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THE IMPORTANCE OF CORRECTLY SELECTED TECHNIQUES IN THE PRACTICAL WORK OF HIGHER MATHEMATICS IN THE INDEPENDENT, CREATIVE THINKING, CONCLUSION OF THE STUDENT (CADET)

Abstract: *the article mentions not only the stockpile of knowledge accumulated during the period of study at the institution of Higher education, which is now an important thing for students (cadets), but also the ability to independently find, understand and apply the necessary information to achieve the desired result in a particular situation.*

Key words: *independent thinking, mathematic knowledge, skills, practical training, problematic situations, «complete the sentence», non-standard tests, analysis of concepts, goal, dependence, student's language.*

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Introduction

Today, the educational goals of the society have changed their attitude to their implementation and require constant study and Re-study from the owner of the profession in accordance with the changing situation. For students (cadets), the important thing now is not only the stock of knowledge accumulated during the period of study at the higher education, but also the ability to independently find [1], understand and apply the necessary information in a particular situation to achieve the desired result.

Preparation for practical work the student (cadet) will get a job with the book, will require attention to literature, will teach thinking. In the process of preparing for practical training, certain knowledge is strengthened and clarified, and new categories are mastered, the “language” of the student is rich [2].

Practical training as a developing, active form of the educational process affects the production of independent thinking in the student, the formation of information culture. This is facilitated by the opportunity and the problematic situations created by

individual students with the teacher in practical classes. It is known that a problematic situation is aual emotional – emotional remission, which arises when conflicts in thoughts and answers to the questions that arise in the body, in finding a solution to the problem of dependence. Force students (cadets) to work [3]: apply complex issues to strong students (cadets), understandably – to the weak, that is, to the level of education (reproductive, constructive and creative levels). During the discussion, finding the answer, the solution to the problem becomes the student (cadet)'s own “discovery”. Naturally, the result of this discovery is also a relatively deep, firmly memorized knowledge [1]. Independent exit from the problematic situation has a positive impact not only on education, but also on education. The process of thinking leads to an understanding of the relevance of the future professional activity of factors, circumstances, directions, professional values, independently found in solving problematic situations.

Practical training is an effective form of strengthening knowledge on the problem under

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discussion, a holistic view of this problem, an awareness of the compatibility of philosophical conceptions with other topics within the holistic limit [4].

From the point of view of conducting methodology, practical training is a mixed, integrated form of training. It implies the use of functions such as references, information from primary sources, dictators of oral and written concepts, tests, “complete the sentence” and other tasks, “make your own logic”, which can also subjugate the teacher to some extent. If the majority of students (cadets) and the teacher

himself consider a good preparation for the practical training, then the practical training will pass successfully and lead to the expected result [5].

At the second stage of practical training, a large amount of work is carried out on deep access to the content of the problem, which is brought to the discussion by the student (cadets).

To direct independent thinking, various active teaching techniques are used by the teacher: problematic situations, “complete the sentence”, non-standard tests, analysis of concepts [6,7], and even an interactive survey.

Table 1. Non-standard test

1. $\int \frac{dx}{\sqrt{x^2+1}}$	A. $tgx + C$
2. $\int \frac{dx}{a^2+x^2}$	B. $-ctg \frac{x}{2} + C$
3. $\int \frac{dx}{\cos^2 x}$	C. $\frac{1}{4}[(x+3) - (x-1)]$
4. $\int \frac{dx}{1-\cos x}$	D. $\ln x + \sqrt{x^2 + 1} + C$
5. 1	E. $\frac{1}{a} arctg \frac{x}{a} + C, (a \neq 0)$

Table 2. Concept analysis

Concepts	Content
Indefinite integral	
Methods of integration	
Direct integration	
Integration by differential input	
Substitution Integration	

At the preparatory stage of practical training, a number of students (cadets) can take the following task – the preparation of refunds and the task of quitting with their theses, after which the teacher will determine the questions that will be put before the group [8].

The revival of practical training, that is, the activizate, affects not only the problematic situations,

but also the introduction of play styles into its macrosystem, so that its mental and educational potential rises to the top [9]. For this purpose, it is desirable to use tests in practical training.

Analysis of errors in practical training gives the teacher the material for further perfection both the content and methodical parts of practical training, the development of their own subjects [10]. Practical

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training allows to activate existing methodological tools in the study of science.

Proceeding from the requirements of today's, the use of the above methods and tools, the correct choice

of them, proceeding from the purpose of the exercise - to increase the effectiveness of practical training.

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