

6.2 Current realities and problems of distance education in medicine

The global process of transition from an industrial to an information society, as well as socio-economic changes taking place in Ukraine, require significant changes in many spheres of the state's activity, and primarily in education. Due to the development of global information networks and the possibility of obtaining almost any information, specialists in narrow areas of knowledge do not need to be "tied" to powerful university centers. Studying in them in traditional ways (direct attendance of practical classes and lectures), especially for residents of foreign countries, is quite expensive [269].

Reforming education also applies to medicine. The need to change the medical education system is additionally dictated by two factors: an exceptional increase in the amount of medical knowledge and a rapid change in the very understanding of events, facts, and phenomena.

The informational educational space, in turn, determines the need to support new requirements. Among them, advanced didactic support, high cost-effectiveness and ergonomics, creation of a virtual learning environment are distinguished. Informational decentralization of education is of particular importance. It contributes to the actual solution of problems related to ensuring social equality, namely the creation of equal opportunities for receiving medical care and medical education, regardless of the place of residence, as well as health's condition and social status. Educational technologies in medicine, which ensure the virtualization of the educational process, have received the name "distance medical education (DME)", and the remote provision of medical care – "telemedicine" [270, 272].

It is claimed that it is possible to receive education or telemedicine services in medical centers, educational institutions, diagnostic centers in any city of Ukraine or in another state, without leaving the place of residence. Another process is quite possible — the provision of educational services to foreign citizens and compatriots living abroad. At the same time, the role of the teacher is fundamentally changing. Distance education expands and renews the role of the teacher, makes him a mentor-consultant who must coordinate the cognitive process, constantly improve the courses

he teaches, increase creative activity and qualifications in accordance with innovations and innovations [272].

Results of the analysis of educational institutions

The main goal of the creation of the DME and telecommunication networks (TN) is to ensure nationwide access to medical resources through the use of modern information technologies and telecommunication networks and to provide conditions for citizens to exercise their rights to education and remote patient consultations in cooperation with Ukrainian and foreign clinics [271].

TN arose due to the development of computer technology and telecommunication technologies. Its main positive quality is the possibility of bringing highly qualified medical care to hard-to-reach areas. One of the leaders in the creation of distance learning technologies and TN in Shupyk National Healthcare University of Ukraine, whose employees have significant experience in organizing similar training courses.

The results of the analysis of the activities of educational institutions that use distance technology in medical education show the effectiveness of the use of new information technologies to ensure the continuity and continuity of education, openness and an individual approach to the educational process (there is an opportunity to "fix" the student on one place of study), centralization of education with a center of education on the basis of the main educational institution and territorially remote educational and consulting points, provision of knowledge control in remote mode (the certification procedure itself and identification of "weak spots" in knowledge is facilitated), provision of tutoring in education, prompt recovery methodical support of the educational process, since obtaining methodical materials on electronic media is easier to keep up-to-date [269, 271].

Despite the rather voluminous list of positive qualities of distance education, as in any other form of education, several disadvantages can be identified in it. First of all, it is difficult to identify remote students, because at the current stage of technology development, it is quite difficult to check who exactly is taking the exam. However, universities that provide the opportunity to study on distance courses have found a way

out of the situation in the mandatory presence of a student at several exams at a higher educational institution. At the same time, it is mandatory to provide documents confirming the identity.

The next factor that is difficult to take into account when organizing distance learning in the medical field is educational standards. They should contribute to the verification and control of educational results, as well as the search for optimal ways of achieving these results. Therefore, when developing remote programs, it is necessary to create conditions for information provision of consumers at the level of the country as a whole, individual regions and educational institutions in particular. The latter is important because, despite the importance of national standards, they are only normative guidelines invariant to this level of education as a whole. In the conditions of the differentiation of educational institutions, the emergence of alternative educational institutions, as well as taking into account the regionalization of education and the strengthening of the independence of each educational institution, the standards of education at a specific level, for example, an educational institution, are of particular importance [270].

At the same time, it is worth considering the main requirement: achieving the same goal, obtaining the same expected result can be done in different ways. This is the idea of alternative and differentiating education, and educational standards should contribute to the creative search for the most effective and fundamentally different methods of educational activity.

