

OPPORTUNITIES FOR APPLYING NEW TEACHING METHODS IN MEDICAL UNIVERSITIES IN CONDITIONS OF THE DISTANCE LEARNING

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Abstract. *This article is devoted to the application of new teaching methods in medical universities in the context of distance learning. The distance form of the educational process is based on the principle of independent learning, in which students are distant from the teacher both in space and time. At the same time, students have the constant opportunity to maintain constant information contact with teachers using modern Internet technologies - Internet platforms, means of communication, social networks. A feature of distance learning is its ability to meet the needs of the learner, thanks to a mobile, interactive form of learning.*

Keywords: *higher education, COVID-19, pandemic, depends.*

Actuality: Changes in modern life caused by the COVID-19 pandemic dictate the need for restructuring not only in the healthcare system, but in the education system. It is known that the development of modern information technologies expands the range of educational opportunities. Consequently, the effectiveness of distance learning directly depends on the quality of the materials used and the skill of the teachers involved in the pedagogical process. Therefore, the pedagogical, meaningful organization of distance learning (both at the stage of course design and in the process of using it) is a priority. To implement distance learning, the teacher must be proficient in teaching methods, help students master the capabilities of the on-line platform (conducting lectures, seminars, practical classes, meetings of student scientific circles, olympiads, conferences) and the necessary software. The teacher needs to develop discipline and skills in students to meet deadlines for completing assignments, and carry out timely assessment of student work.

The term “innovation” has become increasingly applied to higher education. It implies a set of measures used in higher education in Uzbekistan [2].

Medical universities provide training for doctors, which includes mastering various medical procedures, maintaining medical records, acquiring the skills to communicate and examine a patient, etc. is conducted in a classical, full-time form of education. Skills and abilities are mastered through practical classes.

In connection with the emerging unfavorable epidemiological situation, in order to reduce the risks of the spread of the COVID-19 coronavirus, the need arose to use new technologies in teaching university students, namely distance learning [1]. This led to the transition of all universities in our country completely to e-learning using distance learning technologies (DLT). At the Tashkent Pediatric Medical Institute, distance learning is a cognitive and social process, rather than a process of transmitting information via the Internet. Contact work between the teacher

and the student is carried out through dialogues in real time on the Zoom cloud platform; independent work - using email, social networks, instant messengers (WhatsApp, Viber, vk.com.), as well as completing tasks on the Moodle platform.

In contrast to many theoretical disciplines of the curriculum in the specialty “Pediatrics”, “General Medicine”, “Faculty of Medicine and Pedagogy” and (1-3 year), the subjects taught at the departments require students to master practical skills (this is 70% of the volume studied disciplines).

The current system of studying clinical disciplines using DLT should not, in our opinion, affect the quality of training of future medical specialists. This requires teachers of departments to use innovative approaches in the educational process, especially in teaching practical skills.

The purpose of study. Familiarization with innovative teaching methods in medical universities and their application in practice, exploring the features of using interactive teaching methods using situational tasks in working with students in distance learning.

Methodology and materials. In the course of this study, an analysis of domestic literature was carried out on the topic of new teaching methods and their application in teaching medical students.

Results and its discussion. Currently, there are many innovative approaches to studying the proposed material. Training should primarily be aimed at developing abstract and logical thinking in students, assimilation and subsequent application of knowledge [1,2,3].

The student must not only gain knowledge and master the skills that are presented to him, but also independently search for material for subsequent assimilation and discussion with the teacher. The above characterizes the method of “problem-based learning” [5,7]. It is based on a combination of inductive and deductive methods of organizing mental activity with immersion in the root of the problem and determining consequences and goals. Problem-based methods are methods based on the creation of problem situations and active cognitive activity of students. The essence of the method is to find solutions to posed questions that require systematization of knowledge and the ability to think logically and abstractly. The main link in problem-based learning is the modeling of a problem situation. This term is understood as a mental state of intellectual difficulty that appears in a student when, when solving a certain problem, he is not able to explain a new fact with previously existing knowledge or perform an already known action in the same way. The goal of problem-based learning, in addition to mastering the basics of science, is the process of developing the creative and cognitive abilities of students [4, 5].

