

THE NECESSITY OF USING STEAM EDUCATIONAL TECHNOLOGY IN PRESCHOOL EDUCATION

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Abstract

STEAM is an acronym for Science, Technology, Engineering, and Mathematics. The article provides information about STEAM technologies that are rapidly developing today. The methods of using this technology, as well as the introduction of the first STEAM technology, are discussed.

Keywords: Technology, preschool education, STEAM, engineering, visual arts.

Introduction

STEAM is one of the most important innovative methods in the world's education system today. At first glance, the STEAM acronym may seem complicated, but if we look at it separately, we can see that it is simple and clear: S - science, T - technology, E - engineering, A - art, M - mathematics, or natural sciences, technology, engineering art, creativity, mathematics.

In simple terms, these are the most demanded subjects in the modern world. It is no secret that in order to achieve significant achievements in many scientific fields, the integration of knowledge from various fields is required. STEAM technology helps to solve such problems. In the wake of technological changes in the era of globalization, knowledge of new technologies, the formation of databases, trending technologies such as artificial intelligence, and education in accordance with them is considered one of the main tasks of modern educators and pedagogical technologists. STEM introduces innovations in our everyday lives into the education system.

Studies show that through the STEM education system, a child develops creativity, perseverance, curiosity, and the most important feature today - problem-solving skills. In the Republic of Uzbekistan, work has been underway for the past 2 years to introduce the STEM education system into the state education system. However, it is noted that while this is easier in private schools, there are a number of problems in 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) exhibition held in China. A US specialist was involved in the implementation of the STEM education system in general public education in Uzbekistan.

Modern research emphasizes that, although the STEM system belongs to the school education system, it is important to implement it from the youngest age, starting from preschool. The



importance of introducing the STEM system from the youngest age of the child is the root of success. In fact, STEM thinking begins in childhood. Even when a child does not know how to walk, he can understand the connection, sequence and probability of processes. These features should be encouraged in every possible way. In the preschool 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 STEM educational principles.

Example. Introducing the STEM education system into the life of a young child through books is one of the effective mechanisms. A book can be a powerful springboard for introducing a child to the STEM system. A book will be a connecting tool for a child between activity and process. For example, you can talk to children about the fish in the book and learn about the fish living in the aquarium in the kindergarten. The book will increase the child's interest in science from a young age, and the child's vocabulary about science will increase through the book. The important point here is not to confuse a book based on STEM principles with encyclopedia books. How can books prepared for young children be structured within the framework of the STEM education system:

S-Science Books about animals, marine animals, plants, and insects can be used to introduce young children to the world of science.

T-Technology Interesting books that depict technological objects that children encounter around us can introduce a child to the world of technology. Scissors, wheels, cars, a washing machine, a telephone, etc. can be depicted in a book with their insides shown, and stories can be read about the objects. Illustrations of technological objects, accompanied by an interesting story, can stimulate a child's mind to ask questions and think analytically.

E-Engineering Introducing children to the field of engineering can begin with learning about shapes. A book that has some form of information about shapes, their reflection in objects around us, and how shapes relate to each other can be a useful tool. STEAM (S-fan, T- texnologiya, E - muhandislik, A - can'at, M - mathematics) is a modern approach that combines science, technology, engineering, art, and mathematics.

This approach will help children solve life problems in the future. In many developed countries, including the USA, Japan, Israel, Singapore, and Russia, preschool educational organizations are effectively using methods to develop children's creative and inventive abilities.

References

1. "First Step" State Curriculum for Preschool Educational Institutions. T.: BMT Children's Fund (YUNISEF), 2018 Developers: I.V.Grosheva, L.G.Yevstafeva, D.T.Mahmudova, SH.B.Nabixonova, S.V.Pak, G.YE.Djanpeisova.-T.:MTV, 2018.- 71 bet
2. Tolipova T. "Steam projects and working on them" Samarqand, 2021.-84 bet.
3. Г.Богданович. Дополнительная общеразвивающая программа «Мульт-студия «Мой мир» Свердловская область, 2018 г.
4. Shermatova, U. (2024). Developing text creation competency through text analysis in differential literary education. *Mental Enlightenment Scientific-Methodological Journal*, 5(08), 315-319.



5. Yusupovna, R. N. (2024). Finlandiya Ta'lim Tizimining O 'Ziga Xos Xususiyatlari. *Miasto Przyszłości*, 54, 753-755.
6. Abdusamatova, N. J. (2020). Maktabgacha yoshdagi bolalarni maktab talimiga tayyorlashda multimedia texnologiyalaridan foydalanish. *Студенческий вестник*, (14-6), 59-60.

