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IMPROVING METHODOLOGICAL PREPARATION OF FUTURE PRIMARY CLASS TEACHERS ANALYSIS OF MECHANISMS

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Annotation. The effectiveness and quality of a teacher's work depends on many factors, among which his methodological preparation is of great importance. This is due to the fact that it is the methodological activity of the teacher that has direct access to students, to the organization of their educational activities, to the design of the educational process. In addition, in the process of methodological training, those skills are formed and implemented that contain the knowledge acquired by students in the psychological-pedagogical and special (in particular, mathematical) courses.

Keywords: Primary education, preparation, analysis, mechanism, teacher.

In pedagogical science, there is a wide range of research devoted to the professional training of students of pedagogical universities. There are several directions in which pedagogical activity is being researched.

The first direction is the problem of teacher training, including for primary classes (O.A. Abdulina, N.M. Egorova, G.A. Zasobina, N.V. Kuzmina, P.R. Masyrova, T.S. Polyakova , G. I. Sarantsev and DR-)

The second direction is connected with the study of the psychological characteristics of the teacher's personality (S.I. Arkhangelsky, V.A. Krutetsky, V.A. Slastenin, A.I. Shcherbakov, etc.).

The process of formation of methodological skills was considered in the works of M.I. Aizenberg, G.A. Zasobina, N.B. Istomina, N.A. Kuzmina, G.E. Muravieva, S.V. Selivonik, T.A. Terekhina, N.D. Tsareva and others.

Much attention has recently been paid to the problem of pedagogical skills and creativity of the teacher (A.K. Artemov, V.I. Zagvyazensky, J3.N. Zankov, V.A. Kan-Kalik, Yu.N. Kulyutkin, E.I. Lyashchenko, S.I. Tadiyan and others).

The indicated directions do not exhaust the wide range of problems associated with the study of pedagogical activity and the problem of training future teachers. A feature of all these areas is the teacher's orientation towards the independent organization of the educational process, the ability to adapt various training programs, including developmental education programs, to school practice. Efficiency in the implementation of the principles of developmental education

largely depends on creativity in the activities of the teacher. In this regard, it is advisable to form a holistic vision of the educational process among future teachers, including the ability to foresee the results of using certain methodological teaching aids, possible difficulties for students, etc. Thus, in the range of problems associated with the preparation of future teachers for professional activities, one can single out the problem of pedagogical forecasting.

The concept of forecasting in a broad sense is identical to the concept of "foresight", which is defined as any information about the future. Forecasting in the narrow sense is a special scientific research aimed at obtaining reliable advanced information about the object of forecasting. Pedagogical forecasting is aimed at obtaining advanced information about the development of relevant pedagogical objects in order to optimize the content, methods and organizational forms of the educational process. Such information acts as a tool that allows you to anticipate possible changes in the organization of the learning process, predict its results and make the necessary adjustments. In forecasting, one should distinguish between the result fixed in the form of a forecast, which is a hypothesis about the object of study under consideration, and the process itself leading to this result. At the same time, the probability of obtaining a reliable forecast significantly depends on how forecasting is organized.

The problem of forecasting is currently receiving much attention in the psychological and pedagogical literature (S.I. Arkhangelsky, B.S. Gershunsky, V.I. Zagvyazensky, L.A. Regush, I.P. Podlasy, V.A. Slastenin and etc.). In particular, it is noted that forecasting is an integral component of pedagogical activity. To prove this, one can use the data on the study of the professional functions of a teacher, which are given in the works of N.F. Go-nobolina, N.V. Kuzmina, V.A. Slastenina, A.I. Shcherbakova and others. The results of these studies show that the content of each function of a teacher (information, organizational, constructive, etc.) necessarily implies the ability to predict.

