STUDY OF THE DEVELOPMENT AND HISTORY OF THE METHODOLOGY OF TEACHING MATHEMATICS IN HIGHER EDUCATION

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Annotation:
Is in this article. What mathematics studies (object) consists of the spatial forms of available things-in matter and the quantitative relationships between them. The main task of teaching mathematics is to ensure that students firmly and consciously acquire the system of mathematical knowledge and skills necessary in everyday life and professional activities.

Keywords: the history of the emergence of Mathematics, elementary mathematics, higher mathematics, the development of mathematics in Central Asia and the history of its teaching are answered to some extent in the title Book.

Introduction

The word mathematics is derived from the ancient Greek word mathema, which means "to know science". What mathematics studies (object) consists of the spatial forms of maijud things-in matter and the interdependent relationships between them. In the present period, mathematics is conditionally divided into two:

1) elementary mathematics
2) higher mathematics.

Elementary Mathematics also has an independent content, which is built on the basis of elementary concepts from different branches of higher mathematics, namely theoretical arithmetic, number theory, higher algebra, mathematical analysis and the logical course of geometry. Higher mathematics, however, is applied to real spatial forms and to find a mathematical legitimator that is full of i quantitative relationships and reflects deeply. The science of elementarmatematics constitutes the aso of the school mathematics course. The purpose of the school mathematics coursinng is to convey to students through a certain method (methodology) the system of ipatermtic knowledge, taking into account the psychological characteristics of connecting. (The term method is a Greek word meaning "way"). The methodology of mathematics is one of the main sections of pedagogy and didactics, an independent science that studies the laws of teaching, learning mathematics corresponding to educational goals at the level of development of our society. The mathematical methodology answers the following three questions related to the educational process:

1. Why do you need to study mathematics?

2. What to learn from mathematics?

3. How to learn mathematics?

As we know, in mathematics lessons, students learn to draw conclusions independently from the first days of study. They draw conclusions first as a result of observations, and then as a result of logical thinking. These conclusions are confirmed by mathematical laws.The task of the mathematics teacher is to educate students in their interests in the study of the laws of Mathematics, while forming independent logical thinking skills.

Formation of Mathematical Thinking and mathematical culture in students. Each mathematical conclusion studied in mathematics lessons requires a cage, which in turn is represented by a huge number of mathematical concepts and laws. Students stage these laws, during their extensive study, their logical thinking develops, cultures of mathematical inference are formed. a mathematical culture is formed in students by teaching them that they can correctly express thoughts that they want to express in symbolic language and, conversely, that mathematical laws expressed in symbolic language can be expressed in their native language.Experts note that a student who has mastered mathematics well will have a higher level of analytical and logical thinking.

The main task of teaching mathematics in a comprehensive school is to ensure that students firmly and consciously master the system of mathematical knowledge and skills necessary in everyday life and professional activities. It is known that this interest is steadily decreasing when a large proportion of schoolchildren move into the upper classes with a high interest in mathematics in the elementary grades. This is a consequence of the increasing complexity of mathematics programs on the one hand, and the slowness of teachers in using additional interesting materials within the program to gain student interest on the other hand is the reason. Farabi is credited with developing the principles of scholarship, instruction, comprehensiveness, and consistency of teaching based on examples of mathematics.Illuminated the essence of the cognitive forms of the cognitive process in wafan. In his opinion, these processes are formed as laws, and compliance with them improves thinking and prevents gross errors in the complex process of cognition. The process of cognition must go through the logic of thinking. The object of logic is focused on comprehension, and the essences that the mind reaches the analysis serves to determine the correctness of the thought process. Logic is a weapon, and it helps to know the pomegranate exactly. Often in the lesson, the teacher pays attention to some aspect of the task of maturing the teaching. For example, in order to activate the process of cognition, it uses tasks that increase elegance and perception, or forms methods of analysis and synthesis by solving mathematical problems, or creates positive motives for reading by means of conducting a training session in an interesting form. In a math class, the task of maturing becomes the leader

