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# APPLICATION OF NEW PEDAGOGICAL TECHNOLOGIES IN PRACTICAL LESSONS.

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**Annotation:** The article presents the results of the comparative effectiveness of interactive teaching methods "Cluster" and "Three-stage interview" on the subject of internal diseases for second year students of the Tashkent State Pharmaceutical Institute. The "Cluster" method corresponds to the application of the theoretical part of the lesson, increasing the speed of students' logical thinking. The "Three-Step Interview" method corresponds to a special part of the subject, and is highly effective for mastering practical skills.

**Key words:** Cluster, Three-stage interview, theoretical knowledge, practical skills.

#### Introduction

Today, in developed countries, a lot of experience has been accumulated on the use of pedagogical technologies that increase the educational and creative activities of learners and guarantee the effectiveness of the educational process, and interactive methods form the basis of this experience. In modern conditions, the most optimal way to increase the effectiveness of education is the organization of training using interactive methods. Interactivity is the ability of the participants of the educational process to organize action based on mutual cooperation in order to acquire knowledge, skills, competences and certain moral qualities [1].

According to the studies of the American psychologists R. Karnikau and F. McElroy, the natural physiological and psychological capabilities of a person allow to preserve acquired knowledge in different ways. That is, a person: 10% when he reads the source himself; 20% when he heard the information; 30% when he sees an incident, event or process; 50% when he saw the incident, event or process and heard information about them; 80% when he/she transmits information (speaks, demonstrates knowledge) by himself/herself; When he applies the acquired knowledge (information, information) to his work, he has the ability to remember 90% of the information. According to this, interactive teaching is organized on the basis of "cooperation between the main participants of the educational process - a teacher, a student and a group of students, having the opportunity for intense debates and mutual exchange of ideas, in which they can think freely, express their personal views without hesitation, and jointly search for solutions in problem situations., it is characterized by mutual respect, understanding and support of the "teacher-student-student group", sincere relationship, and spiritual unity" [8].



The concept of "Interactive" is English "Interact" ("Inter" - "together" and "act" means "influence". It follows that "interactive methods" means the interaction of students. "interactive teaching method" shows the form of cooperative activity of the students being taught. The essence of the interactive method is the interaction of all students and the teacher [6.7].

The development of qualified competitive specialists who do not fall behind the scientific and technical development is one of the urgent issues facing professors and teachers of higher and special educational institutions. Also, modern higher It is necessary to re-form the methods of training in order to train talented professionals in education [1].

The "cluster" method is a well-thought-out strategy that can be used in one-on-one and group sessions with students. Clusters create an opportunity to generalize the ideas put forward, to find connections between them. The following conditions must be met when using the method:

Whatever you think, write it down!

Don't think about the quality of your thoughts, just write!

Don't worry about spelling or any other aspect of your writing!

Don't stop writing until the allotted time is up!

If you can't think for a while, then start drawing something on paper!

Continue this process of putting forward as many new ideas as possible within the framework of a new specific concept, showing the interrelationship between them: until the idea is born!

Using the method, students express their thoughts on the assignment in the form of clusters (small, separate parts) as shown in Table 1. The "cluster" method is one of the new methods and is considered relevant to the areas under review [8,9].

The purpose of the "cluster" method is to generate new ideas, get a better idea, achieve a better result, and search for a new way to solve a problem. "Cluster" is a rapid intensive process of problem solving. Based on the call for creative activity, students are encouraged to identify many different options for solving the problem, including the manifestation of fantastic imagination. The teacher selects the ones that are important for the practice among the mentioned ideas.

Before the lesson, the teacher tells the students the main principles of discussion, the maximum number of ideas, without paying attention to their quality, the solution of a short problem, in which all ideas that come to mind without critical and analysis are presented, even if they are complex, it is possible to develop someone's idea, only not to criticize. In this case, a set of questions related to the lesson prepared by the teacher can be used during the laboratory exercise.

The use of new pedagogical technologies and interactive methods in the optimization of the educational process leads to the improvement of the evaluation of the student's clinical knowledge [1,2,3]. Teaching practical skills in medical schools and evaluating its implementation requires a special approach [7]. Medical education cannot be comprehensively developed without the application of modern pedagogical



technologies, new types of teaching and improved methods [4, 5, 6]. The proposed method of "Cluster" and "Three-stage interview" is considered important for improving the clinical knowledge of students [8,9].

**Purpose of work**. To study the effectiveness of the interactive method of "Cluster" and "Three-step interview" in the process of practical training to increase the activity of students.

