

INNOVATIVE APPROACHES TO PRESCHOOL EDUCATION AND MODELING TECHNOLOGIES

Khaydarova Zulfiya Orifjonovna

Namangan Region Pedagogues to New Methods

Senior Teacher of the National Training Center

Abstract

This article discusses the reforms implemented in the preschool education system in Uzbekistan in recent years, the positive results achieved in the field of preschool education and their impact on the transition to the digital economy, the advantages of multimedia and modeling educational technologies.

Keywords: development, preschool education, inclusion in education, multimedia, technology, modeling, mathematical imagination, sensory abilities.

Introduction

Reforms implemented in our republic in recent years in all spheres, of course, have a positive effect on the education system, the field of preschool education, which is its first link, and the quality of preparing preschool children for school education. revealed the secret.

The large-scale work carried out in this field in Uzbekistan can be seen in some statistical data. The conducted analyses, increasing children's coverage of preschool education, filling preschool educational institutions with modern educational and methodological materials and fiction, attracting qualified pedagogues and management personnel to the field, increasing the number and quality of institutions, their material and showed the urgency of solving the issues of improving the technical base, applying modern and advanced technologies to the system.

Just one example, in the last 20 years, the number of pre-school educational institutions has decreased by 45% to 4,940, 90% of them are financially poor, and the coverage of 3-7-year-old children in them was only 20%. The extremely low rates of monthly salaries of employees and the slow level of penetration of modern technologies into the system were clearly noticeable.

In 2017, there were 2,541,026 children of preschool age, of which 678,584 (27 percent) were enrolled in preschool educational institutions, while 1,882,442 (73 percent) were being raised in families. Now, the index of coverage of preschool education organization has increased to 7,952, of which: 5,770 (72.5 percent) are state, and 2,718 (27.5 percent) are non-state institutions.

Based on a number of decisions and decrees adopted by our government in 2017 to solve the above-mentioned problems in the field of preschool education, the organization and management of the ministry of preschool education will be fundamentally improved, preschool educational institutions normative documents on current issues such as organization and improvement of activities, further development of non-state educational services, material incentives of industry employees, study and implementation of the experiences of advanced countries were adopted.

The rational policy carried out by the Government and the President of the Republic of Uzbekistan has shown its results, including the enrollment of preschool children in educational



institutions by 27% in 2017, 38.4% in 2019, and in the first quarter of 2020 It was 52 percent, 60 percent by the end of 2021, and increased to 73 percent in 2023-2024, and it is planned to increase this figure to 100 percent by 2030. In 2018 alone, more than 18,000 highly educated professionals underwent free retraining courses and received specialization in this field, and the need for personnel in preschool education organizations, which are expanding more and more, was somewhat satisfied. In the 2019-2020 academic year, admission quotas to higher education institutions were increased by 2.5 times, and salaries of employees were increased from 40 percent to 70 percent, and further increases are planned. From the academic year 2022-2023, the issues of including pedagogues with many years of work experience in higher education on the basis of contracts, and equalizing the salaries of pedagogues to teachers' salaries from June 2024 have been put on the agenda.

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A number of privileges were given to the establishment of non-governmental preschool educational organizations, which led to the expansion of the number of citizens who want to open such organizations. It was planned to exempt such organizations from any taxes for 10 years, to allocate 1% preferential loans for up to 15 years, and to allocate 50% subsidies for each child being raised. For this purpose, our state allocated preferential loans, the period for obtaining a license for private organizations was reduced from the current 1 year to 10 days.

Parents of disabled children are exempted from payment. Contribution payments for families with 2 or more children from the same family traveling to MTTs have been reduced to 29%. In 168 districts and cities of our republic, parental fees have been reduced by 2 times. In order to improve the quality of food within the framework of healthy feeding of children, funds were allocated from the state budget in addition to parents' contributions. The autorting system of feeding was tested. Modern equipped buses, which are alternative forms of preparation for school education, were organized, from the second half of 2019, 16 buses of the "Aqlvoy" project visited hard-to-reach areas and thousands of children were prepared for school education.

In 2020, in cooperation with UNICEF, 418 organizations were planned to be reconstructed, 18 of which were newly built. From 2020, additional rates of choreographer, second language teacher, and methodist have been added to MTTs. In addition, educational and methodological manuals, state requirements for the education of preschool children, the national state



educational program "Ilk Kadam" were created and used in practice, and the preparation of children for school was carried out. was expanded. The implementation of such large-scale works is being continued for several years based on the "Roadmap".

