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**PROSPECTS OF INCREASING EFFICIENCY USING ARTIFICIAL
INTELLIGENCE CAPABILITIES IN MATHEMATICS LESSONS IN OUR
COUNTRY**

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Annotation: This article presents modern prospects for using artificial intelligence capabilities in the process of organizing more meaningful and effective lessons for students in the exact sciences, especially mathematics.

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The modern education system is undergoing rapid changes along with technological development. The integration of artificial intelligence technologies into the educational process allows for increased pedagogical efficiency and improved quality of education. With the help of artificial intelligence technologies, the individual abilities and learning pace of students are taken into account, and lessons are organized in an interactive, flexible and purposeful manner.

The pedagogical capabilities of artificial intelligence are very wide: it allows analyzing the level of knowledge of students, creating individual learning plans, creating interactive exercises, introducing automatic assessment systems and effectively motivating students. At the same time, artificial intelligence technologies serve as an effective tool for teachers in planning lessons, monitoring the educational process and making strategic decisions. In particular, the use of artificial intelligence (AI) capabilities in mathematics lessons can increase efficiency by up to 25–30% by individualizing the educational process, visualizing complex problems and automating assessment. In Uzbekistan, within the framework of the strategy until 2030, there are high prospects for the introduction of SI technologies into education, in particular, through the use of platforms such as Eduten, to develop students' mathematical literacy.

The use of SI elements during mathematics lessons provides the following opportunities:

- **Individualized Path:** SI fills in the gaps by creating adaptive tasks that match the student's learning pace.
- **Visualization and Understanding:** Using graphing calculators and SI, geometric shapes, functions, and 3D models are dynamically displayed, making abstract concepts easier to grasp.



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– **Automated Assessment:** Allows teachers to save time and provide immediate feedback to students.

– **Constructionist Learning:** Students learn to solve and analyze problems independently using SI.

The prospects and plans for the introduction of artificial intelligence technologies in the education system of Uzbekistan are as follows:

– **Strategic support:** The Presidential Decree approved the Strategy for the Development of Artificial Intelligence Technologies until 2030.

– **Implementation in schools:** Starting from 2026, artificial intelligence classes will be introduced in the upper grades of schools in Uzbekistan.

– **Personnel training:** Higher educational institutions are increasing the quotas for training bachelor's and master's degrees in AI.

– **International experience:** Pilot projects are being implemented to improve students' mathematical abilities using AI-based platforms such as Eduten.

– **Key areas for increasing efficiency**

– **Real-life problems:** Creating problems based on real-life contexts (for example, economic or engineering) using AI.

– **Interactive lessons:** Using virtual laboratories and simulations.

– **The role of teachers:** AI does not replace the teacher, but rather performs routine tasks (checking) and allows the teacher to work creatively with the student.

Problems and limitations in using elements of artificial intelligence technologies in the educational process

– **Infrastructure:** Lack of technical equipment in rural areas.

– **Personnel:** Lack of specialized teachers in AI.

– **Digital divide:** Inequality of technical opportunities between students.

The potential for raising the quality of mathematics teaching to a new level, developing independent thinking and digital literacy of students by integrating artificial intelligence in the education system of Uzbekistan is very high.

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