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METHODS AND FOUNDATIONS OF TEACHING GEOMETRY IN PRIMARY SCHOOL MATHEMATICS

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Abstract: Although the issues of organizing problem-based teaching of students in analytical geometry and improving their learning activities are covered in a number of scientific literature, in most cases, the main attention is paid to independent work performed in the classroom or outside the classroom. The problems of activating their learning through non-traditional problem solving and self-assessment have hardly been developed. However, working on such issues helps to strengthen the knowledge gained during the lesson, expand it further and enrich it with new knowledge. Control of knowledge through self-assessment increases students' interest in learning, encourages learning, and makes it possible to democratize the educational process.
Keywords: geometry, elementary mathematics course, method, example, solution.

INTRODUCTION

The didactic goal of the complex technology of teaching analytic geometry in the plane is to provide future mathematics teachers with professional knowledge and skills in this subject, taking into account the national and regional characteristics of the educational process in higher educational institutions of pedagogy. The planned results of training in analytical geometry are presented in the form of clearly expressed requirements for the knowledge and skills of students for each module of the course.

The task of this technology is not only to develop the system of science-related knowledge, spatial imagination, logical thinking, the ability to analyze, generalize, prove, and classify, but also to realize the student's personal opportunities, abilities and potential, to realize his creative potential and is to create conditions.

MATERIALS AND METHODS

One of the unique features of educational technologies is the ability to measure the goals and achievement of these goals based on the established diagnosis. In the developed teaching technology, the quality of knowledge is measured by categories such as level of mastery, thoroughness of mastery, and awareness. Special methods are used to measure the level of formation of professional skills.

Taking into account the professional orientation of future teacher training, we set the following teaching goals for the plane analytic geometry course:

- higher theoretical and practical level of students' HEI program
ensuring their possession;
- to teach how to solve mathematical problems, tasks and exercises of different levels of difficulty and to use the apparatus of analytical geometry in the plane in solving other branches of geometry, mathematical sciences and practical tasks;
- bringing the school geometry course to the knowledge system, illuminating the school geometry course from a higher perspective;
- development of geometric thinking and improvement of acquisition of "geometric" language;

- mastering integrative geometric and methodical knowledge in their unity and interrelationship.

RESULTS AND DISCUSSION

The content of education is determined by the curriculum and educational programs for this subject in accordance with the State educational standard of higher professional education. When developing the teaching content, it is necessary to observe the mandatory minimum content for this subject. The content of a separate lesson is determined taking into account the need to reflect the goals and tasks set by the teacher, the specific features of this subject in the content of the subject.

When choosing educational material, it is necessary to take into account the existing educational opportunities of students and the direction of specialization. The principle of professional-pedagogical orientation of the course requires the inclusion in the teaching content of such elements that contribute to the formation and development of professional skills of future mathematics teachers, and this component must be related to the content of the course. The principle of taking into account the national-regional characteristics of students requires that the content of the course be presented taking into account the national characteristics of students [2].

Teaching tools. Every student has the right to choose his/her individual form of study. In this case, the student prepares a plan of educational activities in advance with the teacher, one of its components is the list of control measures and the deadlines for their implementation (it is indicated when, what and how much material the teacher will control the material). Traditional organizational forms prevail in this teaching technology, and individual teaching forms are used.

The dominant method at the initial stage of teaching is the explanatory-illustrative method. Later, this method is combined with elements of dialogical and problem-based methods.

Regarding the educational process as a pedagogical system, it is appropriate to talk about subject-subject relations, because the main requirement for students in the learning process is their activity and interest.

In this teaching technology, which is based on an activity-based approach to the educational process, the relationship between the teacher and the student develops in the conditions of joint activity, knowledge and skills are formed, and the student's motives and interests in learning also change.

Students' attitude to science depends on the teacher's attitude and his ability to communicate with students. Cooperation between a teacher and a student helps to maintain interest in science, provides a stable, positive emotional basis of the teaching process.

Management of the educational process. We are experts in the teaching process itself

P.Y. We interpret based on Galperin's activity-based theory of teaching [3]. Reading is a system of certain types of activities, mastering of which occurs as a result of its repeated repetitions. In this case, the student is the subject of joint activity with the teacher.

In the teaching technology of analytical geometry in the plane, the system of methodical works of the teacher is organized in such a way that there is a constant exchange of information between the subjects of the teaching process. Developed technological maps of lectures and practical sessions, rating control tables allow the teacher to organize students' activities in a clear and goal-oriented manner.

This training technology provides for the block-module construction of the control system based on the ideas and rules of the control rating system. The use of electronic textbooks, which allow the student to independently determine the level of his knowledge on the subject, helps to quickly and efficiently carry out control. The use of modern information technologies accelerates the progress of the educational process, data acquisition and processing [5].

CONCLUSION

As a result of the study of theoretical issues related to the development of pedagogical technologies and their application to the educational process, today the educational technology is a systematic method of designing, implementing, evaluating, reforming/correcting and then reproducing the educational process. it was concluded that The analysis of different approaches to the development of teaching technologies allowed us to express a working definition of the teaching technology of analytic geometry in the plane.

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