

INTERACTIVE METHODS AS A FORM OF EDUCATION AT THE POST-GRADUATE STAGE OF SPECIALIST TRAINING WITH A MIXED FORM OF EDUCATION**Trefanenکو I.,***associate professor, candidate of medical studies,
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<https://doi.org/10.5281/zenodo.11640079>***Abstract**

Modern information technologies open up new perspectives for increasing the efficiency of the educational process. The rapid introduction of information and communication technologies into the educational process contributes to developing new perspectives in the continuous professional development of a specialist of any profession. Given the working conditions of higher education institutions in the last year (long-term quarantine related to the COVID-19 war), there should be changes in the traditional models of providing educational services and their improvement and modernization.

Interactive tasks are an integral part of modern education, which enables teachers and students to receive certain information in a systematic, mobile, and convenient way. Innovative technologies in education, in particular, are used in the process of studying various disciplines.

The essence of interactive learning is that the educational process in institutions takes place under the condition of active and constant interaction of all participants. That is, both the student and the teacher are equal subjects of learning. This combines learning and mutual learning (collective, group, or cooperative learning).

Therefore, the modern educational process is organically transformed into the so-called "mixed learning model."

The very paradigm of education is changing. Considerable attention is paid to active learning methods, self-education, and distance education programs. Information and communication technologies open vast opportunities for distance learning. Distance education, in general, is formed based on the principles and features of traditional forms of education. However, in addition to them, new features have been added, which consist of the use of Internet technologies for access to educational materials, interactive interaction between students, etc. Since the beginning of 2020, all educational institutions in Ukraine have switched to distance education. Therefore, today, universities face questions related to the choice of application programs, interactive learning methods, and online resources specifically for distance education. Edmodo and MOODLE online platforms can be used to develop educational and teaching-methodical material for working with students and cadets of postgraduate education (PDO). They allow you to place your electronic educational materials, provide access to them, and use the developments of other authors without violating copyright. However, each of these platforms has its advantages and disadvantages. Online services Edmodo and MOODLE allow you to individually approach the choice of the form of conducting distance learning for the development of the cognitive activity of students and cadets of vocational education and training, improve the quality of knowledge, and contribute to the development of independent knowledge acquisition skills.

Keywords: blended learning, interactive learning, Internet platforms.

The rapid development of information and communication technologies and their significant potential in almost every sphere of modern man's life has been rapidly changing the learning processes of all population segments for a long time. Starting from the school desk, today's people can only imagine themselves with the Internet. The latter has become another dimension of humanity's existence. The rapid introduction of information and communication technologies into the educational process contributes to developing new perspectives in the continuous professional development of a specialist of any profession. Given the working conditions of higher education institutions in 2020 (long-term quarantine related to COVID-19), there should be changes in the traditional approaches to providing educational services, as well as their improvement and modernization. Therefore, the modern educational process is organically transformed into a

"mixed learning model." Blended learning means a purposeful process of acquiring knowledge, abilities, and skills, which educational institutions of various types carry out within the framework of formal education, part of which is implemented in a remote mode with the help of information and communication technologies and technical means of learning, which are used to store and deliver educational material, implementation of control measures, organization of interaction between subjects of the educational process (consultations, discussions), during which self-control of the pupil (student) takes place in terms of time, place and pace of learning [1].

Therefore, it is interactive learning that helps to combine all types of learning. Interactive tasks are an integral part of modern education, which enables teachers and students to receive certain information in a systematic, mobile, and convenient way, using innovative technologies in education, particularly when studying

various disciplines, as it simplifies the absorption of information.

The essence of interactive learning is that the educational process in educational institutions takes place under the condition of active and constant interaction of all participants. That is, both the student and the teacher are equal in learning subjects by interpreting, absorbing, and sharing knowledge with each other. This makes any study activity more comprehensive, as it becomes a combination of learning and mutual learning (collective, group, or cooperative learning).

The word "interactive" comes from the word "interact," where "inter" means mutual and "act" means to take the initiative. So, interactivity is the ability to interplay and dialogue. Interactive learning is a special form of organizing cognitive activity with a clear, defined, predictable goal—to create learning conditions under which each student feels his success, individuality, and intellectual ability.

The described conditions require the search for such a form of education that creates comfortable learning conditions under the dynamism of the learning process itself and the flexibility of achieving the goals set by the subject of the lesson. This problem is partially solved by interactive learning. Interactive learning is a specific form of organizing cognitive activity with a predictable goal - to create comfortable learning conditions under which each student feels their intellectual ability and success [2].

Today, the use of Internet services to create interesting didactic materials on any topic using texts, images, video, and audio files, including interactive ones, is gaining popularity. These services have become a convenient tool for creating electronic support for a lesson, class, or distance course. They provide an opportunity to collect all the necessary resources for a lesson or class: files, websites, google documents, embed the necessary files, and online exercises. The developed tasks can be posted on the blog after receiving the appropriate code, and creating a QR code for the lesson can be sent and posted on social networks. The advantages of interactive didactic materials over traditional ones are their clarity, accessibility, creativity, the use of a computer or laptop instead of books, which is more convenient in the modern world, the use of different types of files (audio, video, graphic, etc.) that help to keep different aspects of students' attention focused, as well as various types of exercises that promote the development of student's interest, cognitive activity, informational and communicative competences. Therefore, this altogether supports and enhances a better process of information assimilation.