Theoretical departments have many years of experience in using situational tasks as part of practical classes. However, in the context of distance learning, the relevance of using this form of work has increased. At the same time, the ability to post tasks and answers on the MOODLE platform contributes to a person-centered approach to students, allowing them to work at a comfortable pace, present answers in a convenient form, and stimulates the creative process and cognitive activity. The updated bank of situational problems in general microbiology that we have developed allows students to systematize their acquired knowledge, developing imaginative and logical thinking. Students are asked to fill out tables, depict answers to individual questions in the form of drawings and diagrams, and illustrate their answer with examples.

One of the tools for implementing a competency-based approach when mastering disciplines is the use of tasks formulated in the form of problem situations, in order to solve which, the student needs to demonstrate personal qualities using relevant knowledge and skills on the

topic being studied. This type of situational tasks is widely used by us within the framework of teaching subjects. After an oral discussion of the topic in accordance with the control questions, students are asked to apply the acquired knowledge to solve a clinical situation. During active cognitive activity, the student must choose the optimal method for laboratory diagnosis of the disease, justify his decision, reflect step by step the progress of the study and its results, explain the features of the selection and transportation of the studied material, propose measures for the treatment and prevention of the suspected disease. At the same time, all situational tasks offered to students are maximally adapted for each subject.

The above type of work implements a contextual approach by strengthening the practical orientation of training, integrating the acquired knowledge with the future professional activity of a doctor, which becomes especially relevant in the context of distance learning. The need to find a well-founded solution, the development of creativity, and the practical application of acquired competencies confirm the undeniable pedagogical effectiveness of situational tasks. It seems important to note the value of using this educational technology both for consolidating acquired knowledge and for testing and monitoring it.

Let us give an example of the use of problem-based learning methods - a method of situational learning, which allows you to formulate a specific problem in the form of a task, urging students to look for ways to solve it in the form of competition. This method is used mainly in clinical departments. A group of students (11-13 people) is divided into 3-4 subgroups. Each subgroup is given a situational task that describes a patient with a specific disease. The problem describes: the patient's complaints, the circumstances and time of onset of the symptoms of the disease, the dynamics of the patient's condition, data from the studies performed. The subgroup is given the following goal: to make and justify the diagnosis, solve the problem of hospitalization, carry out emergency measures and diagnostics using the methods proposed by the students, and also determine the doctor's tactics. Upon completion of the work, one of the students in each subgroup reports to the teacher the result of the work done, the rest of the students listen to the speaker and can make adjustments or ask him questions. The teacher can help by asking leading questions and making references to literature. The discussion ends with a summary. Problem-based learning develops self-learning and self-organization skills, increases the level of seriousness towards acquiring professional knowledge and skills, as well as the individual qualities of a doctor [6].

Active learning is also widely used now. This method is based on active mental and practical activity in the process of studying educational material. It is aimed at logical reasoned analysis, correct presentation of speech, conducting discussions and presenting arguments. Active learning is divided into non-imitation and imitation methods. Imitation methods are methods built on imitation of professional activities. Depending on the relationship between the participants and the roles they perform in the presence of competition, these methods are divided into gaming (business games, design) and non-gaming (analysis, problem solving, CBL method) methods [8]. Active learning includes: testing, quizzes, presentations, role-playing and business games, interactive lectures, a round table, as well as a game method that allows you to use knowledge and, using it, act in various simulated situations [9]. Let's look at active learning using the case method as an example. This method is used to develop professional skills. The basis is a task that contains data on blood tests, sputum tests, biochemical studies, x-rays, etc. Students analyze the data, determine deviations from the norm, which allows them to determine symptoms and syndromes.

This method allows you to move from professional knowledge to the independent application of professional skills, and forms the student's understanding of interdisciplinary connections. It can also be noted that the use of visual examples in teaching significantly improves understanding and assimilation of the material, and also creates a positive emotional environment. Non-imitation methods are actively used in lecture classes. Students prepare reports with presentations on the topics being studied, which allows students to master the skills of speaking in front of an audience, as well as the skills of searching and selecting relevant and interesting information on a given topic [10].

