

ACADEMIC PROGRESS DEPENDENCE FROM THE STUDENTS' GROUP UNITY DEGREE – NEW EFFECTIVE TOOL OF ENHANCEMENT

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Abstract

Introduction:

Teaching methods in modern society are constantly updated and improved. Since 2014, the new training exercise "The Human Body" (authored by O.M. Tsilmak and V.V. Artyomenko) was introduced into the educational process of the Odessa State University of Internal Affairs and the Odessa National Medical University.

Objective:

The main objectives of the tool were:

- 1 Systematization of students' knowledge about the basic functions of human organs and their significance for the functional activity of the human body.
- 2 Formation of students group unity.
- 3 Prevention of the occurrence of such a negative phenomenon in the study group as an outsider.

Materials and methods. The essence of the method: each student was offered cards with the names of human organs (kidney, heart, liver, spleen, stomach, etc.).

The tasks for all students were:

- 1 to indicate the main functions of the human organ;
- 2 to determine the negative consequences for the whole organism, if organ diseases are ascertained;
- 3 to indicate the relationship of the organ with other organs;
- 4 to determine the negative consequences for the whole organism, if this organ will not exist.

After 10 min of preparation each student should have made a presentation. Presentation conditions:

- 1 describe the organ from four positions;
- 2 to carry out the presentation of an organ depending on its affiliation with a certain system of organs (for example, digestive organs, organs of the cardiovascular system, etc.);
- 3 after the presentation of the organ, the student remains at the place where the presentation took place.

After all the presentations, students united by a group of organs of a certain system needed to summarize by specifying the organ's significance for a particular system and the significance of the whole system for the functioning of the human body. After summing up, the students had to specify in turn the interrelation of their system organs with the organs of other systems (doing that, the interconnection should be emphasized holding hands). Then the teacher himself summarized and at the end said: "We are all different; however, each of us is valuable in his own way. Only in a team we can move forward effectively and efficiently. Together - we are a force".

It is noted that the main hypothesis of the method creation was: the degree of student group unity directly affects the success of the entire group of students training. First-year study groups were involved, 22 (637) - experimental and 22 (641) - control ones from Odessa State University of Internal Affairs and Odessa National Medical University took part in the research study.

Results:

The indicators of academic performance were analyzed in all 44 study groups before the exercise and one year after. The results of the study showed that in 11 experimental groups of students of the University of Internal Affairs, the learning success increased by 23%, and among students of the Medical University by 18%. At the same time, in the control groups of students of the University of Internal Affairs, the success of studies decreased by 5%, and of the Medical University by 9%. Interviewing students about the reasons for improving academic performance, it was found that one of these reasons is group unity around the result of learning activities.

Conclusion:

The new learning tool — training exercise «The human body" confirmed the hypothesis put forward by us and showed effectiveness and efficiency.

Keywords: Students' academic progress, students' motivation, undergraduate education, collaborative and active learning, non-technical skills, bullying prevention.

1 INTRODUCTION

The training of competent specialists who can safely begin professional activities is the main goal of higher education institutions. To achieve this goal, it is necessary to systematically improve and modernize approaches to teaching, introducing various pedagogical methods, techniques, methodics and tools.

It should be noted that many scientists were involved in the problems of training competent specialists. For example, some authors consider the concepts of "competence", "competencies" and "competent specialist" and offer a management system for the process of training a competent specialist from both theoretical and practical points of view [1,2].

However, without students' motivational interest in developing their professional competence, no advanced techniques will produce results. According to scientists, each student should be active during training. That is, the ideal student is one who independently seeks new knowledge and is responsible for his studies (Bremze, Turusheva L., Turusheva O.,2006). It is also important in the learning process to provide personal support to students during their studies at a medical school [3].

Some scientists have carried out an objective measurement of the degree influence on the certification system of medical students on their stress state, mood, group cohesion, on the occurrence of anxiety, etc. [4].

The authors also put forward and confirmed in the process of scientific research the hypotheses that: 1) the social cohesion of the group positively affects all aspects of the effectiveness of the group; 2) between the cohesion of tasks and the effectiveness of tasks, as well as between social cohesion and the viability of the system there is a very close relationship; 3) all the cohesion and performance parameters will increase with time [5].

