ETHIOPIAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH

eISSN: 2349-5715 pISSN: 2349-5707

Volume: 12, Issue 04, April-2025 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

THE USE OF STEAM EDUCATIONAL TECHNOLOGY IN THE ORGANIZATION OF AN ACTIVE DEVELOPING ENVIRONMENT IN PRESCHOOL EDUCATIONAL ORGANIZATIONS

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Abstract: The article on the use of STEAM educational technology in the organization of an active developing environment in preschool educational organizations covers the principles of organizing a preschool developing environment, requirements for organizing a developing environment, the ability to use STEAM educational technology in a developing environment, and the organization of an integrated developing environment in the development of preschool education. This article was developed on the basis of the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated December 22, 2020 No. 802 "State Standard of Preschool Education and Training" and the "First Step" State Curriculum (improved second edition 2022).

Keywords:STEAM educational technology, development centers, developmental environment, creativity, logical thinking, requirements, development, pedagogical support, expected results, child competence, integration, "I" concept, reflexive activity, facilitator.

Today, interest and attention to increasing the effectiveness of education using innovative pedagogical and information technologies in the educational process is growing day by day. Classes enriched with modern technologies are aimed at developing the child's independent research, creative thinking, and the formation of intellectual potential. As we know, the leading type of activity in preschool education is considered to be a game, but according to STEAM technology researchers, the leading type of activity for children is experience. With the help of toys, children develop a passion for reading, learn to measure, level, count, paint, communicate, and acquire teamwork skills, which helps to acquire the necessary mathematical and engineering skills. Children choose new and creative ideas for themselves and conduct their first experiments based on them, thereby developing the ability to create in an interesting game form.

The following development centers have been established in preschool educational organizations:

1. Center for construction, design and mathematics;
2. Center for plot-role-playing games and staging;
3. Center for language and speech;
4. Center for science and nature;
5. Center for art;
6. Center for music and rhythm.

The difference between STEAM educational technology and other technologies is that it provides a combination of mental and practical activities at the same time, so that children can successfully master various topics. In this, they follow the expression "Mind and hand", children quickly learn and master the knowledge they have gained by seeing it in practical activities.

Since the introduction of STEAM educational technology into the preschool education system is a requirement of today, it is very important to dwell separately on the meaning of the term integration along with the concept of technology. The organization of a developing environment in STEAM educational technology in preschool education can be carried out as follows. In this process, the educator, of course, performs the role of a facilitator, taking into account the interests and desires of each child. For example: In the center for building, construction and mathematics, children build nests for birds based on the theme of the month "Beautiful Spring".

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In the center for plot-role-playing games and staging, games such as a shop, a guest at grandma's, and a family doctor can be organized.

In the center for language and speech, children learn riddles and poems about the spring season, and develop skills in composing fairy tales and stories.

In the center for science and nature, children can learn to plant flowers in flower beds under the guidance of an educator. In this process, children tell the sequence of actions to be performed to plant a flower. In the center for art, they draw pictures on the theme of "Spring". In the center for music and rhythm, they learn the "Dance of Flowers". In these processes, when the educator guides children to work on the basis of new innovative technologies, they develop new ideas, new discoveries, and creative approaches. Children work with great interest in each process in a developing environment and acquire a lot of information.

Educators play the role of children's assistants in development centers, provide a wide range of opportunities where educational activities are carried out, and plan activities taking into account the individual level of development of each child. The daily routine should include different types of activities: together in small groups and in cooperation with the educator, individually (individual) or independently (time should be allocated to the activities chosen by them, because children learn to make conscious choices, realize their interests and abilities). Children should be able to make their own choices, solve problems, work together with people around them, set individual goals and know how to achieve them.

In general, the activities of child development centers not only prepare the child for independent life, but also create the necessary conditions for the effective passage of the day, the natural course of growth and development. According to the theories of great scientists Jean Piaget, Erikson, L. Vygotsky, it is recommended to divide the child's developing environment into activity centers. For this, all materials and equipment in the group should be organized by areas. This will help to organize children's games and work more conveniently.

The following requirements are imposed on development centers:

1. First of all, the centers should be organized in clean air, clean space, normal temperature and bright rooms

2. Ensure that each center is a safe place that protects the child from unpleasant, unexpected events.

3. Encourage children to move, experiment, and discover in the centers, creating optimal conditions for this. For example, there should be enough equipment for small research and experiments.

4. All equipment and materials in the centers should be at a height that the child can reach and the child should be able to use them freely.

5. Encourage cooperation and communication between children during activities in the center (small groups, pairs and games should be created.)

6. Children should feel a sense of belonging to the institution, equipment in the centers should be in its place, and be distributed according to topics.

7. The centers should be divided into meaningful sections and there should be necessary and interesting objects, equipment, toys, and handouts for the child.

8. The furniture of the center should be arranged in a way that does not hinder the child's physical condition and free movement, the child should be able to move the equipment freely, and there should be furniture suitable for the disabled.

9. The developing environment in the centers should be comfortable for both educators and children.

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10. It is important to give the child the opportunity to choose freely and encourage independent decision-making.

11. It is necessary to help the child establish relationships with his peers.

12. The results of children's activities in the centers should be posted on a schedule where the child can see and understand the daily work.

When organizing development centers, the educator should pay attention to the following:

- interests, abilities and skills of children;
- development indicators and age characteristics;
- the needs and requirements of the child;
- the creation of conditions for children's teamwork, small teams and pairs, special attention is required.

