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THE PROBLEM OF PRACTICAL GUIDELINES IN TEACHING MATHEMATICS IN TECHNICAL SCHOOLS

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ABSTRACT

Nowadays, the problem of solving many issues in rural areas is horizontal. These issues are social, ecological, demographic, economic, cultural and educational. In order to solve these issues, there is a need for highly qualified personnel in all fields in the villages. It is impossible to be a good specialist without fundamental mathematical knowledge. It is known from experience that conducting practical training with a rich mathematical-nature connection leads to deep satisfaction. For example, for course requirements, the connection between mathematics and construction sciences can be achieved in practical exercises on the topic "Derivative and its applications", or the role of mathematics in agriculture and farms can be demonstrated in the activity "Calculation of the surfaces of flat figures".

KEYWORDS

methods of solving problems, a matter of practical orientation, practical issues, teaching vocational subjects in relation, solving problems of practical content.

Introduction

Nowadays, the problem of solving many issues in rural areas is horizontal. These issues are social, ecological, demographic, economic, cultural and educational. In order to solve these issues, there is a need for highly qualified personnel in all fields in the villages. It is impossible to be a good specialist without fundamental mathematical knowledge. It is known from experience that conducting practical training with a rich mathematical-nature connection leads to deep satisfaction. For example, for course requirements, the connection between mathematics and construction sciences can be achieved in practical exercises on the topic "Derivative and its applications", or the role of mathematics in agriculture and farms can be demonstrated in the activity "Calculation of the surfaces of flat figures". Humanity throughout its life has been and continues to implement scientific and practical approaches to the spiritual and technical development of society with the harmony of nature. Every country requires the involvement of new technologies in production for its economic and social development. For the economic stability and prosperity of the state, the development of middle-level production - small and medium-sized business is an important step. At present, the role and importance of natural sciences, including mathematics, taught there for the students of secondary education in technical schools to become skilled professionals or skilled professionals in the future, is incomparable. It is very important to examine the theoretical knowledge of mathematics with practical knowledge in technical schools. In fact, modern scientific and technical development will not become a reality if the

creation of high production technologies is not evaluated from the point of view of mathematics. No one doubts the practical application of mathematics, the implementation of its instructions through electronic calculators. In the courses of technical schools, mathematics is closely connected with practice, and its quality education provides students with the ability to solve natural technical problems in their daily activities, and to improve their professional skills in the future. The deepening of mutual relations between sciences leads to the creation of new sources of scientific research for mathematics in a broad sense, and it is necessary that the created problems are first evaluated theoretically and then verified practically.

Currently, there is no clear and coherent general attempt to approach the "Practical Problem". In modern applied mathematics, it is necessary to create a mathematical model of problems, to create an algorithm for it, and to program it. It is known from experience that college students show their activity in mathematics practical classes and solve example problems with great interest. Students seek to connect their interests with mathematical theories through practice. For practical issues, the following requirements should be set:

-Mathematical and non-mathematical problems are clearly indicated and interrelated in practical problems;

- to clarify the necessary components that the issues should not leave the course program to achieve the goal;

- the presented issues are shown through simple, understandable and realistic requirements;

- methods of solving problems are carried out based on practical methods and rules;

- the practical part of the problems should not be purely mathematical instructions.

It is known from experience that conducting practical training with a rich mathematical-nature connection leads to deep satisfaction. For example, for course requirements, the connection between mathematics and construction sciences can be achieved in practical exercises on the topic "Production and its applications", or the role of mathematics in agriculture and farms can be demonstrated in the activity "Calculation of the surfaces of flat figures".

Connecting mathematical knowledge with nature in each practical training is aimed at enriching it with problems in different areas of production. The practical exercises of teaching serve to enrich the deep spiritual and scientific outlook of the student, having the meaning of the stage. The involvement of modern computer technology deepens the practical direction of teaching.

Nowadays, the problem of solving many issues in rural areas is horizontal. These issues are social, ecological, demographic, economic, cultural and educational. In order to solve these issues, there is a need for highly qualified personnel in all fields in the villages. It is impossible to be a good specialist without fundamental mathematical knowledge. These are agronomists, zootechnicians, builders, mechanics... As a result of the division of land plots, new forms of management appeared. These are farms and households in private estates. Private entrepreneurship is developing in the villages. In addition, there is a great need for managers to distribute agricultural products in villages.

