



## FORMATION OF MATHEMATICS TEACHING METHODOLOGY AS A SCIENCE IN PRIMARY GRADES

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### ABSTRACT

*This scientific article describes the formation of mathematics teaching methodology as a science in elementary grades.*

In recent years, teaching mathematics at school in our country, especially in the primary education system, has undergone huge changes in terms of its scope and importance. For example, Article 12 of the Law "On Education" of August 27, 1997 is devoted to the teaching of grades I-IV. Clause 3.3.1 of the "National Program of Personnel Training" in the Republic of Uzbekistan shows the plans for the organization of training in grades I-IV in the development of continuous education. Setting a completely new goal for school education leads to a radical change in the content of mathematics education. Mathematics requires development both in the content of the elementary course and in the methodology of using textbooks and manuals. The word mathematics is derived from the Greek word "mathema", which means "knowledge of science". The object of study of mathematics consists of spatial forms and quantitative relations between them. The purpose of the school mathematics course is to provide students with a system of mathematical knowledge, taking into account their psychological characteristics. This system of mathematical knowledge is delivered to students through certain methods (methodology). "Method" is a Greek word, and "method" means "way". Mathematical methodology is a branch of pedagogic science that is part of the system of pedagogic sciences. Setting new objectives in teaching led to a radical change in the content of mathematics teaching. In order to provide effective mathematics education to elementary school students, it is necessary for the teacher to acquire and thoroughly master the methodology of teaching mathematics in elementary grades. The subject of the methodology of primary education in mathematics consists of the following:

1. Justification of the purpose of teaching mathematics (why mathematics is taught).
2. Scientific development of the content of mathematics teaching (what to teach), how the level of knowledge presented in one system is distributed in accordance with the characteristics of the age of students, consistency is ensured in learning the basics of science,



learning for educational work the load caused by training is eliminated, the content of education corresponds to the specific knowledge capabilities of students.

3. Scientific development of teaching methods (how to teach, that is, what is the methodology of educational work so that students acquire the economic knowledge, skills, abilities and mental activity that are needed today must be?

4. Teaching tools - use of textbooks, didactic materials, demonstration manuals and educational equipment (how to teach).

5. Scientific development of educational organization (how to organize lessons and extracurricular forms of education).

The purpose, content, methods, tools and forms of teaching are complex in the main content of methodological aspects, which can be illustrated with a unique graphic. The methodology of teaching mathematics is inextricably linked with other subjects, first of all, mathematics - its main subject. Modern mathematics relies on set theory to support the concept of natural numbers. We come across the following tasks given for the first grade of the modern mathematics textbook for elementary grades: "Paint as many cells in one row as there are trucks in the picture, and as many cells in the 2nd row as there are buses in the picture paint". Completing such a task encourages the child to match the elements of the indicated sets with each other, which is important for the formation of the concept of natural numbers. MOM (mathematics teaching methodology) depends on the general mathematics methodology. The laws established by the general mathematics methodology are developed taking into account the age characteristics of the younger students. The elementary school is inextricably linked with the science of pedagogy and new pedagogical technology, and relies on its laws. There is a two-way connection between MOM and pedagogy. On the one hand, mathematics methodology relies on the general theory of pedagogy and is formed on this basis. This case ensures the unity of methodical and theoretical approach in solving the problems of teaching mathematics. On the other hand, in the formation of general laws of pedagogy, it relies on the information obtained by private methods, which ensures its viability and accuracy.

Thus, pedagogy is "fed" from the specific material of methodologies, it is used in pedagogical generalization and, in turn, serves as a guide in the development of methodologies. Mathematical methodology is related to pedagogy, psychology and youth psychology. Primary mathematics methodology is related to other science methodologies of education (methodology of teaching mother tongue, science, art, work and other subjects). It is very important for the teacher to take this into account in order to properly implement interdisciplinary communication in teaching.

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