CBL (Case Based Learning) is an active, simulation, non-game method that allows future doctors to develop a competency-based approach to diagnosis and treatment. Based on students' ability to identify signs and organize them into clinical syndromes based on the clinical situation. To solve a clinical situation, students are required to jointly analyze the situation, look for problems, evaluate clinical and laboratory examinations, and establish the leading syndrome in the patient. The point of the method is to develop the student's skills in finding ways and knowledge to solve a particular problem [10, 11].

The gameplay may only outwardly seem like a harmless child's game, but if you direct it into the mainstream of medicine, it will take on a different character. The first to explore the issue of using games in teaching was the Dutch scientist J.Huizing. In his opinion, the game gives freedom, it is not a task, not a duty, not a law. The game creates a certain ease and lightness, which helps to escape from the routine learning process. Didactic games are built on the principle of self-learning, that is, students initially collect and analyze information, and then make a decision. Here are several ways to implement the game process [12].

“Who has the most?”: students are divided into groups, then they are given a specific disease, the group that lists the most symptoms wins. “Choose Me”: Students are presented with several images from which they must choose the manifestation of a specific disease. “Save me”: students are divided into pairs, one of them makes complaints, imitates ailments, symptoms, and the second must identify the disease and provide appropriate assistance. “Information blocks”: students are asked to make a diagnosis based on the medical history. The information is read in the form of a diagnostic process, that is, not completely. After each block, students discuss the information received and determine in which direction to move next. “Immune response algorithm”: each student is given a badge that says: antigen, antibody, macrophage, plasma cell, etc. Students are asked to act out a scene of an immune response. These games are optional, and each teacher can come up with his own types of games.

It should also be said about such innovative technology as thematic crossword puzzle. Many teachers have already appreciated this method, believing that it promotes the formation of logical thinking and helps students express their thoughts in a simple and understandable form. Compiling a crossword puzzle is aimed at developing students' intellectual and professional qualities. Having studied the discipline, the teacher invites students to create a crossword puzzle to consolidate the material they have covered. In the course of this work, it is recommended to refer to scientific and educational literature. A crossword puzzle is a methodological tool used to consolidate theoretical material in the process of solving it. They allow you to transform “boring” topics, since students feel free in the process of solving. This technique stimulates cognitive activity and interest in the subject. When composing a crossword puzzle, you need to take into account such points as its compliance with the content of the basic program and the ease and

brevity of the wording of questions and answers. In order to increase the productivity of students, it is necessary to diversify approaches to solving: some crossword puzzles are given individually, and some are given collectively. This allows you to evaluate the success of each student individually and their teamwork skills. This method involves students in an active learning process, promotes the development of communication skills, as well as team work skills [13].

Technological method “Pedagogical workshop for building knowledge.” This is a non-standard method of constructing knowledge, based on creating a creative atmosphere, comfortable conditions that will help the student develop communication and creative abilities, motivation to learn, and interest in learning. The purpose of this method is to create a creative product, which is based on the student’s search for information when referring to scientific and educational literature. Consider an example of this method: searching for a specific disease in works of fiction. Students are immersed in a literary search for a work that describes this disease. Reconstruction allows you to create an overall picture from unrelated episodes, that is, a clinical situation. This is followed by the presentation of the created product in the form of a presentation. Reviewing creative results takes place in one lesson and allows you to present one clinical situation from several angles, as well as consider the dynamics of the issue over time. During the discussion, participants can ask questions and discuss possible solutions, thus becoming active participants in the process. The result is a “break,” that is, a new vision of the subject, during which the clinical situation takes on a realistic coloring. This method allows the student to develop from a cultural perspective, consolidate the material covered, acquire the skill of independent search, and systematization of knowledge [14].

An innovative direction is also the introduction of simulation centers. Mannequins and robots with built-in sensors contribute to the successful development of skills. There are also simulation machines that help students develop endoscopic surgical skills [15].

There are an endless variety of approaches to learning. First of all, you need to interest the student in active work and show him the effectiveness of his activities. If a student sees the result, he will be interested in active work. Unfortunately, there are some difficulties in applying such innovative methods, such as insufficient motivation of teachers, insufficient involvement and desire of students to take initiative.

Conclusion. New forms of training are in demand at this time, as they form an extraordinary and effective approach to learning. This is important for the future profession of a doctor, since a highly qualified specialist must be able to independently work with the material and be interested in searching for it, as well as correctly apply the acquired knowledge.

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