Herdsman

Issue 1. Cows, sheep and goats are raised on the farm. In total, there are 3400 goods. Sheep and goats make up 9/17 of all animals, goats make up 2/9 of the total number of sheep and goats. How many cows, sheep and goats are there on the farm?

Solving. $3400 \cdot 9/17 = 1800$ (number of sheep and goats)

1800 · 2/9 = 400 (number of goats)
1800 – 400 = 1400 (number of sheep)
3400 – 1800 = 1600 (number of cows)
Answer. The farm has 400 goats, 1400 sheep, and 1600 cows.

Agronomist

Issue 2. They planted a new variety of wheat on an area of 1260 ha and harvested 28 ts per hectare. From the previous type of wheat, 18 tons of wheat was harvested per hectare. How much was harvested in relation to the entire area?

Solving. 28 – 18 = 10 (s)
1260 10 = 12600 (s) = 1260 (t)
Answer. 1260 tons.

Farmer

Issue 3. College students participated in potato picking for 4 days. On the first day they harvested 230 kg more potatoes than on the second day, on the second day 150 kg more than on the third day, and on the third day 259 kg less than on the fourth day. If the students picked 650 kg of potatoes on the first day, how many potatoes did they pick in 4 days?

Solving.
1 day – 650 (kg)
2 days – 650 - 230=420 (kg)
3 days – 650 -150=500 (kg) 650+420+500+759=2329 (kg)
4 days – 500+259=759 (kg).
Answer. 2329 kg.

Conclusion

There is an opportunity to connect each topic of the educational material studied in mathematics with the types and types of problems of practical content related to this topic, and it is necessary and necessary to implement it. The most effective forms of vocational orientation of mathematics education, in our opinion, are:

- regular use of career-oriented problems and tasks of practical content in mathematics classes;
- explanation of the origin and essence of mathematical concepts and laws in practical examples;
- use of problems and materials of practical content known to students to strengthen the studied mathematical concepts;
- use of slides (tables, diagrams, graphs, various models, layouts, tools, reference books and their electronic samples) showing the connection of these subjects in mathematics lessons and related professional sciences teaching;
- carrying out practical work related to students' professional activities in places;
- organization of lectures and discussions about the use of mathematics in production;
- to solve problems of practical content in mathematics circles.

In the selection and compilation of textual problems, the numerical values of the problems should be based on the measurements and observations made in the field. That is, such values must be related to the real situation.

Knowledge of straight lines, planes, existence of spatial figures, straight line, distance between two points, etc. is the minimum scope of basic mathematical knowledge for everyone. The main task of mathematics is to achieve the correct formation of definitions, theorems, laws, formulas and their application in the minds of students and help in learning the laws of nature and society. A mathematics curriculum for technical schools should be free from demanding rigorous proofs for the propositions that are difficult for most students to understand. When describing the properties of mathematical concepts, it is necessary to pay attention to the properties of higher practical importance; it is necessary to enrich new knowledge with ways of practical application of the learned material. For example, the function and its properties in the field of construction, mechanical engineering and other fields; It should be noted that the relationship between straight lines and planes is used in architecture, mechanical engineering, pipe laying, etc. At every step, it is desirable to pay attention to the visuality and convenience of education, to be free of questions and issues that are difficult for the majority of students to understand, despite being attractive. Academician A.A.Samarsky wrote, "Mathematics should be studied not as a set of rules and formulas, but as a philosophy, a specialist's way of thinking, as his work tool." We believe that mathematics textbooks and study guides should have teaching materials that reflect:

- general mathematical training;
- consistency of mathematical knowledge with production education;
- professional orientation;
- determining students' interest in labor education

the sufficiency of the special issues that give.

Relationships between students' mathematical and professional preparation
based on the following requirements:

- the system of concepts of mathematical science and cognitive activity
methods, with production training or with certain occupational groups
to be connected;
- the formation of a scientifically based practical imagination of students about the results of work in the fields of science and production, their interrelationship in the relevant profession;
- to the interaction of mathematical and professional training. These requirements are related to the technical content of mathematical education, teaching and life; by strengthening the connection between theory and practice; taking into account the chosen profession, in the means, form and content of teaching, mathematical and vocational education with the implementation of internal relations of science and interdisciplinary relations; is carried out by studying the guidelines of the chosen profession.

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