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# ON THE ROLE OF HISTORICISM IN TEACHING MATHEMATICS AT SCHOOL

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**ABSTRACT**

In the article, the authors reveal the role of historicism in teaching mathematics at school, the inclusion of a coherent system of historical and mathematical information in the process of teaching mathematics, and list several uses of historical material in the process of teaching mathematics.

**KEYWORDS:-** Mathematics, upbringing, education, educational campus, scientists of the East, classification of the use of historical material in mathematics lessons.

## INTRODUCTION

Article 3 of the Law of the Republic of Uzbekistan "On Education" No. 637, adopted by the Legislative Chamber on May 19, 2020, states that

upbringing is a systemic process aimed at the comprehensive development of the young generation on the basis of a specific target and socio-historical experience, the formation of consciousness, spiritual and moral values and worldview;

education is a systemic process aimed at providing students with deep theoretical knowledge, skills and practical skills, as well as at the formation of general educational and professional knowledge, skills and abilities, and the development of abilities;

educational campus is an educational and educational environment that ensures high efficiency of the educational process, spiritual and moral education, including a complex of buildings and structures, educational buildings, research institutes (centers), industrial complexes and technology parks, places of temporary residence of participants in the educational and educational process, laboratories, information resource centers (libraries), sports facilities, public catering facilities, united on a single territory.

In article 4 of the same law, the main principles in the field of education are highlighted, such as

- Recognition of the priority of education;
- Freedom to choose the form of education;
- Inadmissibility of discrimination in the field of education;
- Ensuring equal opportunities for education;
- Introduction of national and universal values in education and upbringing.

From the above, what is needed in Uzbekistan in

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mathematics lessons in elementary grades for conducting historical material. From the above, that in Uzbekistan, special emphasis is placed on the education and upbringing of the younger generation, and since the subject of mathematics is included in the exact sciences and it is difficult for younger students to learn it, in order to interest them in the subject, it is necessary to conduct historical materials in mathematics lessons in elementary grades.

Let's set a goal first, how? What methods of forms and types of work is advisable to use when studying historical material in mathematics lessons and the second question is what? That is, what kind of historical materials for the program in which topic and in which class, while it should be noted that historical materials increase interest in the subject of mathematics.

The inextricable interconnection and unity of the tasks of forming the dialectical worldview of students, the tasks of their comprehensive education and development - all this allows us to come to the conclusion about the desirability and advisability of using historical and mathematical material in the study of a modern school course in mathematics.

Science and education are of paramount importance for enhancing the intellectual and spiritual potential of not only young people, but our entire society. Where science does not develop, there is regression, the backwardness of society in all spheres.

The great thinkers of the East said: "The greatest wealth is reason and science, the greatest inheritance is a good upbringing, the greatest poverty is the lack of knowledge."

Indeed, the importance of familiarizing students with the history of science for educating students in the spirit of patriotism and internationalism is well known. The example of the life of the great thinkers of the past, their scientific and moral convictions can have a strong influence on the processes of self-improvement and self-education of schoolchildren. For example, the brilliant scientist Beruniy, who is known for outstanding discoveries in the field of astronomy, mathematics, geography, geology, botany, entered the history of mankind as an outstanding humanist philosopher and poet.

What gave strength to the discoveries of Berunii for the subsequent development of sciences and the practical use of the scientific results obtained by him? There is no doubt that his conviction in the importance of pure knowledge and search for the improvement of man was great. The main thing for Berunii was to study and understand. Apparently, laying this truth in the foundation of the moral convictions of schoolchildren for a modern teacher should be no less important than familiarizing students with his scientific principles.When combined with the study of the educational material of the school course of mathematics, historical information is well remembered and, therefore, can serve as a means of memorizing educational information. Here we see how important it is that in the minds of schoolchildren not separate, scattered episodes from the history of the development of mathematics are imprinted, but the process of the formation of its basic ideas and methods. Mathematics should appear before schoolchildren in the creative process of creation and development. It is no less important that the history of science allows students to observe in action the interconnection and interdependence of theoretical scientific knowledge and practical human activity. This contributes to a more effective formation of the dialectical-materialistic worldview and scientific thinking of students.

The inclusion of a coherent system of historical and mathematical information in the process of teaching mathematics, obviously, should mean that the teacher recognizes as legitimate a certain element of amusement and

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entertainment, which is associated with all sorts of historical curiosities. But entertaining is permissible not only in primary grades, it can be an easy start to a serious, completely scientific conversation that helps students to master the content of the school course, basic ideas, language, methods of modern mathematical science, methods of creative mathematical activity.

Pedagogy teaches that when presenting new educational information to students, it is advisable to use all ways of forming cognitive interest. An entertaining presentation of new mathematical facts and phenomena, as the practice of the best teachers of mathematics in the country shows, never harmed the subsequent disclosure of their essential properties, and then showing the cause-and-effect relationships, general principles operating in various conditions.

I. Kadyrov quite rightly asserts in his book "The relationship of extracurricular and extracurricular activities in mathematics" (M., Prosveshchenie, 1983) that all or almost all sections of the optional course can and should be studied using historical and mathematical material. He distinguishes between several types of use of historical material in the process of teaching mathematics:

**1.** An episodic excursion into the history of mathematics; origin of the term, reference to the discoverer of a formula, theorem or method.

**2.** A longer conversation, sometimes in connection with the listed elements, for example, a story about the views of the Pythagorean school, solving a historical problem.

**3.** Review of the life and work of certain outstanding mathematicians (Archimedes, Abu RaikhanBeruniy, NI Lobochevsky, etc.).

**4.** A review of mathematical results obtained in a certain era or related to the development of certain mathematical theories, for example, to computational mathematics and computers.

**5.** Generalization and systematization of students' knowledge with the help of an in-depth historical review, which analyzes the development of one or another content line of the school course. Of course, there are many more theoretically possible such types. Let us take only two grounds for classifying the use of historical material in mathematics lessons:

**I.**

1) Message - fact, brief historical information.

2) Communication - a story about interconnected historical facts, often accompanied by a consideration of illustrative material, analysis and solution of historical problems, etc. (due to which this view is also called conversation).

3) Message - a review that provides an in-depth analysis of the development of a certain branch of mathematics, the formation of its ideas and methods.

**II.** By time, which is reflected in this statement:

1. "Vertical" section (with a characteristic of the historical development of one or another branch of mathematics).

2. "Horizontal" cut (with a characteristic of a certain historical era).

3. The life and work of one or another great mathematician of the past (personalities).

Various combinations of these types (we are not yet considering the practical benefits of each of them) increase their number to 9, but we have not yet considered the types of use of historical

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and mathematical material, depending on its cognitive, educational, methodological, developmental and even educational purpose.

However, a formal analysis of each of the combined uses of historical material, in our opinion, will not yield new results, significantly complicating the presentation. Taking this into account, and also taking into account the dominant educational (educational) function of using historical material in mathematics lessons, conclusions about the most appropriate types of it should be made based on an analysis of its specific connections with educational material.

An analysis of the various functions of using historical material is of much greater importance, since the conclusions obtained will affect the methodology of the teacher's work. In the methodological literature, this issue is not given due attention, limiting itself mainly to the methodological function and explanation of the influence of historical and mathematical material on the development of the cognitive interest of students.

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