains new and poorly researched in the domestic Ukrainian didactics of higher education and is not sufficiently used in its practice. In addition, the issue of how to select the interactive methods needed for a particular subject and how to "incorporate" interaction into the forms of classes traditional for higher education in Ukraine – lectures, seminars, workshops – is not sufficiently clarified. Therefore, it is necessary to ensure the gradual transition of the entire system of training students of higher education to EU standards, according to which the interactive learning model involves the use of a technological approach based on a set of interactive technologies, the common feature of which are the principles of interaction: multilateral communication, interaction and mutual learning of students, cooperative educational activities with relevant changes in the role and functions of both students and teachers. Such a model also involves a special understanding of classes in institutions of higher education as a form of education, which is also based on a technological approach.

In today`s conditions, such a technological approach is transformed into a system based on the use of mobile gadgets for learning, with the use of special software applications. All this significantly increases the effectiveness of the educational process, especially in the case of a mixed form of student education. The main advantages of such technological solutions related to the use of mobile devices in the educational process are as follows:

▪ The use of communication channels in order to receive instant consultations;
▪ The possibility of continuous training in the Internet;
▪ Testing and self-monitoring of knowledge;
▪ The use of electronic publications;
▪ The use of audio and video files in the learning process [6].

Thus, interactive learning not only provides knowledge, skills, methods of activity, and communication skills, but it is a necessary condition for establishing and perfecting professional competence (competence as a proven readiness to act) by involving the students in the educational process in the deliberate maintenance of individual and collective activities for the promotion of knowledge, awareness, and adoption of values.

On the other hand, since interactive learning provides the possibility of communication with the teacher and students on learning, co-competition in the process of cognitive and creative activity, then the system of control over the acquisition of knowledge and methods of cognitive activity, the formation of the ability to apply the acquired knowledge in later situations can be built on the basis of operative feedback, which makes the control of knowledge, skills, and abilities permanent and more flexible and humane [18].

In general, it can be stated that the use of computer-oriented tools in the learning process increases interest and general motivation due to new forms of work and involvement in the priority direction of scientific and technical progress. It implies activation of training thanks to attractive and rapidly changing forms of information presentation, individualization of training, prompt access to information. The use of computer-oriented learning tools significantly increases the intensity of the educational process and allows covering a significant amount of educational material, which is assimilated more effectively thanks to positive motivation.

It should also be noted that computer-oriented learning tools are of leading importance not only as an element of the interactive learning system but also as a key element of distance learning, which is used in its mixed form and has gained special relevance in recent years. At the same time, the introduction of the blended learning model into the educational process based on the use of computer-oriented learning tools is based on:

1. Usage multimedia and virtual resources when working in the classroom.
2. Usage of created sites to support blended learning.
3. Usage of course management systems.
4. Usage of synchronous and asynchronous discussions [15].

Therefore, the use of a mixed form of education in the educational process can become one of the key directions of modernization of education in higher education institutions, as it opens up wide opportunities for independent work of students under the guidance of a teacher, promotes the development of an independent creative activity, stimulates the acquisition of additional knowledge and their consolidation, which gives the opportunity to train competitive specialists based on the integration of new interactive learning technologies in the process of training future specialists.

5 Conclusion

Thus, we come to the conclusion that interactive learning technologies represent a holistic and integrative system of the learning process, which provides, in accordance with the learning goals, the most rational application of interactive methods, techniques, means, and forms of learning selected according to the principles of communicativeness, the expediency of implementation, and mutual complementation in order to achieve in advance planned learning outcome. Hence, the use of interactive technologies in the educational process of higher educational institutions enables:

▪ Increasing the effectiveness of classes and students` interest in future professional activities;
▪ Developing communication skills and abilities, forming emotional contact between students;
▪ Forming analytical abilities and a responsible attitude to one`s own actions;
▪ Forming students` planning skills;
▪ Ensuring the formation of self-control and self-assessment skills in students of higher education.

The expected result of such a process of forming students` skills, when using interactive learning methods, should be a conscious mastery of the method of organizing interactive learning. Also, such activity significantly contributes to the more effective form of professional competence of future specialists in general.

