

main idea of the works of art is that the expression of a person's happiness or ruin as a result of the struggle between good and evil encourages the reader to draw conclusions. A reader who reads a lot of books will be able to draw the necessary conclusions. As a result, he expands his knowledge, worldview, and becomes an educated, literate, cultured, spiritually mature, spiritually active, and strong-willed person.

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METHODS USED IN THE DEVELOPMENT OF MATHEMATICAL CONCEPTS IN PRESCHOOL CHILDREN ON THE BASIS OF STATE REQUIREMENTS (UZBEK EXPERIENCE)

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***Abstract.** Pre-school education is the primary link in the system of continuing education and plays an important role in educating a healthy and well-rounded child and preparing him for school. During the years of independence, the education system in Uzbekistan and the upbringing of a*

harmoniously developed generation have risen to the level of the main priorities of state policy.

Keywords: Pre-school education, education system, state requirements, foreign experience, scientific achievements, modern information, communication technologies.

At present, the Republic pays special attention to this area at the level of state policy. The President of our country Shavkat Mirziyoyev has set a very important task for teachers to reform the field of preschool education.

Law of the Republic of Uzbekistan "On Education", Resolution of the President of the Republic of Uzbekistan dated December 29, 2016 No PQ-2707 "On measures to further improve the system of preschool education in 2017-2021" and the Cabinet of Ministers of August 5, 2004 No 372 "Uzbekistan According to the Resolution of the Ministry of Public Education of the Republic of Kazakhstan "On improving the activities of the Republic of Uzbekistan", the state requirements for the comprehensive development of children in preschool education, their education, skills and preparation for school [1].

On the basis of the State requirements for the development of primary and preschool children of the Republic of Uzbekistan, it is necessary to determine the level of knowledge, skills and abilities of children, their comprehensive development and readiness for school, to create organizational, pedagogical, psychological and methodological resources for their upbringing in family and preschool was found.

The purpose of the State Requirements for the Development of Primary and Preschool Children of the Republic of Uzbekistan is to bring up a spiritually perfect and intellectually developed person in the preschool education system, taking into account the ongoing socio-economic reforms in the country, foreign experience and scientific achievements and modern information and communication technologies.

The functions of state requirements are:

- Setting requirements for the content and quality of development, education of preschool children;
- Introduction of effective forms and methods of education and upbringing of children on the basis of national, universal and spiritual values;
- Introduction of pedagogical and modern information and communication technologies in the educational process;
- Ensuring the effective integration of education, science and industry for targeted and quality training.

State requirements are applied on the basis of the following principles:

- The uniqueness of the child;
- The active role of the child in creating the concept of "I" and personal education;
- The importance of protecting and ensuring the rights of the child;
- The main role of adults in the education and development of children;
- An approach based on individual variability, adapting to each child due to the presence of individual differences in children's development.

The structure of state requirements is as follows.

Government requirements include the integration of developmental areas and the development of the child.

State requirements divide children from birth to 7 years of age into five main areas of development. Each area of development is subdivided into sub-areas, which consist of several requirements (expected development indicators) for each age group.

State requirements are set for the following areas of the child's development:

- Physical development and formation of a healthy lifestyle;
- Socio-emotional development;
- Speaking, communication, reading and writing skills;
- Development of the cognitive process;
- Creative development.

The field of cognitive development is divided into the following areas:

- To give knowledge and understanding about the world;
- Formation of elementary mathematical concepts.

The formation of elementary mathematical concepts is part of the cognitive process. At different ages, children should have the following basic mathematical skills [2].

Development of mathematical imagination for children under 2 years of age According to the

performance indicators in the areas of state requirements, they can divide the amount into "single" and "multiple".

To develop these concepts, the child is asked to describe the size, weight, and length of objects, and to ask the child basic math questions during the trip (how many steps did we go through? How many toys do you have?). Involving a child in math development activities also works well. They usually observe the movement of others or a fallen object, move with objects to achieve actions and sounds that evoke a feeling of joy or satisfaction, imitate actions, or repeat the gestures of others. Mathematical concepts are developed by giving them instructions such as "Give me a piece of candy," "Put the toys in the basket," "Take the ball," "Bring me a bowl," and "Give me two biscuits."

2–3 year olds differentiate objects according to their color and shape, place objects in a row from small to large, and find shapes that fit them. Focus the child's attention on objects of different sizes and their names (large and small), help to develop the ability to sort and name objects (cubes, bricks, balls), increase the child's experience of learning the environment, dormitory, Mathematical concepts are developed by teaching children to distinguish between hotels, playrooms, and other rooms, and by counting stairs, applause, and so on with the child. The child also distinguishes nearby objects (toys, dishes, clothes, shoes, furniture), knows some domestic and wild animals, distinguishes some vegetables and fruits, builds devices with the help of adults, organizes games around his device, knows how to place objects in the appropriate environment. For example, he knows that a giraffe should be parked in a zoo and a car in a garage.

To develop these skills, children develop mathematical concepts through a variety of questions and instructions from adults. For example: "More or less?", "One for me, one for you", "Strange bag" game, "Make a spruce out of triangles", "Give two cubes", "Bring a yellow ball". To reinforce geometric shapes, such as "What is this?", "This is a circle", "This is a triangle", "This is a bread, this is a circle", "This is a ball, this is a circle", "This is a box, this box is a rectangle" ... questions and references will be made.

