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THE ROLE OF EDUCATIONAL REFORMS AND THE STEAM APPROACH IN THE NEW UZBEKISTAN DEVELOPMENT STRATEGY

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Abstract: This article analyzes the essence of the educational reforms outlined in the New Uzbekistan Development Strategy and their integration with modern pedagogical approaches. In particular, it highlights the importance of the STEAM approach in the modernization of the education system, the role of interdisciplinary integration, creative thinking, problem-solving skills, and the development of technical and scientific competencies. The application of STEAM technologies in preschool, general secondary, and higher education is explained in relation to the priority areas of the strategy. Additionally, the article examines the challenges encountered in integrating STEAM into the educational process and discusses possible solutions to these issues.

Keywords: New Uzbekistan, Development Strategy, educational reforms, innovative education, STEAM approach, interdisciplinary integration, creative thinking, digital education, education modernization, competency, pedagogical technology, scientific research, innovative economy.

The New Uzbekistan Development Strategy is a state program aimed at elevating the country's sociol-economic development to a new stage, improving the wellbeing of the population, and radically enhancing the quality of education. The strategy identifies the modernization of the education system as one of the top priorities. In today's era of globalization, digital transformation, and advanced technologies, the education system must not only impart knowledge but also train individuals who think creatively and innovatively, can analyze problems, and make scientifically grounded decisions. From this perspective, integrating the STEAM approach into the educational process is of strategic importance.

The Development Strategy outlines a number of priority tasks such as increasing the quality of education through the effective use of modern pedagogical technologies, strengthening interdisciplinary integration in the learning process, and developing the creative potential of students. The STEAM approach plays a crucial role in fulfilling these tasks. STEAM — a model integrating Science, Technology, Engineering, Arts, and Mathematics — enhances students' ability to think systematically, identify and solve problems, conduct experiments, design projects, and develop technical thinking and creativity. In the context of New Uzbekistan, the formation of an innovative economy and digital society has begun. This process requires the training of young specialists capable of mastering technologies, generating new ideas, and competing in the global arena. Therefore, the introduction of STEAM into the education system fully aligns with the goals of the strategy.

One of the main directions of educational reforms is revising the content of the learning process, focusing on practical competencies, and creating conditions that foster students' independent inquiry and research activities. The STEAM model supports this process by combining theory with practice. Students gain skills through hands-on activities, conducting experiments, solving

problems through project-based learning, and integrating knowledge from different disciplines. This directly fulfills the strategy's requirement to organize the learning process using modern and competency-based methods.

The Development Strategy also emphasizes the development of digital education. Digital platforms, online learning technologies, artificial intelligence tools, and electronic library resources are all closely connected to the STEAM approach. STEAM education promotes active use of technology, increases computer literacy, and develops students' interest and competencies in fields such as robotics, electronics, and programming. In this sense, STEAM is a practical embodiment of the digital transformation set forth in the strategy.

Furthermore, the strategy prioritizes the integration of science and industry, the promotion of scientific research, engaging youth in scientific activities, and supporting innovative ideas. STEAM technologies foster scientific thinking from an early age through laboratory experiments, project development, working with construction kits, and applying scientific knowledge to solve real problems. This lays the foundation for training future researchers and engineers essential for an innovative economy.

The STEAM approach is equally important in the preschool education system. The strategy emphasizes increasing preschool enrollment, enriching the educational process with modern methods, and stimulating children's creative thinking. Establishing STEAM centers, construction and experiment corners, and sensory and creative activity zones helps develop logical thinking, cause-and-effect reasoning, creativity, and observation skills from an early age. This supports the strategy's goal of shaping a "well-rounded individual."

However, challenges remain in the implementation of STEAM: insufficient teacher training, lack of methodological resources, limited laboratory equipment, and underdeveloped technical infrastructure in some regions. Nevertheless, ongoing government reforms—teacher retraining programs, establishment of STEAM centers, and modernization of educational institutions—are gradually addressing these issues.

Overall, there is a strong interconnection between the goals of the New Uzbekistan Development Strategy and the STEAM approach. STEAM technologies enhance the quality of the educational process and develop students' creative thinking, research abilities, problem-solving skills, and technological competencies. As a result, competitive and innovative specialists essential for the modern economy are trained. Therefore, the deep integration of STEAM into the education system elevates not only the quality of education but also the overall national development strategy to a new level.

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