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**IMPROVEMENT OF EDUCATIONAL PROCESSORS
OF MILITARY-TECHNICAL DIRECTION WITH THE
USE OF INTERACTIVE FORM OF TRAINING**

Annotation. The article describes the experience of using some interactive teaching methods that allow organizing the learning process on a practice-oriented basis and assessing the quality of knowledge in the subject area, as well as the level of formation of the core professional competencies of students in accordance with the requirements of the teacher's professional standard.

Keywords: interactive forms of education, training of bachelors, business game, case method, project activity, professional education.

Cadets enrolled in the field of “military engineering education” should be well aware of the content of curricula. Currently, the objective needs of society set the relevance of the widespread introduction of personally-oriented developmental technologies into the sphere of education. In line with this, innovations in education are associated with interactive teaching methods, the use of which is the most effective means of improving the quality of training cadets and becoming them as future officers. In this regard, it is possible to identify the main problem of this study, which is the effective organization of the educational process.

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Separately, it is possible to distinguish works on general pedagogical problems of organizing the educational process for bachelors (Makletsov S.V., & Khabibullina G.Z., 2016), (Betz N., 2014), (Aganov A.V., & Nefediev L.A. & Garnaeva G.I. & Nizamova E.I., 2015). The issues of the development of academic mobility in Russian universities were discussed from different angles by many scientists (Artamonova, Yu.D., & Demchuk A.L., 2012), (Khabibullina G.Z., & Shigapova E.D., & Rusanova I.A., 2016), etc. Separately, one can single out works on the peculiarities of teaching future teachers (Shigapova E.D., & Akhmedova A.M., 2015). Features of the organization of classes with the use of interactive teaching methods are disclosed in the works (O. Grigorash, A. & Trubilin, 2014), (Beauchamp G., & Kennewell S., 2010).

One of the leading methods of studying this problem was the theoretical analysis of the pedagogical literature, which made it possible to review the development of learning technologies. Currently, there are three forms of interaction between teachers and students: passive, active and interactive.

The passive (traditional) form of interaction assumes that the main actor controlling the learning process is the teacher, and the cadets act only as passive listeners subordinate to its directives. Communication "teacher – cadet" is carried out through surveys, independent and test papers, tests. The traditional forms of education include a lecture, story, explanation, interview, seminar. This form of interaction involves the active use of display and exercise methods. Despite the fact that the passive method is considered to be little effective, in some cases, if the teacher has experience, and students have clear goals aimed at a thorough study of the subject.

The active form of education implies that the teacher and the student interact with each other on equal terms, that the students are active participants in the classes. Active teaching methods imply a democratic style of interaction and are aimed at developing students' autonomy of thinking, initiative and the ability to competently solve non-standard professional tasks. These methods are usually widely used during seminars and laboratory classes.

So, active and interactive forms and teaching methods play an important role in the training of military engineering cadets.

The following interactive forms are used in the process of training cadets of the military engineering direction:

- a business game is an imitation of a professional environment for making management decisions in various situations (by playing, playing) according to certain rules, which allows you to develop a behavioral model and professionally significant qualities in students;

- project activity – an activity in which students acquire knowledge and skills in the process of independent planning and execution of research and project work;

- case-study – analysis of specific situations for students to develop solutions using their experience and knowledge gained in the course of previous training in physics and the methodology of its training;

- information technologies – technologies that involve the interaction of participants in the educational process through the use of computer tools and modern information and communication technologies (organizing and conducting videoconferences, solving video data, elements of distance learning).

The control and measuring materials (CIM) used in the business game are developed by the students themselves during the development of the disciplines. The game consists of three stages: 1) an examination; 2) an inspection of the work performed; 3) examination of proven work. The teacher needs to monitor the distribution of roles (students do not have to perform their own CIMs, check their own work done). The following evaluation criteria are used: the decision of tasks of the CIM, the execution of roles, the examination of works, the assessment of expertise.

The process of planning, organizing and evaluating research and project work is carried out in order to form future skills for future officers in organizing project and research activities for cadets studying during practical training.

One of the effective forms of education is problem-situational training using case-based technologies. The case study method, based on the use of models of real situations, is one of the most popular tools used in the construction of educational methods. Learning takes place through the presentation of information in the form of a problem presented in documentary form (for example, a message) or by means of verbal or visual means (for example, video, a slide show). The students are offered to understand the real-life situation, describing not only a practical problem, but also actualizing a certain set of knowledge that needs to be learned when solving this problem.

It should be noted that cases differ from the usual training tasks used in conducting seminars and practical exercises, in that they have certain features:

- as a rule, the basis of the case is the situation – a real or specially formulated teacher, the material of which is supported by the results of special studies, forms of statistical reporting and other additional information;
- for a case it is not obligatory to have clearly formulated questions;
- when analyzing a case, it is not always obvious what is essential and requires first-hand analysis, therefore one of the most important and difficult stages in analyzing a case and finding a solution is determining the main problem;
- the case may not have a unique solution;
- when a solution cannot be worked out in the generally accepted understanding of this word, the solution can be the identification and clarification of the problem, its analysis and determination of the course of conduct in the current situation.

