

FEATURES METHODS OF PROFESSIONAL TRAINING OF FUTURE DOCTOR

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✓ *Resume,*

The principles of organization and functioning of the system of students learning process, which form personal and professional qualities that are of particular importance in ensuring the professional skills of future doctors. To identify and improve these abilities, various highly effective methods were used in a combined form, such as the "Synectics" method, Delphi, memory theory, and were introduced as an experimental form of training for a certain period of the educational process for medical students of senior courses and the results of scientific work revealed the qualitative results of our research.

Keywords: professional training, methods of education, doctor, discussion, critical thinking, improvement of the learning process, new technologies, task setting, theoretical and practical knowledge.

ОСОБЕННОСТИ МЕТОДОВ ПРОФЕССИОНАЛЬНОЙ ПОДГОТОВКИ БУДУЩЕГО ВРАЧА

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✓ *Резюме,*

Принципы организации и функционирования системы процесса обучения студентов, которые формируют личностные и профессиональные качества, имеющие особую важность в обеспечении профессионального мастерства будущих врачей. Для выявления и улучшения данных способностей были использованы в объединённой форме различные высокоэффективные методы, как метод "Синектика", Дельфи, теория памяти и были внедрены как экспериментальная форма обучения на определенный промежуток учебного процесса для медицинских студентов старших курсов, и по итогам научной работы были выявлены качественные результаты нашего исследования.

Ключевые слова: профессиональная подготовка, методы образования, врач, дискуссия, критическое мышление, улучшение процесса обучения, новые технологии, решение задач, теоретические и практические знания.

Introduction

The ongoing reforms in the health care of the Republic of Uzbekistan related to medical education require the preparation of competitively capable students-high-level specialists, but currently the system of higher education institutions is not fully improved, due to the fact that the training is aimed at studying mainly knowledge, whereas in higher education should be taught to think on the basis of skills. It is time to significantly improve the quality of training of medical specialists of any profile, including General practitioners. Their importance is great in maintaining health, extending the active creative period of life and increasing the working capacity of the population. Therefore, there is an urgent need to form a form of professional thinking among future doctors that allows students to independently update their knowledge, skills, and improve their professional level, to think critically and find effective ways to solve clinical problems and tasks. Today, the main method of teaching is the traditional method, which consists of transmitting as much information and knowledge to students as possible, where the teacher transmits already meaningful and differentiated information themselves, which from his point of view determines the development of necessary skills in students. The amount of knowledge obtained in the course of training by this method does not always make it possible to use it in practical health care, as a result of which young doctors make some mistakes in the diagnosis and treatment of patients due to the fact that this knowledge is stored in memory as a thematic block, which in many cases does not have a semantic connection. As a result, a large number

of teachers cannot link their subject with the knowledge of students in other disciplines. What accompanies the appearance of doubt as to how deeply the students were aware of the educational material, its development and use in situations that go beyond the boundaries of theory, that is, in practice (Gadaev A. G., Gulyamova sh. S., 2011) [1, p. 8]. There is a dependence of the student's professionalism (academic performance) on the form of his thinking. A high level of professionalism is associated not only with the practical, but also with the theoretical form of thinking. Therefore, it is necessary to introduce targeted training methods for the development of professional clinical thinking.

Goal: to solve the shortcomings of the learning process by improving the methodological arsenal of the teacher by introducing new pedagogical and information technologies, the latest teaching methods and unusual techniques, as well as creating a universal model and methodology for training students.

Methods and materials

A large number of teachers of foreign and domestic universities, even far from radical solutions, insist on individualized training. It is important that the educational process takes into account the personal abilities and interests of the student, and it is necessary to increase attention to the individual by reducing the number of students in the group, reducing the school week and changing the class-based learning system, as well as intensifying the educational process. For intensification, it is important to individualize education, which in turn consist of the