The next problem of the effective implementation of distance learning is the adequacy of the assessment of the acquired knowledge. In recent years, the concept of computer testing has significantly spread in the issue of assessing the level of knowledge of those who are being taught. The simplest example of such an approach is the use of very common one-step tasks built according to an alternative type. They constitute a condition with a description of a complex of symptoms and a limited set (three to five) of diagnosis options, from which one must be chosen (at the same time, it is not always possible to choose distracters in such a way that the effect of choosing the answer "from the opposite" does not work) [272] .

One of the solutions to this problem is the application of the idea of computer simulation. The main content of the game simulation is to educate the doctor in the practical skill of error-free differential diagnosis of clinically similar diseases, timely establishment of a reliable diagnosis and optimal treatment of the patient in the shortest possible time [269].

An example of a comprehensive approach to assessing the knowledge of trainees and students can be the experience of the Department of Therapy and Family Medicine, Faculty of Postgraduate Education, Ivano-Frankivsk National Medical University.

The quality of education in a specific discipline or major in general at the department is proposed to be determined by evaluating the results of the work of each trainee (student) for a certain period. At the same time, the goal is to evaluate the acquired theoretical knowledge, the degree of development of creative thinking, the acquisition of independent work skills, the ability to synthesize the acquired knowledge and apply it to solving practical problems. Also, when developing the criteria for evaluating the quality of training, three main components are taken into account: the level of knowledge, the skills of independent work, and the ability to apply knowledge in practice. When developing these criteria, a unified approach in interpreting the content of each of the three components is provided.

When determining the content of the concept of "level of knowledge", the teachers of the department take into account the depth and duration of knowledge, the level of thinking, the ability to synthesize knowledge from individual topics, the presence of a structural analysis of the educational material, the ability to make a detailed answer plan, give precise formulations, correctly use the conceptual apparatus, mastery of skills and methods of performing practical tasks.

When checking the skills of independent work, taking into account the profile of a specialist, in accordance with modern ideas, the skills of finding the necessary literature, orientation in the flow of information from the chosen profession, knowledge of the main types of literature, reference publications, skills of searching for literature in libraries, skills of research work are included. However, the main conclusion is that the clinical experience necessary for the final formation of a doctor, his intuition cannot

have an exact quantitative expression. Therefore, it should be recognized that both the preparation and the overall assessment of the doctor's preparation are always relative, regardless of the form of education – on-site or distance. In turn, this means that with insufficiently high-quality education, it is not the form that is important, but the informational content and presentation of the material.

The National Academy of Sciences has special requirements for the formation of a contingent of students, primarily depending on work experience in the specialty and the speed of assimilation of new material. Even within each contingent there are its own problems. For example, by assembling groups based on one period of professional activity, it is difficult to achieve homogeneity in terms of the level of intellectual development, attitude to professional activity, and motives for obtaining new information. In addition, the use of computer systems imposes special requirements on the participants of the educational process regarding the knowledge of computer telecommunication technology. They must be able to enter the network; compose and send a text message; structure the received message into special folders; use remote databases; to join electronic conferences, post their own information there, etc. [272].

The characteristic features of distance learning are:

1. Interactivity of training: interactive capabilities are used in the system of distance learning programs and information delivery systems, allow to establish and even stimulate feedback, provide dialogue and constant support, which are not possible in most traditional training systems;
2. Flexibility of education for students receiving distance education in choosing an educational institution, place and time of study. Students have the opportunity not to attend classes, but study at a convenient time and place;
3. The distance education program is based on the modular principle, which allows to form a curriculum that meets the needs of students from a set of independent courses-modules;
4. Individualization of education, which allows to implement an individual educational program and an individual educational plan for the student. You can

independently choose the sequence of studying subjects based on an individual schedule;

5. The cost-effectiveness of distance learning is manifested in the effective use of training areas and technical means, concentrated and unified presentation of information, the use and development of computer modeling, which leads to a decrease in the costs of training specialists; as well as the absence of the problem of purchasing educational materials and textbooks;