**Discussion and results.** The efficiency of the interactive method was analyzed according to the indicators in the practical training for students of internal medicine taught in the second course at the Department of Internal Medicine of the Tashkent State Pharmaceutical Institute. In order to achieve the set goal, the performance indicators of training conducted in interactive and traditional methods were evaluated in two representative groups, which are almost equal in terms of rating indicators and the topics to be covered are exactly the same. The results of 4 practical exercises related to diseases of cardiovascular organs were compared. All students were divided into two groups: the first group used the "Cluster" method on 4 topics (21 students), the second group (22 students) - the "Three-step interview" interactive method technology was used.

In the "cluster" method, problems are brought to the attention of students in the whole group, they quickly analyze together and determine the answer in 5 minutes. In the "three-step interview" method, a group of three students in each group plays the role of "doctor", "patient", "expert-UASh", 10-15 minutes are allocated. "Expert" evaluates the doctor's actions, including "what was done correctly", "what went wrong?", "how should it be done?" analyzed, then discussed by the teacher.

Table 1. Application of "Cluster" method in practical training

Order number №		
number 312	Cluster questions	Answers
1. (α1)	Arterial	3
	How many degrees of hypertension	AG I level 140-159, 90-99
	are there?	AG II level 160-179, 100-109
		AG III degree >180, >110
2. (α2)	Arterial hypertension  List the risk factors.	Drinking, smoking, age, sex, inactivity, poor diet, stress
3. (α3)	Arterial hypertension identify the causative endocrine diseases.	Itsenko-Cushing syndrome, pheochromocytoma, diabetes, diffuse toxic goiter



4. (α1)	Arterial hypertension  write the clinical signs of the	Headache, dizziness, blurred vision
	disease.	darkening, nausea, weakness
<b>5.</b> ( α2)	In the treatment of AG	Diuretics, beta-blockers, APF
	What group of drugs are used?	inhibitor, Sa channel blockers,
		Antagonists of Angiotensin II converting enzyme
6. (a3)	AG complications	Target organ damage,
	count	hypertensive crisis,
		myocardial infarction, stroke

"Cluster" method covers the topics of the general part of the subject. The "three-step interview" method was used to teach special sections. The level of students' knowledge and its consistency were studied in questions and answers, written works, test results, intermediate and final evaluation results. Questions in the "cluster" method ( $\alpha$ 1,  $\alpha$ 2 and  $\alpha$ 3) were asked (table 1).

According to the results of the investigation, the "Cluster" and "Three-step interview" methods had different effects on the formation of students' knowledge level. This was evidenced by the analysis of the results of the control work obtained in academic groups. Based on the obtained evidence, it appears that the "Cluster" method has shown the development of students' verbal and quick thinking in the analysis of acquired knowledge control. In 14 cases (66.7%) of classes conducted in the "cluster" interactive method, oral speech was formed in the acquisition of clinical knowledge, and in 6 cases (28.6%) skills were formed in clinical observation, from which it can be understood that the method is important only for the theoretical part of the training and will not be important enough for acquiring practical skills.

During the course of the lesson, significant positive changes were observed in the students of the II group compared to the students of the 1st group. It was found that the students playing the role of "patient" studied the symptoms of the disease as deeply as possible, assimilation of subjective information reached 75%, a reliable difference of 48% was observed from students who did not play this role (p<0.005), and students playing the role of "doctor" with subjective information objective data in one line - palpation. studied the skills of percussion, auscultation thoroughly, and performance of practical skills reached 78%, the difference between them according to the method of physical examination was 50% (p<0.005). The mutual activation of the students who played the role of "doctor" during the performance of practical skills was clearly felt. Also, mastering the results of laboratory-instrumental tests increased by 27% among students, helped them to learn how to behave in front of the patient. Students playing the role of "experts" have noticed errors and shortcomings in time along with positive achievements, and have studied relatively thoroughly the quick measures to prevent or eliminate them. The disadvantage of the method is that not all



participants could actively participate in the learning process. Therefore, the "three-step interview" method allows students to think freely and increases the rate of acquisition of clinical thinking and practical skills.

In the students of the I-group, the speed of analysis of clinical cases increased reliably by 2I% (p<0.05), they felt relatively free during the lesson, they learned to analyze the achievements and shortcomings, independent thinking, the indicator of practical knowledge acquisition was higher than that of the students of the II-group was found to be significantly behind (p<0.005).

The analysis of the results obtained above shows that the "Cluster" method helps students to strengthen their theoretical knowledge and to be quick, while the "three-step interview" method helps them to make clinical observations and acquire practical skills.

It follows that the "Cluster" method is convenient for passing the theoretical part of practical training, and the "three-step interview" method for the practical part.

#### **Conclusion**:

- I. "Cluster" and "three-step interview" methods have different effects on the formation of students' knowledge.
- 2. It is necessary to clearly define the interactive method for each subject and approach accordingly.
- 3. "Cluster" method corresponds to the theoretical part of training, teaches the student to think quickly. The "three-step interview" method is adapted to the specific part of the subject and helps to master the practical skills.

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