Given the importance of preparing medical students for collaboration in their careers, scientists emphasize the importance of building team skills in group learning [6].

We believe that the group cohesion of students is of great importance in the process of preparing a future medical specialist. Since it is the process of collective development of a certain area of medical knowledge that allows you to achieve better results in the formation of a certain type of professional competence [7]. Therefore, the goal of our scientific research was to establish the influence of the degree on group cohesion of students on their success and quality of education.

2 METHODOLOGY

There are various methods and techniques for the formation of group cohesion of students. In 2014, we developed the training exercise "The Human Body" (authors Elena Tsilmak, Volodymyr Artyomenko). The main objectives of the exercise "Human body" are:

- 1 The formation of group cohesion among students.
- 2 Systematization and refinement of students' knowledge on the basic functions of human organs and their significance for the functional life of the human body.
- 3 Prevention of the occurrence of such a negative phenomenon in the study group as an outsider.

- 4 The development of students' general medical competence.

For the effectiveness of the training exercise, it is necessary to adhere to a number of mandatory rules and observe certain conditions. So, the basic rules for the exercise are as follows:

- 1 Students must clearly complete the tasks that they receive from the teacher.
- 2 The presentation of the student's assignment must be structured, concrete and logical.
- 3 The teacher should clearly monitor and direct the course of the exercise.

The main conditions for the effective implementation of this training exercise are:

- 1 The presence of students' knowledge of the basic functions of human organs and their importance for the functional life of the human body.
- 2 The teacher takes an active part in the exercise (selects a specific organ and presents it together with students).

The algorithm of the training exercise "The human body."

- 1 The teacher gives each student cards with the names of human organs (kidneys, heart, liver, spleen, stomach, etc.).
- 2 The teacher gives assignments to all students:
 - a) indicate the main functions of the human organ;
 - b) determine the negative consequences for the whole organism, if an organ disease is detected.
- 3 Student assignments. Students are given 10 minutes to complete the tasks.
- 4 Presentation of the organs of a specific system of the human body. The teacher voices the name of a specific organ system, and invites students to stand in the center of the audience for an individual presentation of "their organ."

It should be emphasized that the teacher also presents "his own body" during the presentation of students of a particular system. It unites students and the teacher around the studied discipline.

- 5 A survey of students. A teacher using a "brainstorming" interviews students, united by a certain system of organs, about the importance of this system for the life of the whole organism. When all the answers have been exhausted, go to the presentations of the organs of the next system. Students who describe "their organs" continue to stand, moving slightly to the side, in order to free up a central place for other students, united by another system of organs, for their presentation.
- 6 A survey of students regarding the relationship of the body and other bodies. When all the presentations are completed, the teacher offers students to alternately indicate:
 - a) the relationship of the body with other bodies;
 - b) negative consequences for the whole organism if this organ does not exist;
 - c) the relationship of the organs of the system with the organs of other systems.

To emphasize the interconnectedness of the organs, the teacher suggests students to emphasize the interconnectedness of the organs, holding hands.

- 7 Summarizing by students. When all the students (together with the teacher) joined hands, the teacher asked students the following questions: "What conclusions can we draw from this exercise?"; "What was the purpose of this exercise?"; "What exactly does this exercise help us realize?"
- 8 Summary by the teacher. The teacher summarizes the main result, saying: "We all, like the organs of the human body, are different. Each of us has something individual that others do not. However, each of us is valuable in our own way. And therefore, combining efforts during training, sharing our knowledge, we will be able, firstly, to refine our knowledge, and secondly, to increase the effectiveness and quality of training. As the saying goes: "One head is good, but two is better." Only working as a team, we can effectively move forward. Together we are strong..."

During the debriefing with medical students, the teacher emphasizes the value of collective unity when studying a certain field of knowledge, when making a diagnosis to a patient, when prescribing treatment for a patient, when solving certain medical problems, etc. The exercise "Human body" can be carried

out not only in a medical institution of higher education, but also in other educational institutions. Therefore, we conducted an experiment at the bases of two higher education institutions, namely, Odessa National Medical University and Odessa State University of Internal Affairs.

