

HISTORY OF DEVELOPMENT OF MATHEMATICS TEACHING METHODOLOGY AND WAYS OF ITS IMPROVEMENT AND DEVELOPMENT IN THE FUTURE

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Abstract: This article presents the history of the development of the methodology of teaching mathematics and the recommendations of scientific research on ways of its future improvement and development. The article also contains the scientific proposal and practical recommendations formulated by the author on this issue.

Key words: Arithmetic, navigation, properties, concepts, algebra, geometry, trigonometry.

Arithmetic as a teaching subject appears long ago and has taken a strong place in school education. Arithmetic teaching methodology was created much later. Until the end of the 18th century, the methodology of arithmetic did not exist as an independent study guide. The development of arithmetic teaching methodology was motivated by the "Mathematics and Navigational Sciences School", which was the first general education school in Russia, established in Russia (1701) according to the instructions of Peter I. This school accepts teenagers and young adults from 13 to 18 years old.

In 1703, Leontiy Filippovich Magnisky created a textbook "Arithmetic, sirech nauka chislitel'naya" specially for the school of mathematics and navigation. It was a great book for its time. During the first half of the 18th century, several generations learned arithmetic from this book.

Magnisky's great merit was that he introduced for the first time in his "Arithmetic" the Arabic system of numbering, which supersedes the Slavic numbering system that had been in use until that time.

In Magnisky's Arithmetic, not only arithmetic information is given, but also material on algebra, geometry and trigonometry. At that time, the branches of mathematics were not clearly differentiated enough.

In the course of Magnisky arithmetic, no proofs are given, explanations, rules are presented with emphasis or statement. This was the main drawback of Magnisky's textbook. Of course, such textbooks did not satisfy both students and teachers. The material of the book was presented in the form of questions and answers in the form of recipe definitions and rules.

The value of the ideas given in the following works in the creation of the arithmetic methodology and the ones that are relevant to our time are as follows:

1. The educational material is placed by topics. In particular, three concentrations are distinguished: the first ten, the first hundred, multi-digit numbers.

2. The first successful attempt was made to bring the student to master the laws and properties of arithmetic operations through oral and written calculation methods. When learning to add within 10, children learn the substitution law of addition. Calculation methods of addition and subtraction within 100 are revealed based on the rules of adding and subtracting a number to a sum and subtracting a sum from a number.

3. Students' independence is emphasized and much attention is paid to it. Sheets of the book "Arifmeticheskie listki" (there are 2523 problems in the book) are specially used to guide students' independent work and individualize teaching, these sheets are pasted on cardboard and distributed to students.

4. Demonstration is widely used, especially in the first steps of education.

5. Later, the foundation was laid for the theoretical foundation and practical development of the method called "method of learning actions".

About the history of teaching arithmetic

Arithmetic appeared very early as a subject of education and had a clear and strong place in the home and school. The teaching methodology was created much later.

In the 60s of the 19th century, new directions of education began to emerge. Paulson's book "Arifmetika po sposobu nemeskogo pedagoga Grube" was published. It was created by the Russian Methodist V.A. Yevtushevsky reworked it and used it in Russian primary schools.

Later V.A. Latishev created a methodology for learning arithmetic operations. He tried to simplify the operations in the book "Rukovodstvo k prepodavaniyu arifmetiki" (1880).

After that, A.I. In his book "Methodology", Goldenberg recommended studying actions in three areas:

a) decimal; b) one hundred; d) multi-digit numbers.

Arithmetic operations, their properties, instructional explanation, arithmetic book, verbal calculation table, etc. gave many methodological recommendations. Based on this, until the beginning of the 20th century, there were many changes in the field of creating and teaching arithmetic. Arithmetic has been proven to be at the forefront of mind development.

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