Considering the origin of the word "interactive" (capable of interaction and dialogue), it can already be concluded that this way of learning promotes a better learning environment. The basis of it is the organized, creative cooperation of equal individuals. All cadets and the teacher actively interact with each other, analyze their actions and the actions of other participants in the educational process, and change their behavior model. At the same time, the cadets and the teacher are equal and equivalent subjects of education. During in-

teractive training, the teacher is an organizer and consultant of the learning process. The teaching process turns into self-learning, which is controlled by the teacher and realized by the cadet [3].

Using interactive learning techniques, one cannot avoid online lessons that become an essential part of any educational activity. Online lessons can be held using on-stream services in institutions of higher education. This will be about algorithms and communication between teachers and students or students during distance learning, as well as a set of services and the specifics of their use for teachers, including Google Classroom, Microsoft Teams, Cisco Webex, Zoom, Edmodo, MOODLE, and many others. Each of them has its advantages and disadvantages. Here are some of them.

Google Classroom is a free web service created by Google for educational institutions to simplify the creation, distribution, and classification of assignments in a paperless way. The service's main purpose is to speed up the process of sharing files between a teacher and a student. Google Classroom combines: Google Drive for creating and sharing assignments, Google Docs, Sheets and Slides for writing, Gmail for communication and Google Calendar for scheduling. Students can be invited to the group through a private code or automatically imported from the university website. Each group creates a separate folder on the Google Drive of the corresponding Google Drive user, where the work evaluated by the teacher can be submitted. The mobile apps, available on iOS and Android, allow users to take photos and attach them to tasks, share files from other apps, and have offline access to information. The teacher can track each student's progress, and after grading their work, the teacher can return it with comments.

Microsoft Teams is a hub for teamwork in Office 365 from Microsoft that integrates the users, content, and tools a team needs to work more effectively. The application brings everything together in a common work environment that includes chat for meetings, file sharing, and corporate applications. It is designed for smartphones running on Android, iOS, and Windows Phone platforms and computers with Windows 10 S, Windows 7+, or Mac OS X 10.10+ operating systems.

Classmate is an online service for instant tests that can be taken both during class and for homework. After switching to the tab, you get to the working cabinet, which will be empty at first. You can add a virtual group by clicking the "+" button in the upper right corner. After filling in the name of the group, you immediately get the opportunity to add students to it by sending a code generated by the program or a link (to e-mail). You can add up to 250 people to Google Classroom, including students and other teachers.

Zoom provides an unlimited number of conferences, meetings and webinars. Its advantages: video and audio quality, streaming video with a resolution of 720p. Any member can share their screencast. The administrator (presenter) can select several participants to show screens simultaneously; commenting is available. After the meeting, video is available in MP4 format, audio in M4A format, and text messages (chat) are also

saved. Recordings can be saved to your computer or to Zoom's cloud storage. Mobile devices: The ability to plan and start events, provide access to the event, and broadcast the desktop on mobile devices. Event planning from Outlook and Chrome, the ability to create events from Outlook and Google calendars using free plugins. Zoom easily integrates with various scheduling systems, making it easier for users to coordinate meeting times with each other. There is an opportunity to increase the number of participants to 500.

To use the program, it must be downloaded. On the website, you need to enter your e-mail address, to which the letter will be sent. The link will take you to the registration page. You can immediately enter the mail of colleagues and friends and invite them to a video chat. Next, the program will generate a personal link, after clicking on it, the service will be automatically installed on your computer. The interface is quite simple and convenient, the program icon will be automatically pinned to your taskbar.

Today, higher education mainly uses interactive methods such as training, situational tasks, master classes, press conferences, testing, case methods, game learning, round tables, multimedia lectures and practical classes, and electronic educational publications. All this helps to form the professional potential of future specialists [4].

Interactive learning in the structure of mixed learning helps create educational materials for visual demonstration of educational information; store them on specially designated resources, with the possibility of quick access to them; control and correction of knowledge and skills acquired during training; build an individual scenario of conducting a lesson; access information from various Internet resources on personal mobile devices at any time. Internet services provide an opportunity to use, process, and transfer data regardless of the specialist's location while ensuring communication between the participants of the educational process [5].

Let's give an example of a lesson in the cycle of thematic improvement:

Round table (group discussions) on "Emergency care for pulmonary edema of various etiologies." The teacher's mini-presentation on the main points of the topic will use multimedia Internet presentations (Prezi, SlideShare, SlideBoom, PowToon, Emaze, Prezentit, Menti, etc.). Division of cadets (students) into groups in separate rooms of the electronic platform. Distribution of assessment cards to groups. The groups are invited to prepare pre-suggested questions according to the topic (different forms of pulmonary edema) in the form of an online poster, business card, or video message (Glogster, VectorPaint, ThingLink, etc.). After the performance of each group, the rest of the cadets and the teacher ask questions. After the discussion of the reports, a unified approach to the management and treatment of patients by topic is formed, simultaneously

involving Internet administrative resources with instructions, protocols, orders and recommendations of societies of Ukraine, Europe and America (Jamboard, Padlet). Separately, you can offer to prepare an exciting case from practice to consolidate the topic visually. It is also suggested that the final test be passed on such platforms as Edmodo.com, Quizlet.com, Kahoot.com, Moodle.com, etc. The teacher summarizes, makes comments, and argues his conclusions.

Therefore, using various forms of interactive education is a promising way to ensure the introduction of blended learning into the activities of higher education institutions, especially for the continuous professional development of specialists, including doctors and pharmacists.

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