following characteristics: making an individual rhythm for the study of educational material, independent work with the use of special didactic materials, determining the boundaries of the volume of learned educational material as a minimum and maximum, the teacher as a consultant and coordinator, the free relationship of the student with the teacher. But still, at this time, most teachers use traditional methods of teaching, which includes; step-by-step formation of skills, knowledge and skills. There are various variations of traditional learning lessons: lesson-opening, lesson-discussion, lesson-excursion, and others (Petrova O.O., Dolganova O.V., Sharokhina E.V., 2008) [3, p. 9]. To visibly improve the quality of education and develop the thinking of medical students, it is worth using non-traditional methods of teaching, which in turn consist of a large number of features that can increase the productivity of the educational process. Form of non-traditional methods is the gradual introduction of new proposals concerning the modernization of modes, methods, forms of teaching, the widespread use of unconventional methods of teaching, the main reason for innovation is the need to develop the student's creative abilities and initiatives, therefore, at the forefront of independent scientific work of students which needs to be requested and evaluated from the faculty that will be further considered in the conduct of the final examinations. Another important component is to actively consider the prospects of using the latest technical tools in higher Education institutions as a powerful source of information and self-education, which guarantees the successful modernization of educational activities. The use of technology breaks down stereotypes in the classroom, which allows you to consider the conduct of individual training in a new way and manage the educational process. Today, the development of technological progress allows us to create new technologies that will certainly increase the information content, intensity and effectiveness of medical education. We compared and studied the training processes, as well as combined different training methods and courses. To do this, we studied the materials of the Andijan state medical Institute and other Universities of Uzbekistan that train specialists with high qualifications, but these methods will be taken into account and transformed into professional features and capabilities. The formation of clinical thinking among students is desirable to be carried out by introducing theoretical and practical classes using new problem-finding educational technologies. Our study was conducted for two weeks in 3-4 year students of the European group of the faculty of medicine consisting of 28 people, which we in turn divided into 2 groups of 14 people. We divided these groups into control and experimental groups. The control group of students during seminars and lectures was trained according to the traditional method of teaching, which consists mainly of the assimilation of knowledge transmitted by the teacher, where students are passive objects. The experimental group was trained using interactive teaching methods, including the method of synectics presented below. Classes on interactive methods were conducted in the active interaction of students and teachers. This method developed versatile and critical thinking in students, which in turn showed a high-quality result. Based on all the above and based on the research of I. K. Kaikov (1989) [2, p.9], it was decided to base our scientific work on the method of "Synectics" - the meaning of the method is a collective creative activity based on the use of intuitive, metaphorical thinking of participants. The name of the method was given

by its author, the American Psychologist W. Gordon. In Greek, the word "synectics" means the combination of heterogeneous elements, and this method of learning is combined with the theory of memory and the method of Delphi, which is very effective both in everyday life and in the professional sphere, because it allows you to take into account the opinions of all people who are related to any issue, by consistently combining considerations, suggestions and conclusions, and then come to a specific agreement. The Delphi method is easy to use, and it can be used by any person or group of people, it is only important to know how it is done, previously these methods were not combined and used in the learning process, but, as expected, they gave a very good result in the formation of a versatile development of thinking. Since the method of synectics is a development of "brainstorming", but in contrast to it allows criticism, which allows you to develop and modify the ideas expressed. In the process of using the method of synectics, four types of analogies are used.

Which makes it possible to consider the problem being solved from all sides, which in turn develops clinical and critical thinking.

The block diagram of the synectic process is;

1. Problem statement
2. Translation of the task, "as it is set" into the task, "as it is understood".
3. Identify the issue that causes analogies.
4. Work on finding analogies.
5. The use of analogies:
 - * Direct analogy

In direct analogy, the object in question is compared with a more or less similar object in nature or technology. Since in our task we will consider the situation with heart palpitations and we will consider a direct analogy as a car engine. As we know, the motor, as well as the heart, pumps fluid and any interruption causes a violation of the movement of the fluid and the vehicle itself. Here the main task to pay attention to is the structure, function, task and expiration date, which makes it possible to consistently consider the causes of the problem.

* Symbolic analogy

The role of symbolic analogy is to describe the problem being solved using abstract, generalized, and paradoxical words. It allows you to use original and paradoxical descriptions of the problem, looking at the problem from a different, newer point of view.