6. The use in the educational process of new achievements of information technologies, which contribute to the departure of a person to the global information space, which ensures technological learning;

7. Information security of distance learning is characterized by the fact that students get access to a set of necessary educational materials in a modern electronic form directly from the server of the higher educational institution where they study, other universities and Internet resources. Modern computer telecommunications are able to provide knowledge transfer and access to a variety of educational information at the level, and sometimes much more efficiently, than traditional means of education;

8. The quality of distance education should be of a high level, not inferior to the quality of face-to-face education. This is achieved by preparing didactic teaching aids, the development of which involves the best professors and teaching staff and uses the most modern teaching and methodical materials;

10. Concurrency of distance learning – it is carried out simultaneously with professional activity or with training in another field of training, that is, without separation from production or another type of activity. It is also possible to simultaneously study at a Ukrainian and foreign university;

11. Openness and objectivity of the assessment of students' knowledge, its independence from the teacher, since modern computer technologies and appropriate programs for issuing grades according to the ECTS scale are used;

12. High self-organization of students, which increases creative and intellectual potential, the desire to acquire knowledge, the ability to interact with computer equipment and master the latest information technologies.

Problems of distance education

Among the important problems of the distance form of education in Ukraine, it is also worth highlighting the insufficient direct contact between a personal teacher (tutor) and a distance student due to the extraordinary professional workload of domestic teachers. Students of foreign distance courses can receive answers to their letters in a few hours, since there are far more teachers than students in countries with significant experience in the implementation of distance education. Unfortunately, the opposite situation has developed in Ukraine – there are many people who want to receive distance education, but there are not enough experienced teachers who are familiar with the latest technologies of distance communication [270, 272]. In addition, a rather significant problem is the low bandwidth of the electronic network during educational or examination teleconferences. First of all, distance students from small towns of Ukraine suffer from this, for which, in fact, distance education is most suitable due to the geographical distance from scientific centers. An even more complex problem that cannot be ignored today is the protection of the copyright of course developers. The issue of certification of training courses remains open.

In our opinion, the main problems of distance education organization are the following. The effectiveness of distance learning directly depends on those teachers who work with students in the Internet space. These should be teachers with universal training who possess modern pedagogical and information technologies, psychologically ready to work with students in a new educational and cognitive network environment.

Another problem is the infrastructure of student information support in networks. The question of what the structure and composition of the educational material should be is decided by a specific higher educational institution.

A methodological problem is the lack of methods for creating and using distance courses in the educational process based on modern pedagogical, information and communication technologies. This task is solved by teachers and developers of distance learning, who must professionally master all modern innovative technologies for creating electronic content.

One of the most important in modern conditions is the psychological-pedagogical problem. It is connected with the fact that every university teacher polishes his methodical materials over several years of work, which are individually developed on the basis of his own pedagogical and scientific-methodical experience and are his intellectual property. The distance course is taught on the WEB-portal, which makes it publicly accessible not only to students, but also to other users. There is a psychological barrier to the development of teaching and methodical materials, as they can be used by someone else who did not participate in this development. In this regard, the problem of protecting intellectual property rights of the teacher – the developer of the distance course must be solved. The technical problem arises due to the lack of technical communication capabilities of users, the absence or low speed of Internet access, the absence or high cost of software, and even the lack of personal computers among students living in rural areas. At the same time, the technical base of the university's classroom fund is not in line with the needs, the equipment with modern computer technology is insufficient. This limits the possibilities of distance learning in some higher education institutions.

Conclusions

In general, distance education in Ukraine does not meet the requirements of the information society and does not ensure Ukraine's full entry into the international educational space. In order for the distance learning system to occupy a worthy place in the education system of Ukraine, it is necessary, first of all, to create a global computer network of education and science, since it is the computer that makes it possible to receive educational material, it is at the same time a library, a reference information center, and a communication center, which makes it one of the participants in the implementation of the continuous education program in Ukraine.

Further improvement of the process of distance education requires the search for ways of qualitative identification of students, opportunities to take into account educational standards in view of regional features, the choice of qualitative and comprehensive assessment methods, ways to reduce the workload of medical teaching staff, and ways to protect copyright.