In total, we involved 44 study groups, 22 of them - experimental and 22 - control. Thus, 637 first-year students of the experimental group (motivated to become competent specialists) and 641 students of the control group took part in the scientific study.

To test the effectiveness of the exercise "Human body" by us:

- 1 the success indicators of educational activities in all 44 study groups were analyzed (before the exercise and one year after the exercise);
- 2 an anonymous questionnaire was conducted among students of the experimental group (one year after the exercise) in the fourth academic semester;
- 3 a psychodiagnostic study of students in the control and experimental groups was carried out using the projective technique: "I am in the student team" (before the exercise - in the 2nd academic semester and a year after the exercise - in the 4th academic semester). All the drawings in accordance with the groups we have collected for study and comparison;
- 4 the exercise "The human body" was conducted with students of the experimental group (in the 2nd academic semester).

3 RESULTS

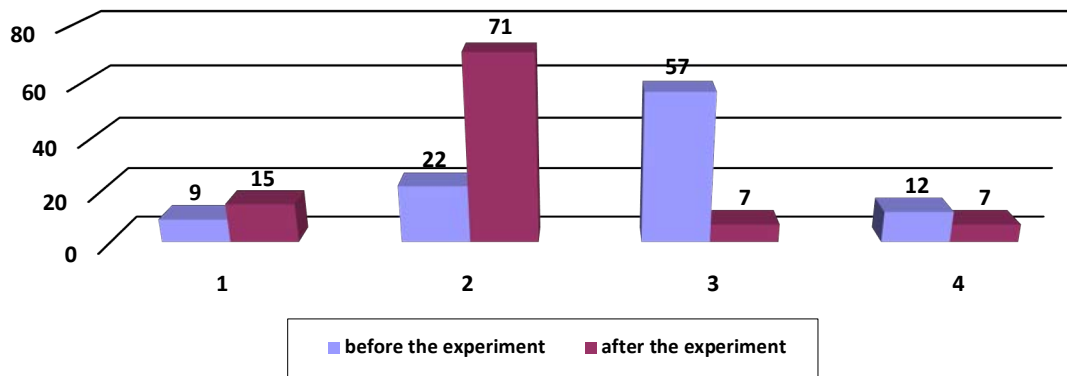
As a result of the analysis of students' educational activity success indicators, we found that in 11 experimental groups of students (future lawyers) of the Odessa University of Internal Affairs, academic performance increased by 23%, and among students of a medical university by 18%. That is, after the exercise "The Human Body", the number of students studying "good" and "excellent" increased.

As a result of questioning students of experimental groups of two institutions of higher education, we established the following reasons for improving academic performance:

- 1 students' awareness of personal responsibility for the results of decisions made - this was noted by 100% of medical students and 100% of law students;
- 2 self-awareness in the profession (the image of "I am a doctor" and "I am a lawyer") - this was noted by 98% of medical students (2% - disappointed in their professional choice) and 93% of law students (7% - disappointed in your professional choice);
- 3 awareness of the need for group unity to improve the quality of knowledge - this was noted by 100% of medical students and 100% of law students. In the questionnaire, we also provided a question as to how much the exercise called "The Human Body" had an effect on student performance. So, according to students, the exercise "Human body" contributed to:
 - the realization that "we are all individual", however, the individuality of each is very important during the adoption of group decisions - this was noted by 100% of medical students and 100% of law students;
 - an increase in the degree of group cohesion in the process of studying a certain field of knowledge - this was noted by 96% of medical students and 97% of law students;
 - improving the quality of teamwork in the process of solving certain educational problems - this was noted by 94% of medical students and 95% of law students.

To check the degree of group cohesion of the student group, we conducted a psychodiagnostic study of students in the control and experimental groups using the projective methodology "I am in the student team" (before the exercise - in the 2nd academic semester and a year after - in the 4th academic semester).