Literature:

1. Atkins, M. J. (1993). Evaluating interactive technologies for learning. *Journal of Curriculum Studies*, 25(4), 333-342.
2. Balaniuk, I., Kyrylenko, V., Chaliuk, Yu., Sheiko, Yu., Begun, S., & Diachenko, S. (2021). Cluster analysis of socioeconomic development of rural areas and peasant farms in the system of formation of rural territorial communities: a case study of Volyn region, Ukraine. *Scientific Papers Series "Management, Economic Engineering in Agriculture and Rural Development"*, *21*(3), 177-188.
3. Chaliuk, Y., Dovhanyk, N., Kurbala, N., Komarova, K., & Kovalchuk, N. (2021). The digital economy in a global environment. *AD ALTA: Journal of Interdisciplinary Research*, *11,* Special issue XVII, 143-148.
4. Gysels, M., & Higginson, I. J. (2007). Interactive technologies and videotapes for patient education in cancer care: systematic review and meta-analysis of randomised trials. *Supportive care in cancer*, *15*(1), 7-20.
5. Hennessy, S., Dragovic, T., & Warwick, P. (2018). A research-informed, school-based professional development workshop programme to promote dialogic teaching with interactive technologies. *Professional Development in Education*, *44*(2), 145-168.
6. Kademiya, M. (2013). Use of interactive learning technologies. *Theory and practice of social systems management*, *3*, 125-132.
7. Khan, A. W., & McWilliams, P. (1998). Application of interactive technologies in open and distance learning: An overview. *Indian Journal of Open Learning*, *7*(1), 7-21.
8. Kolisnyk-Humenyuk Yu. I. (2013). Modern interactive learning technologies. *Pedagogy and psychology of professional education*, *5*, 118-124.
9. Koval T. (2011). Interactive technologies for teaching foreign languages in higher educational institutions. *Continuous professional education: theory and practice*, *1*, 86-92.
10. Lebedyk L. V., & Strelnikov, V. Yu. (2020). Interactive technologies for training future specialists in the field of social work. *The image of a modern teacher*, *4*(193), 49-53.
11. Lokhman, N., Beridze, T., Baranik, Z., Cherep, A., Dashko, I., & Hamova, O. (2022). Economic and mathematical modeling of the functioning of an industrial enterprise. *Financial and Credit Activity Problems of Theory and Practice*, *2*(43), 182–191.
12. Ostapchuk D. & Myronchuk N. M. (2014). Interactive methods of learning in higher educational institutions. *Modernization of Higher Education in Ukraine and Abroad*, *8,* 140-143.
13. Pavelko, O., Lazaryshyna, I., Dukhnovska, L., Sharova, S., Oliinyk, T. & Donenko, I. (2021). Construction Development and Its Impact on the Construction Enterprises Financial Results. *Estudios de Economia Aplicada*, *39*(3).
14. Radchenko, M. A. (2014). Interactive learning technologies in the professional formation of future specialists. *Pedagogy of creative personality formation in higher and secondary schools*, *34*, 299-306.
15. Rafalska O. O. (2013). Mixed learning technology as an innovation of distance education. *Computer-integrated technologies: education, science, production*, (11), 128-133.
16. Redko V. (2011). Interactive foreign language learning technologies. *Native school*, (8-9), 28-35.
17. Semenyshena N., Khorunzhak N., Lazaryshyna I., Yurchenko O. & Ostapenko Yu. (2021). Accounting Institute: on the Genesis and Impact of Management Revolutions. *Independent Journal of Management & Production*, *12*(3), 243-261.
18. Sysoieva, S. (2010). Interactive technologies for adult education. *Native school*, (11), 3-8.
19. Tori, R., Nakamura, R., Nunes, F., Bernardes Jr, J. L., Ferreira, M. A., & Ranzini, E. (2011). Interlab: interactive technologies laboratory. *SBC Journal on Interactive Systems*, *2*(2), 94-97.
20. Violante, M. G., Vezzetti, E., & Piazzolla, P. (2019). Interactive virtual technologies in engineering education: Why not 360° videos?. *International Journal on Interactive Design and Manufacturing (IJIDeM)*, *13*(2), 729-742.
21. Volpe, G., & Gori, M. (2019). Multisensory interactive technologies for primary education: From science to technology. *Frontiers in psychology*, 10, 1076.
22. Voloshyna, S., Provolotska, O. Lazaryshyna, I., Nieizviestna, O. & Skliar, N. (2019). Analytical assessment of the jewellery market in Ukraine. *Economic Annals-XXI*, *176*(3-4).
23. Vorobyova, O., Horokhova, M., Iliichuk, L., Tverezovska, N., Drachuk, O., & Artemchuk, L. (2022). ISO Standards as a Quality Assurance Mechanism in Higher Education. *Revista Romaneasca Pentru Educatie Multidimensionala*, *14*(2), 73-88.
24. Yakoviyk, I., Chyzhov, D., Karpachova, N., Hlushchenko, S., & Chaliuk, Yu. (2020). National security policy in Ukraine: a change in the system of power relations of the modern world. *Revista San Gregorio*, 42, 224-235.
25. Zubenko O. V., & Medvedeva, S. O. (2008). Interactive learning technologies for learning foreign languages at a technical university. *Bulletin of the Vinnytsia Polytechnic Institute*, 119-122.