

# Organization of a Developing Environment When Using STEAM Technology in Preschool Education

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**Abstract.** the article discusses the content and essence of the use of steam education technology in modern education, its specific features, advantages and opportunities.

**Key words:** STEAM, STEAM educational technology, abilities, competencies, competencies, life skills.

The purpose of teaching the science of STEAM in preschool education:

- To teach students to integrate the content of various activities into the comprehensive intellectual education of preschoolers;
- Teaching the regulatory and methodological foundations for the use of STEAM educational technology in preschool education;
- Teaching foreign experience in the application of STEAM educational technology in preschool education;
- Organization of comprehensive training;
- Providing knowledge and information about the methods of practical application of STEAM educational technology in preschool educational organizations.

The developing subject-spatial environment of STEM education, described in detail in each training module, is selected taking into account the objectives of this module. At the same time, the local tasks of each module are combined with the overall goal of the Program: to develop the intellectual abilities of children of preschool and primary school age, involving them in scientific and technical creativity in the process of cognitive activity.

The factors that unite all elements of STEAM are:

- integration of the content of various training modules into the course of children's activities;
- spatial intersection of various guides and materials;
- availability of material for independent activity;
- emotional comfort from the content of manuals and materials, their aesthetic qualities and the results of working with them;

**In many countries, STEAM education is a priority for women:**

- In the near future, the need for engineers and specialists in high-tech production will be very high in the world, and hence in Uzbekistan.
- In the distant future, we will have professions related to technology and high-tech production, with a reserve in the sciences, specialists, especially in the field of bio- and nanotechnology.
- Specialists have extremely extensive training and experience in a variety of medical cases, cases and engineering.

**Benefits of STEAM Education**

- Integration of education not by subjects, but by “subjects”
- Application of scientific and technical knowledge in real life
- Develop critical thinking and problem solving skills
- Active communication and work in the game
- Increasing self-confidence

**Benefits of STEAM Education**

- Development of interests in technical sciences
- Creative and innovative approach to projects
- Bridge between education and career
- Preparing students for a technologically innovative life

In the Republic of Uzbekistan, reforms are being carried out to reform the education system. Decree of the President of the Republic of Uzbekistan “On the creation of modern schools”, Decree of the President “On measures to further improve the system of preschool education in 2017-2021”, “On measures to create presidential schools” highlight the Presidential Decree on “activities” and many other reforms aimed to equate the education system of our republic with the advanced education systems in the world. To fulfill these goals, there has been talk of the emergence of STEM in the national education system since 2016. Currently, the STEM education system has received wide recognition around the world. In some countries, this education system is designated as the national education system. At the end of 2016, in terms of the distribution of school graduates in the STEM education system, the rapidly developing high-tech China took the first place, while the United States and Russia took 3rd and 4th places, respectively.

Education in the STEM system emphasizes these 4 areas, as well as their interconnectedness. In order to keep up with technological changes in the era of globalization, one of the main tasks of modern educators and pedagogical technologists is to learn about trending technologies such as new technologies, base formation, artificial intelligence, and provide education in accordance with them. STEM brings innovation from our daily lives to the education system. Research shows that thanks to the STEM education system, children develop creativity, hard work, curiosity and the most important quality today - the ability to solve problems. Over the past 2 years, work has been carried out to

introduce the STEM education system into the state education system of the Republic of Uzbekistan. But if it is easier in private schools, then it is noted that there are a number of problems when introducing the STEM education system into the general education system. In December 2019, the Ministry of Public Education participated in the Shanghai International STEM Education Expo (STEAMEX) held in China. The American expert participated in the introduction of the STEM education system into the general education system of Uzbekistan.

In addition, training is carried out according to the STEM education system in presidential schools established in his country on the initiative of President Sh. Mirziyoyev. Modern research emphasizes that the STEM system is related to the school education system, but it is important to introduce it from a very young age, from the preschool period. The importance of introducing a child to STEM from an early age is the root of success. In fact, STEM thinking begins in childhood. Even when a child cannot walk, he can understand the connection, sequence and probability of



processes. These qualities should be encouraged in every possible way. In the early childhood education system, STEM activities can be carried out on the basis of a daily work plan. It is important to develop and implement activities based on the principles of STEM education. Example. One of the effective mechanisms is the introduction of the STEM education system into the life of a young child through books. The book can be a powerful springboard for introducing a child to the STEM system. The book will be a connecting tool between activity and process for the child. For example, you can talk to the children about the fish in the book and learn about the fish that live in the aquarium in the kindergarten. The book strengthens the child's interest in science from an early age, and thanks to the book, the child's vocabulary about science increases.

Based on the tasks set before us by our President, children in preschool educational institutions grow up in all respects and develop in accordance with the requirements of our time.

In the course of providing MTT with books, choose books based on the principles of STEM;  
Inclusion of mechanisms for working with books on the principles of STEM in the work plan of the MTT system;

Increasing the vocabulary of young children with the help of STEM books; Encourage the release of STEM books for young children, consisting of innovative technologies;

Development of mechanisms for familiarizing MTT teachers with the STEM education system.

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