When taking into account the uniqueness of child development, it is first of all necessary to understand that all children go through certain stages of development, but each child is unique and unrepeatable. In order to provide children with exactly the same, similar things and types of activities, educators must have a clear idea of their specific, distinctive development indicators. Also, experts emphasize that educators should be attentive to the differences in the abilities and interests of different children of the same age. This refers to the specifics of child development, types of activities that respond to children's interests, that is, their level of mental, social and spiritual maturity. Such types of activities are aimed at children's interest in nature, satisfaction from experience and the desire to test their ideas in practice.

The construction and design center has various building elements of various shapes and sizes, and children build structures from them, relying on their imagination. For example, historical monuments they have seen, houses, farms, etc. Children who are engaged in construction learn a lot here. It helps children develop mathematical abilities, acquire social skills. In the center, a child learns to build, make, mathematical knowledge, and communicate. At the same time, fine motor skills develop, the child is constantly in motion, learns from each other, teaches.

Center for plot-role-playing games and dramatization

The plot is the main component of the game activity, which includes the character, life situation, action and relationship of the characters. Although plot-role-playing games are considered a team game by their content and essence, they should not give the impression that they cannot be played alone. Plot-role-playing games play an important role in the mental, moral, and physical development of the child, in which the child's needs and skills are nurtured and formed. Children's sequential execution of roles, demonstration of the appearance of dolls one after another, in the process of the stage play, the child connects one event with another, tests ideas, corrects mistakes, makes plans, and their implementation leads to their mental development.

In the center of plot-role-playing games and dramatization, the child's speech develops first of all, he learns to communicate with adults, understands kinship. Hospitality and guest etiquette are brought up, he gets acquainted with the work of adults, and an interest in professions arises. The first stages of choosing a particular profession begin. The child's imagination expands. He learns from his peers what he did not know, and performs the first stages of dealing with money. Information about his family, good and bad habits in the family is given by the child without his knowledge. Cooperation with parents begins on the situations observed by the educator. Pedagogical recommendations are given. Individual work plans are drawn up with children. In the center of language and speech, the "Center for Language and Speech" is one of the most important, meaningful and diverse centers in the formation of children's communicative competencies in preschool educational organizations. In this center, children conduct independent activities on the topics given in the program.

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This center is a quiet corner where children can look at books and read to each other. They also compose independent stories based on pictures. The "Language and Speech Center" is one of the most important, meaningful and diverse centers in the formation of children's communicative competencies in preschool educational organizations. In this center, children conduct independent activities on the topics given in the program.

In the "Language and Speech Center", they learn to independently compose, create, and weave short stories. In small groups and individually, children tell their stories and fairy tales, memorized poems to the educator. This shows that from preschool age, children develop their oral fluency not only during classes, but also independently in the "Language and Speech Center". Most importantly, they become truly prepared for school activities in the future.

In the Science and Nature Center, children learn the first natural and scientific concepts. This center is used to practice the concepts that children have learned about natural phenomena and things they find on the street. Children can conduct small experiments, organize laboratories, and study objects and phenomena themselves, identifying their unique properties. For example, they study the properties of natural elements in nature: water, air, sand, and soil. They try them out in practice. In this center, children can distinguish the properties of clay and sand, and build various structures. By gaining knowledge about where the things we use in our lives come from and what they are made of, their attitude towards them will change in a positive direction. For example, it is very interesting for children to see how bread comes to our table, how oil is extracted from cotton seeds by crushing them, how there is no oil in watermelon seeds, how onion roots grow when placed in a glass of water, and how seeds germinate when sprinkled on cloth. For example, the following small experiments can be conducted in school preparatory groups.

Topic: Properties of water (tastelessness)

Purpose: To introduce children to the properties of water, namely its tastelessness.

Equipment: A glass of water, a glass of juice.

Experiment progress:

1. Children try to drink a glass of water.

Question: Does water have a taste?

2. Children try to drink a glass of juice.

Question: What does juice taste like?

Conclusion: Based on the experiment, children conclude that water has no taste.

The art center encourages children to test and realize their creative abilities, gives them the opportunity to get satisfaction from getting acquainted with new materials, and enriches children's sensory abilities. There are paints, paper, scissors, crayons, pencils, pieces of fabric and various scissors for cutting and gluing. It is also useful to include natural materials - wood, leaves, sand and soil. Classes in this center are aimed at developing creative abilities, verbal and non-verbal communication, gross and fine motor skills, and mental abilities. In addition, this center develops the skills of creativity, aesthetic taste, and understanding the masterpieces of folk applied art. The music and rhythm center can be used to combine classes throughout the day. Singing, movements, clapping, games, playing musical instruments, and listening to recorded songs complement any program. Musical activities sharpen the mind, teach rhythm, counting, and develop speech; develop general and fine motor skills and allow you to demonstrate creative abilities.

Conclusion A developing environment is created in preschool educational organizations, and it is advisable to improve it using STEAM educational technology. Independent educational activities in development centers encourage preschool children to implement the idea of "Mind and Hand". The use of STEAM educational technology in organizing an active developing environment in preschool educational organizations helps children learn to make their own decisions, set goals and

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achieve them. Also, the educational process teaches creativity, logical thinking, the ability to communicate with surrounding children and adults. In addition, children develop ingenuity, develop new ideas, independently find solutions to problems, and creative abilities. In the rapidly developing world of science and technology, if we can educate our children using STEAM educational technology, we will be preparing the inventors of our time.

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