To do this, we proposed to draw one in one 3 different in diameter circle. Then they voiced the instruction: "Three circles is your student group. You need to carefully look at these circles and determine your place in the group. "

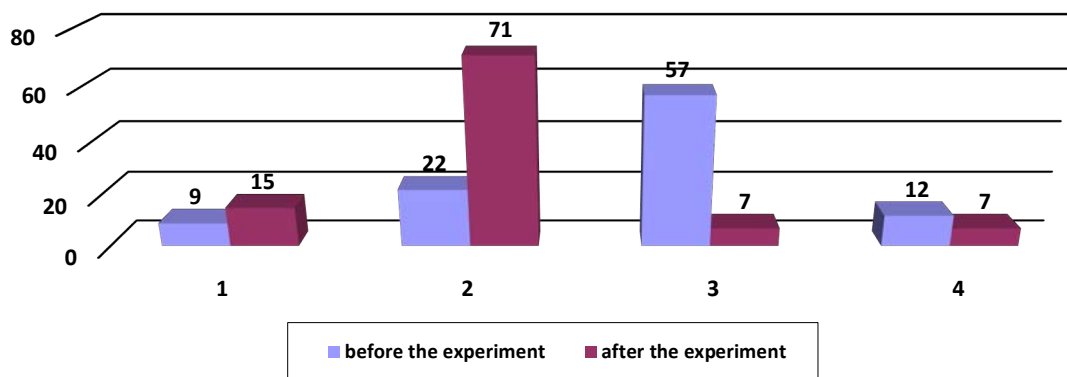


Legend: 1 - percentage of medical students of the central circle; 2 - percentage of medical students of the inner circle; 3 - percentage of medical students in the external circle; 4 - percentage of medical students outside of circles.

Figure 1. Comparative analysis of the drawings "I am in the student team" of medical students from experimental groups.

As a result of a statistical study of the drawings of medical students and students of future lawyers, we found that the number of medical students increased: 1) the central circle - by 4%, 2) the inner circle - by 53%. The number of students outside the circle, after conducting the exercise "The Human Body", decreased by 3%, which indicates that students have become more united. 2% of medical students were disappointed in their professional choice.

The same positive dynamics of group cohesion, after conducting the exercise "The Human Body", is also observed among students of future lawyers (see Fig. 2). We found that the number of students of future lawyers has increased: 1) the central circle - by 6%, 2) the internal circle - by 49%. The number of students outside the circle decreased by 5%, 7% of students of future lawyers of the experimental group were disappointed in their professional choice.



Legend: 1 - percentage of students (future lawyers) of the central circle; 2 - percentage of students (future lawyers) of the inner circle; 3 - percentage of students (future lawyers) of the external circle; 4 - percentage of students (future lawyers) outside the circles.

Figure 2. A comparative analysis of the drawings "I am in the student team" of students of future lawyers of experimental groups.

As a result of a comparative analysis of the figures, we found that among medical students there are 1% more leaders (see Fig. 1) than among students of future lawyers (see Fig. 2) - they chose the central circle. Regarding the dynamics of group cohesion of students in control groups (see table 1). As we see in the 4th academic semester, the number of leading students decreased (among medical students - by 3%, among students of future lawyers - by 4%). The number of medical students and students of future lawyers of the inner circle increased by 4%. The number of students outside the circle increased (among medical students - by 6%, among students of future lawyers - by 2%).

Table 1. The results of the comparative analysis of the drawings “I am in the student team” of medical students and students of future lawyers in control groups.

Quantity	Central circle	Inner circle	Outer circle	Out of circle
Medical students in the 2 semester	14 %	28 %	49 %	9 %
Medical students in the 4 semester	11 %	34 %	60 %	15 %
Students of law in the 2 semester	15 %	35 %	40 %	10 %
Students of law in the 4 semester	11 %	39 %	38 %	12 %

At the same time, in the control groups of students of the Odessa University of Internal Affairs, academic performance decreased by 5%, and of the Odessa National Medical University - by 9%. The groups of students' control groups noted: group disunity, lack of desire to “work together”, unhealthy competition, some bitterness, detachment. To correct this situation, we also conducted an exercise called “The Human Body” with students in control groups in the 4th semester.

4 CONCLUSIONS

As we can see from the results of the study, the training exercise “The Human Body” that we used during the educational process showed effectiveness and efficiency. Therefore, we recommend its use during the educational process. Since group cohesion in the student team contributes to: improving the quality of solving certain educational problems, increasing the degree of group cohesion in the process of studying a certain field of knowledge, recognizing the importance of each individuality during group decision-making.

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