

FOREIGN EXPERIENCE IN TRAINING SPECIALISTS IN TECHNICAL EDUCATIONAL INSTITUTIONS

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Annotation: *For better mastery of technical disciplines by cadets, it is necessary to strive to create pedagogical conditions for enhancing professional learning. This article discusses certain issues of organizing training for cadets of higher educational institutions in technical disciplines.*

Key words: *technical disciplines, methods and forms of teaching, educational process, pedagogical conditions, specialty, training of cadets.*

INTRODUCTION

As we know, technical disciplines in higher educational institutions are usually taught by those with a technical education or who have served in the military in engineering and technical positions. And this is natural: in order to competently train cadets, for example, in the structure, principles of operation, rules of operation and maintenance of military equipment, as well as other special subjects, one must thoroughly know these disciplines. This is the first and main condition for successful learning [1].

But mastering only the content of the subject being studied is not enough. Training requires the teacher to have knowledge of pedagogy, psychology and private methods. Teaching methodology is an applied science, which means that in the learning process itself, theory and practice should not be combined arbitrarily, but in reasonable proportions.

If complex material is studied, then theory predominates in the work on it: explanation, reasoning, conversation and other methods of studying theory. When the new material being studied is consolidated, the development of appropriate skills and abilities in cadets requires its practical mastery and exercises [2].

So, how to competently organize the educational process, how to structure the teaching of special disciplines so that it is as effective as possible?

The teacher, in turn, must know the answers to questions such as:

- ☐ what provisions of military pedagogy and psychology should be relied upon in order to pedagogically competently construct training in military-technical discipline;
- ☐ what requirements of the methodology should be followed in order to make classes and other forms of training in military-technical disciplines as effective as possible;
- ☐ how to organize and conduct work on technical terms;

what requirements should a teacher adhere to for his speech so that his explanations, answers to questions, wording of assignments, and others are literate, specific, and cultural.

For better mastery of technical disciplines by cadets, it is necessary to strive to create pedagogical conditions for enhancing professional learning. Pedagogical conditions constitute the educational environment in which the educational and pedagogical process is carried out, developed, and improved.

Therefore, the study of pedagogical conditions for the implementation of vocational training tasks is associated with an analysis of the educational space in which specialists are trained.

And if these conditions sufficiently ensure the effectiveness of the educational process, then the quality of specialist training will be adequate to the educational goals set [3].

It is undeniable that the art of teaching greatly depends on the ability to correctly construct the didactic process, accurately realize learning goals, and fulfill pedagogical conditions.

The teaching level, professionalism, motivational focus on improving the quality of professional training undoubtedly influence the effectiveness of the educational process.

The main pedagogical conditions that increase the productivity of the educational process are:

- standardization of the professional educational process;
- methodological equipment of the pedagogical process, aimed at using modern forms and methods of teaching;
- information and methodological support for the teacher's self-educational activities;
- creation of continuous professional development for teachers;
- implementation of a personality-oriented approach to training;
- creation of conditions that ensure the development of scientific research and teaching and research work in the educational process.

All this places certain demands on the training of future specialists, such as:

- general intellectual development of cadets;
- general professional training;
- increasing the amount of study time for self-training (self-education) of cadets.

To do this, it is necessary to implement an activity-based approach to the implementation of educational programs.

Mastering the training program presupposes that from the first days of stay at a higher educational institution, the cadet should have a fairly clear idea of the amount of knowledge that must be obtained at each stage of training.

This is manifested in the familiarization of cadets with the training curricula, with the programs of the disciplines studied, with the content of each stage of training [4].

Standardization of education allows the cadet to be presented with a complete picture of the entire process and content of training. By analyzing this information, the future specialist is in conditions where it is necessary to demonstrate the required activity and content of training [5].

In developed countries, such as Germany, engineering education is concentrated at technical universities within the TU9 alliance and offers a wide range of specializations, from aerospace engineering to computer science and robotics.

Education, particularly in German at public universities, is free (subject to a semester fee), while English-language programs typically require tuition. Admission requires proof of German proficiency (B2) and eligibility to study (through a Studienkolleg or 1-2 years at a domestic university) [6].

Engineering education in the United States is characterized by the presence of prestigious universities such as MIT and Stanford, a focus on STEM (science, technology, engineering, and mathematics) programs that span a wide range of disciplines, and a competitive admissions process that requires high standardized test scores and academic achievement.

Tuition fees vary greatly depending on the type of university, but are high, necessitating the use of various funding sources, including scholarships and grants.

Technical sciences in France are taught at universities and specialized technical schools, such as “grandes écoles”. The education system includes both traditional university programs (bachelor's and master's degrees) and more practice-oriented diplomas, such as the Diplôme Universitaire de Technologie (DUT), awarded by the Institut Universitaires de Technologie (IUT). Prestigious technical universities, such as the École Polytechnique, offer the highest level of education [7].

In the United States and China, students have the opportunity to participate in a wide range of additional research programs organized at all levels: university, national, and international.

For example, the Massachusetts Institute of Technology (MIT) has a widespread Undergraduate Research Opportunities Program (UROP), which has also been implemented jointly with MIT and at the Hong Kong University of Science and Technology.

At the same time, other programs have a number of unique features.

Let's examine these features. American and Chinese educational programs in research-intensive fields have different ratios of elective and invariant disciplines in their curricula [8].

Thus, the above-mentioned Chinese experience demonstrates that large universities with significant research potential, uniting various institutions, have great potential to become active participants in the formation of world-class regional industrial clusters, contributing to the socioeconomic well-being of the region and the country.

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