Stages of training organization:

- preparatory (the teacher specifies the didactic goals, develops the appropriate "specific situation" and the scenario of the lesson);
- introductory (at this stage, students are involved in a lively discussion of the real professional situation, so it is very important to think over the most effective form of presenting the material for familiarization);
- analytical (a decision making process is underway);

- final (dispute, comparison of totals).

The use of this technology gives the following results:

- provides a higher motivation of ukursantov in the process of learning, and the motivation is carried out through the problem, conscious and perceived at the personal level;

- makes learning active;

- develops thinking, the ability to analyze and diagnose a problem, draw conclusions [4].

- forms a view of life as a constantly changing system with an extremely large number of variables, which, in turn, allows you to quickly adapt to the professional activity;

- develops communication skills, the ability to cooperate, a sense of leadership, business ethics;

- develops a system of values of students, professional positions, attitudes, professional attitude.

Well-designed cases can also serve as an assessment tool for the quality of education. Analysis of the solution of the case and the process of its decision by students and allows you to determine the degree of formation of some professional competencies.

Interactive forms of organizing the process of teaching cadets involve the use of information technologies, namely, computer tools and modern information and communication technologies: elements of distance education, video conferences, Internet resources, electronic textbooks and reference books, video tasks, virtual laboratory works and so on [2].

Organizing and conducting videoconferences in classrooms, installation and reporting conferences on teaching practice allows all subjects of the educational process to see and hear each other, exchange data and process them together interactively, bringing the communication to a distance to real live communication as close as possible. It should be noted that in the preparation and implementation

of a videoconference it is necessary to take into account its technical, organizational, substantive aspects.

When cadets perform independent work to consolidate their knowledge in the course of studying the disciplines of the professional cycle, the authors implement elements of distance learning, which contributes to the development of students' professionally significant skills, ability for self-development and self-education [1].

At the discretion of the teacher in the preparation of practical and laboratory classes are conducted using video, virtual laboratory work, electronic textbooks and problem books, etc. In addition, the content of the video tasks can be used by the teacher to create "cases", the solution of which is carried out in the interaction in small groups.

It is assumed that as a result of the training, the cadets will learn to create their own copyright "cases" both to describe the problem and to solve it [4].

The experience of video conferencing, the organization of distance learning and classes for solving video problems in preparing students showed that the organization of the educational process in these forms imposes additional requirements on the psychological, pedagogical, methodical training of a teacher, and the level of his information competence. The interactive dialogue, implemented during the videoconference and distance learning, allows to ensure the transition to a qualitatively new level of pedagogical activity, significantly increasing its didactic, informational, methodological and technological capabilities and contributing to the formation of professional competencies.

The main difficulty of organizing the educational process of cadets of the military engineering direction with the use of interactive forms of education is related to the fact that, first of all, it is, first of all, the time-consuming extracurricular creative work of the teacher in preparing the material, which requires time-consuming and own creative and creative thinking. – secondly, the implementation of these forms does not always fit into the established time frame of the educational process [3].

In conclusion, I would like to note that one of the main tasks of the co-education system is the need to improve the efficiency of learning material, aimed at improving the modern quality of education. Improving the quality of education should be carried out through the improvement of forms and methods of teaching, selection of the content of education, through the introduction of educational technologies focused not so much on the transfer of ready knowledge, but on the formation of a complex of personal qualities of students.

It is in the conditions of interactive learning that the cadets experience an increase in the quality of perception, mental performance, the development of intellectual and communicative personality traits: attention stability, observation, ability to analyze and sum up. Interactive learning contributes to the ability to make decisions and take responsibility for them, to work in a team and a team, to communicate productively with colleagues, expands the possibilities of the educational environment.

REFERENCES

1. Aganov A.V., Nefedyev L.A., Garnayeva G.I., Nizamova E.I. Pedagogical technology and modular education as factors for the development of higher pedagogical education // *Kazan pedagogical journal*. Kazan – 2015. -№ 3 (110) – 10-23.
2. Artamonov Yu.D., Demchuk A.L. The development of academic mobility in the universities of Russia and the GEF. // *Higher education in Russia*. – 2012.- №12. – 86-95.
3. Khabibullina G.Z., Shigapova E.D., Rusanova I.A. (2016). The European Processors of Social & Behavioural Science EpSBS. – 2016. – vol. 12. – 83-88.
4. Oga R.N. To the question of the role of oral exercises in the teaching of technical disciplines / Oga R.N. // In the collection: Innovative research: problems of implementation of results and directions of development: a collection of articles. International Scientific and Practical Conference (January 20, 2019. Perm) at 2h / – Ufa: Aeterna, 2019. // p.104-106