There are studies that consider pedagogical activity as a process of purposeful management of the educational activities of students (P.Ya. Galperin, T1.F. Talyzina, A.I. Raev, etc.). Management presupposes a clear knowledge of the goals to which it is directed, long-term plans for the implementation of these goals, a system of means that provide feedback and adjust the impact on the way to achieve the goals. The teacher, in the process of managing the educational activities of students, needs to justify the setting of the goal of the lesson, the need to select methodological means to achieve the goals. When drawing up a lesson plan, each teacher needs to answer a number of questions: how to make educational material more accessible, how to organize developmental education, what difficulties students may encounter, what results can be expected, etc. All this has to do with forecasting. It allows the teacher to reasonably build the educational process, optimally set learning objectives, plan the learning process and make adjustments to it. This provision is very important from the point of view of methodology, since in the conditions of a qualitative renewal of the content of school education, the task of training specialists capable of solving issues related to the organization and management of the educational process at a high theoretical and methodological level, i.e. creatively related to their work, is relevant. The content of creativity, its methods and the prospective evaluation of its results are interconnected with the teacher's ability to carry out prognostic activities. There is a unity of the essential characteristics of creativity and forecasting: obtaining a new one, the absence of an action algorithm, focusing on the future. Thus, the professional significance of forecasting as an element of creativity in the teacher's activity actualizes the need to form

prognostic skills in future primary school teachers. By predictive skills we mean the ability to make predictions at the stage of choosing methodological teaching aids in order to obtain the best results for students in teaching mathematics.

However, traditional university education does not provide for the formation of these skills in students. An analysis of the literature and school practice allows us to note that many students and teachers cannot reasonably make a forecast and plan their future activities, foresee possible difficulties for students that arise in the educational process, which leads to methodological errors of the teacher. This is also confirmed by our ascertaining experiment with students of the correspondence department of the primary school faculty who have different work experience at school (see 2.4). Its results indicate a low level of formation of prognostic skills that are part of prognostic activity.

So, forecasting in pedagogical activity is of great practical importance. However, many aspects of this problem have not yet been studied or studied insufficiently and require special studies. So, for example, the methodology for the formation of prognostic skills in future primary school teachers in teaching mathematics remains almost undeveloped, which does not contribute to increasing the effectiveness of the learning process. Our study aims to fill this gap.

Thus, the relevance of this study is due, on the one hand, to the need for teachers to carry out prognostic activities in the process of teaching mathematics to younger students, and on the other hand, to the insufficient formation of their prognostic skills and the lack of development of the problem under consideration in the system of methodological training of primary school teachers.

The research problem is to find ways and means to improve the preparation of students of primary education faculties for prognostic activity in teaching mathematics to younger students.

The research was carried out in the section of mathematics "Multiplication and division of numbers". The choice of the named section is due to the fact that it is one of the most difficult in the primary school mathematics course, as indicated by the numerous mistakes made by students in the calculations. Algorithms for multiplication and division are rather peculiar and cumbersome, very often children learn them formally. In order to ensure the conscious assimilation of these algorithms by students, it is necessary to determine what knowledge and skills underlie the algorithms, to anticipate what difficulties students may have when considering various cases of multiplication and division, and to be able to organize the learning process in such a way as to obtain the planned result. i.e. forecasting. It is assumed that students can, by analogy, apply their knowledge in other areas of mathematics.

The purpose of the study is to identify the theoretical foundations of teaching forecasting and develop a methodology for developing students' ability to predict the process of teaching mathematics in primary school.

The object of the study is the process of methodological preparation of future primary school teachers for teaching mathematics to younger students.

The subject of the study is the prognostic activity of future primary school teachers and the methodology for developing their prognostic skills.

Such a methodology is built on an integrated basis, in the concept of management and the unity of content and process. (A.K. Artemov, V.V. Davydov, V.I. Krupich, E.I. Lyashchenko, etc.). This means that the teaching methodology is built not only taking into account the logic of

the content, but also the logic of mastering this content with the involvement of knowledge of didactics, psychology, and mathematics.