* Personal analogy

The essence of personal analogy is to represent yourself as the object that is associated with the problem and try to judge "your" feelings and ways to solve the task or problem.

* Fantastic analogy

The task of a fantastic analogy is to use a fabulous means to solve the problem, determining the final result and goal. An example is the external location of the heart, which makes it possible to study the pathology of this problem in a visual form. Where we can see the whole picture of possible violations and determine the cause of this pathological process.

6. Search for ways to translate the found analogies and images into suggestions for solving the problem.

When you formulate a task, you need to distinguish two points: what you need to get in the end, and what prevents you from getting what you want.

Synectics is based on brainstorming. But if the usual assault is carried out by randomly assembled teams, then synectics involves the creation of permanent groups. Such

groups, accumulating experience, work better than randomly assembled teams. You can say that synectics is a professional brainstorming session.

"A 28-year-old man with complaints of heart palpitations asked for an ambulance. In the anamnesis

were, blood pressure 90/70 mmHg.art. (working AD 120/80). On ECG: heart rate about 200 per minute, no visible p teeth, QRs complexes, ST segment and T teeth unchanged."

Table 1

Evaluation control of the Delphi method

| № | Rank | Score | Point | Derivatives |
|---|------|-------|-------|-------------|
| 1 | 9 | 4 | 72 | 85 |
| 2 | 8 | 4 | 86 | 98 |
| 3 | 6 | 5 | 90 | 101 |
| 4 | 8 | 3 | 78 | 89 |
| 5 | 7 | 4 | 69 | 80 |

Rank-5-10 Derivatives: 115-98= " 5"

Rating-1-5 97-81= " 4"

Point -55-100 80-63= " 3"

Questions:

I. the Etiology of arrhythmias. List the main etiological factors in the development of arrhythmias?

Answer: Functional disorders and the influence

Organic factors

Toxic influence

Hormonal disturbance

Electrolyte disorders

Mechanical effects

II. Tell us the classification of arrhythmias by M. S. Kushakovsky?

Answer:

1.Violation of pulse formation.

A. violation of the automatism of SA node (nomotopny arrhythmia):

— Sinus tachycardia

— Sinus bradycardia

— Sinus arrhythmia

— sinus node weakness Syndrome

B. Ectopic heterotopic rhythms due to the predominance of automatism of ectopic centers:

— Slow sliding complexes and rhythms

— Accelerated ectopic rhythms (non-paroxysmal tachycardia)

— migration of the supraventricular pacemaker.

C. Ectopic (heterotopic) rhythms, mainly due to the mechanism of re-entry of the excitation wave:

— Extrasystoles

— Paroxysmal tachycardia

— atrial Flutter

— Flicker (atrial fibrillation) atrial

— fluttering and flickering (fibrillation) of the ventricles.

2. Conduction disturbance:

— Sinoatrial block

— intra-Atrial (inter-atrial) block

— Atrioventricular block

— Intraventricular blockades

— ventricular Asystole

— premature ventricular arousal Syndrome

3. Combined rhythm disorders:

— Parasystole

— Ectopic rhythms with output block

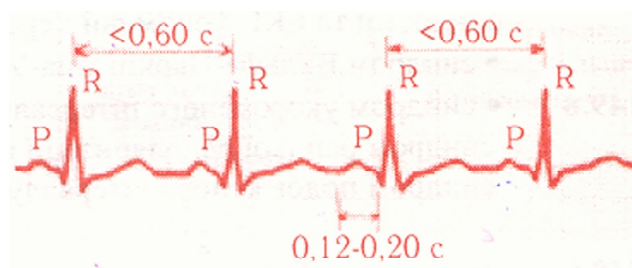
— Atrioventricular dissociations. (Chudnovskaya E. A., 2003) [4, p. 9]

III. Describe and depict ECG signs of arrhythmia associated with a violation of the automatism of the sinoauricular node?