when the teacher recommends didactic games, asking tasks, problematic questions that develop elegance and resourcefulness to students. Teaching computational skills, and mathematical operations, becomes an auxiliary task. There is a good deal of interest in mathematics for students, one of which is the recommendation to ask questions in which imagination can arise and which he can make assumptions. For example: "how long can it take for the pool to be filled with water?"Similar to this, questions linked to an event that occurs in life develop ability at a time of interest," he explained. In this, the reader, while not knowing the exact answer, puts forward various assumptions, taking into account the area of the pool, the speed of the water, the width of the pipe. The science of mathematics is an ancient and constant whimsical science. It has been developing and progressing since the emergence of the Society of man. There is no field in the present, let it be that mathematics has not penetrated into it. In the rise of Mathematics at this level, of course, the past is the beginning of our ancestors, including Alkhorazmiy, Beruniy, Al-Farghani, Ali Qushchi, Al-Koshiy, Ibn Sino, Ulughbek and X.k. we also recognize that the services of those are great. It is imperative that we regularly familiarize ourselves with the scientific heritage of allomas, to tell our readers who are the heirs of our future that the scientific resources created by our ancestors for centuries, the works created by them are preserved and studied by our people, our state. Zero, A. As casirius said,"it is good to return to Moses to do business." The longer the history of the emergence of mathematics goes back to Times, the longer the history of the study of this discipline, its teaching, is also so long. How was the teaching of mathematics carried out in the madrasas of the territory of Central Asia from the 15th to the 20th centuries? To this question S.A.To some extent, Akhmedov's book — from the history of mathematics and its teaching in Central Asia-was answered. It cites that the Madrasa was considered the higher religious school of the time. As long as the madrasa provides secular knowledge along with religious knowledge. In the madrasa, subjects are taught on the basis of a long-standing procedure, although there is no qatiy program and curriculum. It also teaches Arabic grammar, Arabic religious books, medicine, geography, astronomy, and arithmetic, algebra, and geometry under the name "calculus".

In the form in which the scientific works of medieval eastern mathematicians were perfected, they were applied as a program (study-plan) in the madrasa. For example, Khwarazmi was taught in the madrasa in the same order, starting with hesitation and halving of numbers and ending with the practice of rooting after stating the decimal system of writing numbers in his works. The rest of the topics are also described in the order of works written by Khwarazmian and later medieval mathematicians. The teaching of mathematics in madrasas was based on the data provided. The last part of mathematics taught in the madrasa consists of a large in volume —inheritance tax‖, which applies in practice arithmetic, algebra and geometry, which is based on the works of medieval eastern mathematicians, depending on Sharia norms,

complex issues of a clear nature are solved with different names for the distribution of property between heirs. One of the main goals of teaching mathematics in the madrasa is the preparation of specialists who know the scientific and practical theory of inheritance distribution, such a specialist is called the Pharosiykhan (hereditary). Prepared hypotheses were engaged in the distribution of inheritance in the bodies of the Local Court (boiler house). Considered a high-type institution in its day, the madrasa had a form of teaching mathematics, primarily as a course. After the teacher exposes a new topic to the students, he assigns them to work independently for a certain period in the Madrasa cell on this topic. Its fulfillment is checked by the teacher, an assessment is made, and then a new topic is passed. Independent work is more practical in nature, boring for students: and received a lot of their time. For example, by continuing one with sequential hesitation to 264, the reverse of this is continued from 264 onwards until one consecutive halving. or, a very large number of examples of Exact and approximate (second, third, fourth and desired exponential) rooting are solved from numbers with 20 or more digits

Mathematics develops in students the skills of will, concentration, ability and activity, imagination, moral qualities of an individual (persistent, striving for a clear goal, creative, independent, responsible, hardworking, disciplined and critical), as well as the ability to defend his views and beliefs on the basis of evidence. In the process of studying Mathematics, Methods and techniques of human thought include induction and deduction, generalization and clarification, analysis and synthesis, abstraction, Analogy, Classification and systematization. In the study of mathematics, students acquire the skills to clearly and fully, succinctly and meaningfully state their thoughts, thoughts, comprehend, complete and complete mathematical records.

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