DETERMINATION OF THE QUALITY OF MASTERING AN INTEGRATIVE COURSE AND THE LEVEL OF METHODOLOGICAL AND MATHEMATICAL TRAINING OF A GRADUATE

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ABSTRACT

Investigating the ways of methodical and mathematical integration in solving the problem of elementary teaching of mathematics, first of all, it was found that the methodology of teaching mathematics as a science has a pronounced integrative nature. Considering the methodology of teaching mathematics as a science about the development, education and upbringing of students in the process of studying mathematics, we emphasize that the methodology of teaching mathematics appeared at the intersection of mathematics, pedagogy and psychology. Moreover, the methodology of teaching mathematics with good reason can be regarded as an example of interdisciplinary integration at the highest level - systemic.

Keywords: Mathematics, methodology, integration, education, equipment, training, monitoring.

INTRODUCTION, LITERATURE REVIEW AND DISCUSSION

For the successful implementation of the integrative course "Mathematics and Methods of Teaching Mathematics for Primary Schoolchildren", it is necessary not only to implement its methodological equipment, but also to organize constant monitoring of the quality of assimilation of the relevant program material, which can and should also be integrative in nature. This monitoring can be carried out in various forms and at different stages of training. The first stage of such monitoring is the current control over the implementation of the tasks offered in the classroom. As a result of the implementation of this form of control, the teacher can receive information about the mastery of the lecture material by the students, about the correct understanding and use of the appropriate terminology and symbols, about the ability to apply the obtained theoretical knowledge to solving practical problems, etc.

The next stage of monitoring is intermediate control, which is carried out, as a rule, in the form of a control work or colloquium. This type of control allows you to assess the level of assimilation of sufficiently large and logically complete sections of the program. The results of intermediate control, taking into account the results of current control, allow the teacher to objectively and fully carry out the intra-semester certification of students.

The end of the semester is accompanied by another form of control - semester, which is carried out, as a rule, in the form of credit. Students must report on the material studied during the semester. A more objective picture can be obtained if the results of current and intermediate control are involved for the final semester certification. This can be done in the form of a cumulative assessment, which consists of all previously received points.

At the end of each course, the curriculum provides for another form of control - a course exam. When conducting the exam, students should be offered assignments that should be comprehensive, integrative. They should be structured in such a way that students can

demonstrate both knowledge in the field of mathematics and the corresponding methodological knowledge and skills that are directly related to the proposed question in mathematics. On exams, students can be offered the basic questions of the initial mathematics course to consider them from two positions: mathematical and methodological. For example, the question can be formulated as follows: "Natural numbers of the first ten and the number O (quantitative aspect)." In this case, students should describe the main provisions of the corresponding mathematical theory, which make it possible to construct a system of non-negative integers and outline the essence of the methodological approach that is based on this theory.

Below is a list of knowledge and skills that should be assessed at any of the above level of control. For this, we will use the materials developed by S.E. Tsareva, since they fully allow us to solve the problem. So, “should be evaluated:

a) knowledge

• definitions of concepts, formulations of properties and standard (generally accepted) forms of designation of mathematical concepts - in mathematics-science and in the school mathematics course;

• algorithms for solving mathematical problems in accordance with the program of the university and the programs of mathematics courses for elementary school;

• "school" characteristics of the concepts of the studied topic and algorithms;

• features of a mathematics lesson, criteria for evaluating the effectiveness of a lesson;

• methodological techniques for creating a positive motivation for learning mathematics, the formation of mathematical concepts and computational skills, learning to solve problems, etc.

b) skills

• solve "school" and "university" mathematical and pedagogical problems (computational, plot text, geometric, set-theoretic, etc. educational pedagogical situation, etc.);

• substantiate, analyze and research solutions of mathematical and pedagogical problems in a form that provides assistance to an elementary school student in solving, taking into account the individual characteristics of this student;

• translate mathematical statements into a language accessible to children, without distorting their essence and meaning;

• to find in the texts for students the characteristics of mathematical concepts, mathematical statements, to translate them from the language of the school textbook and manuals into the language of mathematics, checking the correctness and consistency of the information contained in these texts;

• to receive information from educational literature, to use the literature to develop mathematical and pedagogical views and methods of action;

• to observe the activities of students and teachers (during the period of pedagogical practice, presented in the video, played in the lesson); analyze such observations, make adequate pedagogical conclusions based on the results of the analysis;

• select and compose tasks for students that correspond to the given pedagogical goals and characteristics of students;

• to design scripts of lessons and fragments of lessons from the standpoint of progressive pedagogical concepts and technologies;

• "play" lessons of mathematics and fragments of lessons in the classroom, conduct mathematics lessons at school during teaching practice [4; p.27-29].

Thus, a special place in the issue of control over the assimilation of this course is occupied by the State Final Attestation. Its forms are determined by the current curriculum. At present it is the State exam and the defense of the thesis. At the same time, the State exam should be

comprehensive in all the main areas of teacher's professional training, and the topic of the thesis can be chosen by the student at his discretion. The content of the complex exam program is determined by the university, but the distinctive feature of the questions of this program, in any case, should be their integrative nature.

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