Answer:

1.SINUS TACHYCARDIA

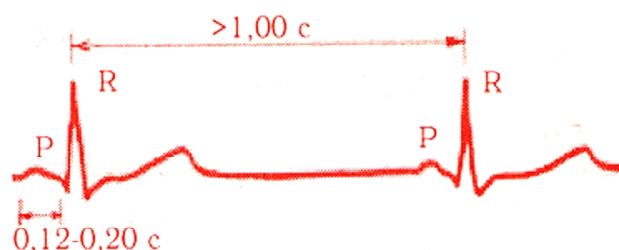
ECG: Sinus rhythm, heart rate 90-180 /min, R-R<0.60 s



(pic.1)

2. SINUS BRADYCARDIA

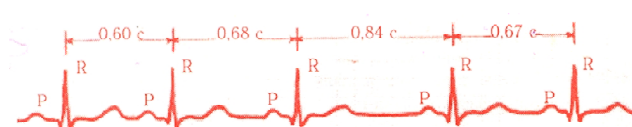
ECG: sinus rhythm, heart rate 59-40/min, R-R>1.0 s



(pic.2)

3. SINUS ARRHYTHMIA

ECG: Sinus rhythm, the difference between the longest and shortest intervals R-R>0.15 s



(pic.3)

The difficulty of applying morphological analysis is that there is still no universal method for evaluating the effectiveness of a particular solution. For this purpose, we decided to link the method of synectics with the method of Delphi and memory theory, which were described above

and were experimental tests of students' knowledge on the passed seminar, in which these training methods allowed to correctly direct and successfully start, as well as effectively finish the training material. And according to the theory of memory, the results of academic performance and memorability of educational material were made in our study conducted in 2 groups, the first control group showed average results of academic performance and assimilation of the passed material, where the percentage of memorability was 52-57% of the total data of the group, and the experimental group showed a high percentage of memorization of educational material, which was 77-83%.

Research results: we compared the educational processes of national and European groups of the University, and observed the conduct of lectures by teachers and the participation of students in seminars. The studied lectures were traditional with the use of information technologies, and the task of students was to record and listen to the lecture, in which their state was in a passive mode, there was no relationship between the teacher and the student. The seminars were held at a good level, where there is already a teacher and a student, but the students were the weak link, because they did not use modern methods of preparation for the educational process, which would give them a better chance to learn the educational material. In this regard, our research is aimed at determining the qualities of versatile thinking, which plays an important role in the professional training of students. For this purpose, we conducted several educational situational games with students of different courses and faculties, and created synectical groups, in this case, fourth-year students were selected. The solution of a problem by a synectic group begins with familiarizing the problem, clarifying it, and finding a solution based on turning the unusual into the familiar. For this purpose, morphological analysis is used, which can be used both at the first stages of the search for technical ideas and solutions, and at subsequent stages to expand the scope of use of the found idea in order to develop it. We also noticed that the number of students was exceeded in some groups, which does not allow the teacher to interview and make sure that all students understand the learning material correctly. Another reason for this was the small amount of time spent on conducting classes and a large amount of material on the topic being studied. Other factors of low activity of the learning process were not synchronicity of thematic plans of the main subjects, which are the Foundation of knowledge for becoming a student specialist

in their field. The following also revealed the allocation of the same amount of time for secondary subjects along with the main ones, which does not allow students to fully engage in the main subjects. Another problem of the educational process is not the synchronicity of lectures with seminars, and according to the results of an anonymous survey, it was found that students of medical universities have a small amount of free time for training and normal rest, so this is also an important feature that must be paid attention to.

Conclusion: it should be noted that the training methods we have created allow us to achieve higher-level goals in the educational process, i.e. they contribute to the development of students' professional competence (the ability to conduct medical consultations, work in a team, resolve complex clinical situations, listen to others, etc.), as well as to form a high quality of educational services, it is necessary to actively manage the quality of all parts of the educational process. The method of brainstorming can be applied not only when searching for new solutions, but also when identifying shortcomings in existing objects (reverse attack), examining projects, inventions, and evaluating the effectiveness of the data obtained. At the same time, improving the quality of processes should be continuous and systematic. Special attention in medical schools should be paid to improving the skills of teachers and significantly improve the teaching process. Without qualified teaching staff, without the introduction of active learning technologies in the educational program, it is impossible to train specialists who meet modern requirements.

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