Since the skills of students are formed and manifested in their activities, we also rely on the concept of educational activity (P. Ya. Galperin, V. V. Davydov, N. F. Talyzina, etc.).

In accordance with these concepts, the theoretical provisions of the methodology for the formation of students' prognostic skills are considered, which is built as a methodology for teaching the ability to solve prognostic problems. These are tasks whose purpose is to build a forecast. They act as a means of developing predictive skills.

The formation of any action is more effective if it is built taking into account its operational composition, as well as the laws of its formation (P. Ya. Galperin, P. A. Shevarev, etc.).

Based on this provision, we formulated the following hypothesis: if we single out the actions that are part of prognostic activity and, on this basis, develop a methodology for the formation of students' prognostic skills in teaching mathematics to younger students, this will improve the quality of methodological training of future primary school teachers.

In the process of studying the problem and verifying the validity of the formulated hypothesis, it was necessary to solve the following tasks:

1. To study the state of the problem of forming the ability to predict according to literary sources and school practice.

2. To identify the theoretical foundations of the methodology for the formation of the considered skill in future primary school teachers in teaching mathematics to younger students.

3. On the basis of the selected theoretical provisions, develop a methodology for the formation of students' ability to predict.

4. Check experimentally the effectiveness of the developed methodology for the formation of predictive skills.

To solve the tasks set, the following research methods were used: analysis of psychological, pedagogical, methodological and educational literature; questioning teachers and students; lesson analysis; pedagogical experiment, including analysis and statistical processing of its results.

The study was carried out in stages.

At the first stage, the study and analysis of psychological, pedagogical and methodological literature on the problem of the formation of prognostic skills was carried out in order to identify the theoretical foundations of the corresponding teaching methodology, while the state of the problem under study in the practice of work was studied, and a stating experiment was carried out.

At the second stage, a system of prognostic tasks was developed, aimed at developing the appropriate skills in students and the methodology for its application in the study of the section “Multiplication and division of numbers”.

At the third stage, a formative experiment was carried out in order to test the effectiveness of the developed methodology.

The scientific novelty of the study lies in the fact that in it the problem of improving the methodological training of future primary school teachers in teaching mathematics is solved by purposefully forming their prognostic activity.

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The theoretical significance of the study is to highlight the actions that make up the content-operational component of the teacher's prognostic activity; in the development of a system of prognostic tasks and methods for the formation of prognostic skills in students in teaching mathematics to younger students.

The practical significance of the results of the study lies in the fact that a methodology has been developed for the formation of prognostic activity among students in teaching mathematics based on a system of prognostic tasks, in accordance with which a special course has been developed for students of the Faculty of Primary Education. The materials of the study can find practical application in the study of the compulsory course of mathematics methodology, when reading special courses and special seminars, and directly in the practical activities of a teacher in teaching mathematics to younger students.

The validity and reliability of the results obtained are based on the methodological foundations of the theory and methodology of teaching mathematics, taking into account the current provisions of the psychology of learning; application of research methods adequate to its goals, objectives and logic; correspondence between the results of theoretical analysis and the conducted experiments.

Conclusions. Theoretical and experimental study of the problem of finding ways and means of teaching students of pedagogical universities of prognostic activity, aimed at improving their methodological training, made it possible to draw the following conclusions:

1. The research hypothesis was confirmed: if we single out the actions that are part of prognostic activity and, on this basis, develop a methodology for the formation of students' prognostic skills in teaching mathematics to younger students, this will improve the quality of methodological training of future primary school teachers.

2. The theoretical foundations of the methodology for the formation of prognostic skills are revealed. On their basis, a specific methodology for the formation of such a skill in students in connection with teaching mathematics to primary school students has been developed.

3. Systematic purposeful formation of prognostic knowledge and skills occurs in the process of solving prognostic problems of various types. Their successful solution is possible only on the basis of a synthesis of psychological, pedagogical, methodological and mathematical knowledge.

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