

**METHODICAL ASPECTS OF INTERACTIVE  
STUDENTS' LEARNING IN MEDICAL HEI  
(HIGHER EDUCATIONAL INSTITUTION) IN STUDYING  
OF THE SUBJECT «INTERNAL MEDICINE»**

**Taktashov H. S.**

*Doctor of Medical Sciences, Professor  
Head of the Department of Internal Medicine № 2  
Donetsk National Medical University*

**Hrona N. V.**

*Candidate of Medical Sciences, Associate Professor,  
Associate Professor at the Department of Internal Medicine № 2  
Donetsk National Medical University  
Lyman, Donetsk region, Ukraine*

The use of interactive forms of learning develops such important competencies as knowledge, skills, ability, desire for self-development in the learner. Interactive methods are best suited for a personality-centered approach since they involve co-teaching (collective, co-operative learning) with both the student and the teacher who are the subjects of the learning process. The following methods of interactive learning are used in the study of internal medicine in our practice [3, p. 16; 2, p. 34].

Role playing is implemented through simulation of real professional activity by students. General goals are to immerse students in the atmosphere of activity as close as possible to their practical work of a doctor; to create a dynamically changing picture based on right and wrong actions and decisions; to develop the ability to perform a diagnosis and prescribe optimal treatment tactics; to develop the experience of communication with the patients and the colleagues. The technique of carrying out business clinical games consists of the following stages [1, p. 69]. 1. The preparatory stage: choosing a topic, defining the goals of the game, scenario of the situation, set of roles, places of action and preparation of real medical documents and

providing the game with diagnostic equipment, phantoms, etc. 2. The course of the game. There may be possible some variants of clinical games. The first type is «doctor – patient» which simulate the conditions of the doctor's intellectual professional activity aimed at recognizing a disease and treating a patient. The second type is the «council of physicians» that is characterized by the fact that the consultants participate in the game in addition to the attending physician. Formally, it is a role-playing game where different players act as doctors of different specialties and level of training. The example of it is «Therapeutic patient at the outpatient reception» The purpose is to teach the principles of making a preliminary diagnosis, performing a differential diagnosis with subsequent patient management in the physician's simulated working conditions. The description of the method is that the leading teacher instructs each student of the group to act as a patient with a particular common disease at the end of the studying of the next part of the subject (cardiology, pulmonology, etc.). The student develops a disease scenario containing typical complaints, the case history and data of physical examination on their own at home. The other students from the group should not be aware of each other's diagnoses. The students are divided into pairs of doctor-patient at the lesson. The task of «the doctor» is to identify the leading clinical syndrome within 10 minutes and make a preliminary diagnosis based on the survey and physical data of the «patient» and define a further scheme of the examination. Then the students swap their roles. 3. The analysis of the game. The students are assessed directly by the teacher and all the participants of the game. The following things are assessed: a) home preparation for performing the patient's role (adequacy of the complaints, the case history, physical data of the selected disease); b) the ability to examine the patient in the limited time, determine the leading syndrome, a preliminary diagnosis and a diagnostic route.

The work in «small groups (team)». Team-based learning (TBL) is the students' collaborative activity in the group under the teacher's leadership aimed at solving a common problem by creatively adding the results of the individual work of the team members with the distribution of powers and responsibilities [7, p. 245]. The aim is to acquire

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collaborative and other important interpersonal skills. The advantage of a small group is in its greater efficiency as it is more responsive to the organization and it works and gives each student the opportunity to make their contribution to the work. There is a high level of information exchange and fewer differences in groups of two, but there is a higher likelihood of tension, emotionality and process stoppage. When there are three-person groups two stronger players can suppress a weaker group member's activity in such an organization. However, three-person groups are the most stable structures with periodically shifting coalitions. It is more difficult to settle the differences in groups of four people than in groups with an odd number of the members. The group of five is the largest satisfactory one for any educational purposes. The thought distribution at a proportion of 2 to 3 times provides minority support. Such group is large enough to simulate the situations and small enough to engage all the participants in work and personal encouragement. It is recommended to divide students with various degrees of success into the same group. More active creative thinking, more frequent exchange of explanations and mastering of received data as a result of discussions are apparently noted in mixed groups. The implementation of this method consists in the independent patient management with filling in a case history and the development of practical skills under the teacher's supervision.

