

DEVELOPMENT OF COMPETENCIES IN STUDENTS THROUGH THE WORKS OF AL-KHORAZMI ASPI.

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Annotation: this article analyzes the importance of developing competence in students through the works of Al-Khorazmi and examines ways to effectively use Al-Khorazmi's algorithmic approaches. In addition, through STEM projects and group work methods based on the works of Al-Khorazmi, the possibility of developing students' skills to apply theoretical knowledge in practice is highlighted. The role of these approaches in improving educational effectiveness and their practical significance are described, with the study showing that Al-Khorazmi's works are relevant in modern education.

Keywords: Al-Khorazmi, competence, education, algorithmic approach, mathematical models, STEM-education, creative thinking, critical thinking, efficiency, pedagogical approach, student, work.

Introduction.

Today, Information Technology and innovative approaches are developing. Together with this, the formation of students' analytical thinking skills has now become a priority of the educational system. Analytical thinking includes the skills of a person to analyze logically, evaluate evidence, solve problems in a systematic way, and draw correct conclusions. These skills are important in the development of today's science and technology. Therefore, the formation of the analytical potential of students is of great importance not only in mathematical or technical areas, but also in solving complex situations in everyday life. The scientific heritage created during the Golden Age of Oriental Science, especially the works of Al-Khorazmi, provides rich experience and methodological guidance in this regard. Al-Khorazmi a thinker who made a huge contribution to the development of World Science, and his work "Al-jabr and al-muqobala" became the foundation for the science of algebra Main part. Currently, dealing with algorithmic problem solving and mathematical modeling will help increase the level of analytical thinking of students. Therefore, the extensive introduction of Al-Khorazmi's scientific heritage into curricula provides an opportunity to take the modern educational system to a new level. Also, the practical significance of this scientific heritage in the educational

process and the prospects for its wide introduction through innovative pedagogical methods are considered. Al-Khorazmi is known not only as the founder of algebra, but also as the father of algorithm theory. Reflects Al-Khorazmi's role as the founder of algorithms.

This is an important resource in training students in the skills of step-by-step resolution of complex issues. Al-Khorazmi's approach helps to create the initial steps of analytical thinking for students. Al-Khorazmi was active in Baghdad in the " Bayt al-Hikma "(House of Wise Men), where he wrote his famous "Literature analysis. Al-Khorazmi has shown solving economic and geometric problems in everyday life using mathematical models. This forms the ability for students to apply theoretical knowledge in practice. Develops systematic thinking by representing problems in the form of mathematical models. Al-Khorazmi's approach teaches students to analyze issues step by step. This process consists of breaking down problems into small parts, identifying important elements at each stage, and, as a result, finding a complete solution. This approach develops algorithmic thinking skills in students. The AL-Khorazmi method teaches students to logically assess evidence and draw conclusions. This applies not only to mathematical problems, but also to solving life problems. In the works of Al-Khorazmi, specific algorithmic stages are given for the systematic solution of problems, which is a way for readers to approach each issue with a clear approach. Research methodology. The main methods of developing algorithmic thinking based on the works of Al-Khorazmi in the educational process are as follows: students first begin by solving simple equations, and then move on to complex issues. This approach helps students not only to think logically, but also to form methodological skills in memory. Students use learned algorithms in real-life situations to test their solutions in practice. For example, the application of equations in the field of economics or engineering. Through this method, students learn to systematically analyze problems, substantiate each step, and assess the effectiveness of their solutions. Mathematical models and simulations teach students to understand real-life situations through a mathematical approach. Students learn to understand life problems through mathematical expressions. For example, the division of land or costs in trade matters.

Research results.

Analytical training teaches students to analyze problems, assess evidence and draw conclusions based on Al-Khorazmi's works. This, along with increasing their level of knowledge, develops their mathematical thinking. Students look at a particular algorithm or solution with a critical eye, identifying their effectiveness and weaknesses. For example, they

solve a particular issue through several methods and analyze which method is more effective. Students practice theoretical approaches and test each step in their own experiments. This method strengthens their ability to think independently. Analytical training trains students to think critically and make independent decisions. They will have the skills to effectively apply theoretical knowledge in Practice[2].

By applying Al-Khorazmi's works to the educational process, students develop mathematical and algorithmic thinking skills. They are STEM-education (science, technology, engineering and mathematics) is one of the main areas of today's education system and offers great opportunities in basing Al-Khorazmi's works on practical projects. Students are offered projects aimed at developing and solving practical issues by studying Al-Khorazmi algorithms. For example, projects such as dividing geometric land areas or modeling trade issues are developed. Each project develops not only theoretical knowledge of students, but also creative thinking skills. For example, students can create new issue models by applying algorithms. STEM projects serve to enhance practical knowledge and skills while strengthening students' analytical thinking skills.

Conclusion.

In place of the conclusion, we can say that the application of Al-Khorazmi's works through innovative approaches in the educational process plays an important role in preparing students for complex issues of the modern world. The algorithmic approaches and mathematical models he created provide a wide range of opportunities for students to systematically solve problems, logically evaluate arguments, and develop independent thinking skills. The introduction of Al-Khorazmi's works into curricula not only deepens theoretical knowledge, but also provides a practice-oriented approach. At the same time, technological literacy and teamwork skills of students also develop. Modern educational technologies, including STEM projects, gamification and group work, are important tools in the practical application of Al-Khorazmi heritage. Through these approaches, students' interest in the learning process increases and their mastery efficiency increases. Extensive study of Al-Khorazmi's works.

References:

1. Nasr, S. H. *Science and Civilization in Islam*. Harvard University Press, 1968.
2. Al-Khorazmi, Muhammad ibn Musa. *Al-Jabr and al-Muqabala*. Baghdad, 9th century. (Uzbek and other language versions are used).

3. UNESCO. *Great Mathematicians of the Islamic Golden Age.* Paris: UNESCO Press, 2015.
4. Daryonov A. "Mathematical thinking and its development." Tashkent: New Generation of the Century, 2019.
5. Kolb, David A. *Experiential Learning: Experience as the Source of Learning and Development.* New Jersey: Prentice Hall, 1984.