The development and progress of preschool children is rapid, especially the need for information of a 3-6-year-old child is unlimited. In today's digitization age, wide use of pedagogic and information communication technologies in all aspects, including preschool education system, has become a necessity of the time. In this regard, computerization of preschool educational organizations, active use of modern technologies, improvement of pedagogues' qualifications and retraining of appropriate competencies were carried out. In multimedia education, it has already been proven in real life experience that it is effective to learn by seeing and hearing at the same time. Through the use of multimedia technology, it is possible to keep the acquired knowledge in the long-term memory of the students, and it increases their interest and passion for the computer. [1.221] Another characteristic of computer education is the negative impact of the computer on the children's organism. Therefore, it is emphasized that students should not use it continuously for more than 15 minutes, and children should not play didactic games for more than 20 minutes.

Another modern approach to preschool education is the introduction of modeling technologies. Modeling is one of the most common forms of scientific activity, in all disciplines the model is used to obtain information about the phenomena being modeled, to develop hypotheses and theories. Modeling involves simplification, idealization, and abstraction. It allows checking the representativeness of the information in the sources, the credibility of the evidence, the validity of hypotheses and theories. Uncertain, incomplete information can be obtained as a result of studying the world around us. But this does not prevent us from flying into space, discovering the secret of the atomic nucleus, mastering the laws of the development of society, and others. Based on them, a model of the studied phenomenon and process is created. Introducing preschool children to the secrets of the first modeling requires skill and deep knowledge from educators.

The requirements for modeling should clearly indicate the main characteristics and relationships to the object of knowledge; it should be understandable and convenient to create actions with it; it should clearly convey the characteristics and relationships that should be mastered with its help. The following types of modeling are common:

- ✓ **Object model** - a model in the form of natural objects (a model of a figure reflecting its main parts, structural features, parts in space).
- ✓ **Schematic model.** Here, the important components identified in the object of knowledge and the connections between them are shown with the help of objects - placeholders and graphic symbols. (in the case of a puppy)
- ✓ **Graphical models** (formulas H₂O-water, diagrams-population growth).

The model should be available for children in everyday life; - the model should be compact and describe only the main qualities of the object or phenomenon. Successful use of models helps children to enrich their learning experience of the world around them. Models are used in the process of joint conversations, observations, and activities with children, and then they are placed on a panel in the nature corner, where children independently examine them.



Through modeling, children's knowledge, ideas, and views about the environment are developed. For example, fish (scales, fins) in an aquarium, a graphic model that helps to generalize the concept of "fish", "Where does a fish live?" How do they act and why? What is the body of a fish covered with? Why does he need scales? How does a fish breathe? Can a fish be taken out of water? Why? Why do fish need fins?' such concepts are clarified and modeled on this basis.

Mathematical modeling technology with preschool children can be built as follows

According to theoretical-plural content:

- finding the entire given invariant form, dividing its various classes;
- finding the whole variable discrete form, dividing the given primary form into constant classes.

By spatial orientation:

- design a plane based on cutting a right angle;
- spatial modeling based on cutting a right-angled parallelepiped;
- based on materials that allow continuous deformation (with topological properties);
- based on classic origami and flexagon.

Sensory abilities of the child, manifested in the perception of objects and their properties, are of particular importance in the development of the field of environmental knowledge [2.91] In the context of mathematical modeling with preschool children, it is important to perform three types of actions when using sensory standards:

- ✓ to determine whether an object is fully compatible or similar to the standard;
- ✓ comparison of the benchmark with the object that cannot be solved by simple matching;
- ✓ perceptual modeling - creation of acceptable quality from standard material.

Mathematical modeling technologies are organized in order to develop logical and mathematical abilities of preschool children through modeling.

The process of mathematical modeling determines the development of children's ability to perceive the environment in different age groups.

- ✓ at a young age - will acquire skills to fill certain parts of models with real objects
- ✓ in middle age - learns the movements of using ready-made models
- ✓ at an older age- -independently creates models through schemes and constructs new models and their schemes.

In conclusion, it should be said that the innovations and advanced technologies entering the preschool education system allow children to acquire 21st century skills, participate and compete in various prestigious international competitions, and create a foundation for them to become fully competent and perfect individuals.

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