The method of «case-studies» (CBL – case-based learning) is a method of active problem-situation analysis based on learning by solving specific problem situations [5, p. 56]. It is a non-game active simulation training method. The main function of case method is to teach students to overcome complex unstructured problems that cannot be solved analytically. Cases are represented as integrated complex situational tasks. The data of the case histories or some patients' outpatient case histories are used as «case-studies» study material. The tasks or the questions are developed for each case history. For example, according to the clinical course, ECG, clinical and biochemical blood tests, the students should determine the stage of acute myocardial infarction of the patient's being at the inpatient department on a specific day and develop the subsequent tactics of patient management.

The class-conference. If there is a large amount of material or there isn't any patient with a specific diagnosis according to the topic of the lesson it is possible to conduct a class-time conference under the terms of ordered time. Each student is given the topic to speak about as a part of their homework. The lesson simulates a scientific conference: speeches, questions, results, choosing the best message. There are formed such things as mobilizing abilities to describe and distinguish the leading features and features of given nosology as well as the skills of public speaking and the analysis of the data. Each participant of the conference is encouraged to participate actively, ask questions. A discussion and a summary are held at the end of the conference.

Creative tasks. This interactive method aims to increase subject interest by creating a non-standard approach to mastering the material and it facilitates its practical application. One of the creative tasks is to compile crossword puzzles. We consider making crossword puzzles to each part of the course as a way of self-realization and as an indicator of mastering the conceptual idea of the subject. The description of the method is that during the practical lesson the students are offered to compile or solve a crossword puzzle that contains the questions of diagnosis and treatment of a thematic nosological unit or topical issues of the subject (cardiology, pulmonology, etc.). Another creative challenge is the quiz on medicinal drugs. The objective is to increase the level of mastering the principles of drug therapy in diseases of the internal organs. The description of the method is the following: each student is tasked with studying and making up a list of questions regarding the indications and contraindications to a particular group of drugs at the end of the next part of the subject. The quiz is conducted in the form of question-answer.

The use of educational interactive video courses. The aim is to teach the methods of differential diagnosis, treat the diseases if thematic patients are absent. The achievement of this goal is based on the creation of performing a situational task in the form of a short video film with subsequent involvement students in business simulation game. Testing is used to assess the mastering of the material at the end of the video segment. Interactive information technologies include the use of

computer multimedia training programs with self-control of knowledge, electronic textbooks, test tasks, the department's web site, Skype-online and offline consultations, conducting teleconferences.

The attendance of medical conferences, consultations. The purpose is that the use of this method allows you «to bring» the student closer to reality, to involve him in the collective discussion of various clinical situations and increase the importance of theoretical knowledge. Several students are usually involved in the preparation for the conference. One student may act as an opponent of a physician reporting a case history while others make the reports on the diagnosis and treatment of the disease.

«Brain storm». The objective is to get several variants of the clinical situation from the group in a short period of time and assess basic and current knowledge of the students. The main idea of the process is that the group is given a topic, a question or an unfinished action. The group members discuss the topic during a few minutes. The task is to receive a large variety of proposals. For example, the students are offered a series of consecutive electrocardiograms during Cardiology lesson which they should assess and briefly make an electrocardiographic diagnosis one by one without explaining it for the first time. Finally, when all the students from the group have answered the teacher explains and analyzes the mistakes [6, p. 15].

«Discussion». The main point of this method is to exchange the views on a particular problem. It allows you to learn to defend your notion and listen to others that ultimately activates thinking and provides conscious mastering of teaching material as a product of mental processing [4, p. 110]. It is used in a roundtable presentation format during the practical lessons when discussing the results of completed tasks.

Carrying out research activity is conducted in the form of independent out-of-class work. The stages of the research work are reported to the teacher-tutor and they are discussed at the meetings of the student's scientific circle of the department. The implementation of this type of work is carried out in small groups that increases each student's responsibility, promotes the development of communication skills,

teamwork skills. The results are reported at the conferences and congresses of young scientists.

Thus, the use of interactive teaching methods increases the level of motivation in the development of the skills of general vocational training and the study of modern scientific achievements.

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