3–4 year olds divide objects into groups according to 1-2 signs, find "single" and "many" in the environment, type objects according to their size, distinguish geometric shapes (circle, square, triangle), shapes (cube, sphere), compares plurals, knows the meaning of the concepts of "long" and "short", knows the concepts of "half", "half", understands the relationship between numbers and numbers, mechanically counts to 5.

To strengthen mathematical concepts in children of this age, play "Make a Christmas tree out of circles of different sizes", "Who has more sticks?", "Make a car out of rectangles", "Shape kaleidoscope", "Give everyone two pencils". Get out, "What was the weather like yesterday, what about today?", "Put four apples on a plate," "Make a triangle, a rectangle with sticks" and so on.

4–5 year olds find objects similar to geometric shapes, know the names of geometric figures and shapes, determine quantitative relationships, know the quantitative composition of numbers, use mathematical concepts (more, less, total, as many), count in sequence, co. compares plaices 'more', 'less', 'equal', knows how to get direction in space (front, back, top, bottom, near, far), understands the concept of whole and its parts.

In children of this age, mathematical knowledge is imparted not only in the formation of elementary mathematical concepts, but also in other activities: speech development, drawing, various didactic games, outdoor walks, exercise. At the same time they are taught numbers and their neighbors, exercises for their formation, quantitative concepts, concepts of space and time: "Find the place of one", "Two big or four?", "Toys" "Bring the first, third, fifth toys," "Take two of the six pencils," "Place the big toy on the shelf and the small ones on the bottom of the shelf," "Who was on duty yesterday?", "What day is it today?" "How many days a week?", "Is our garden far or close to home?" "Who's in the line before you, and who's after you?" strengthened through exercise.

At the age of 5–6, children become familiar with geometric shapes. They know geometric figures and distinguish them from objects, compare objects by length, width, thickness and height, compare groups of objects, use mathematical terminology in communication, understand the system of signs (using numbers and symbols +, -, =), Counts numbers from 1 to 10 correctly and inversely, compares objects by number and number, identifies groups of equality and inequality of objects and compares them with each other.

They were asked, "Which is the longest ribbon?", "One to ten in a row and count backwards," "How many people are around the table?" Mathematical speech and skills are developed through appeals such as "Jump eight times", "Six times on the right foot, six times on the left foot", "Make two triangles out of a rectangle", "Name the shapes".

For children 6–7 years old, the content of mathematical concepts is a bit more complicated. They understand the importance of numbers and counting in life, know geometric shapes and figures, perform some mathematical operations up to 20, solve simple mathematical problems of addition and subtraction up to 10 (using numbers and symbols +, -, =), number series have an idea about. They also analyze whether groups are equal or unequal (how many ?, how little?), Place objects in sequence according to size, height, and thickness, and measure liquid, brittle, and solid material based on a symbol.

The children in the preparatory group will develop skills in two operations (addition and subtraction), comparison of numbers, solving simple conditional problems and examples. For them: "Mathematical dictation", "Geometric dictation", "Day and night" game, "Simple mathematical logic games", "Examples and problems of comparing numbers", "Picture rebuses", "Fairy-tale puzzles" , Mathematical skills and abilities are developed through exercises such as "Games of economic circulation in everyday life", "Name and remember numbers". Children ages 6–7 have extended math classes to prepare for school. Classes are 72 hours per academic year, 2 hours per week, and 8 hours per month. Math lessons vary according to the age of the children. These activities help children learn simple math concepts and develop independent work skills. The child also develops independent work skills and expands the range of mathematical concepts. Educational and pedagogical work actively carried out by the educator ensures full compliance with the requirements of the State. This serves as an important factor in preparing children for school.

Today in the developed countries of the world STEAM (S – SUBJECT-science, T – TECHNOLOGY-technology, E – ENGINEERING-engineering, A – ART-art, M – MATHEMATICS-mathematics) – science, technology, engineering, digital Development centers have been established in pre-school educational institutions on the basis of a modern approach that combines horse and mathematics.

STEAM helps children develop the following important traits and skills:

- Comprehensive understanding of the problem;
- Creative thinking;
- Engineering approach;
- Critical thinking;
- Understand and apply scientific methods;
- Understand the basics of design.

This approach will help solve life problems in children in the future. In many developed countries, including the United States, Japan, Israel, Singapore, and Russia, this approach is being used effectively to develop children's creative and inventive skills in preschools.

Thanks to the STEAM approach, children understand nature and explore the world on a regular basis, thereby developing their interests, engineering thinking style, ability to cope with critical situations, teamwork skills and leadership, the basics of self-expression, respectively, provides a radically new level of child development.

Build self-confidence

In this approach, children "launch" bridges and roads, planes and cars created by their own hands, "develop" and test underwater and aerial structures, and each time they get closer to the goal. A "product" that doesn't work well is constantly being tested and improved. As a result, solving all problems and achieving goals will bring inspiration, victory, adrenaline and joy for children. Each victory gives more confidence in their abilities.

Active communication and teamwork. STEAM programs are also characterized by active communication and teamwork. During the discussion, they learn not to be afraid to express themselves. Most of the time, they don't sit around a table, they test and develop "products" based on their designs. They are always busy interacting with educators and their friends in a collaborative team.

Develop an interest in technical sciences. The task of STEAM education in preschool and primary school age is to create the preconditions for the development of interest. For children, the love of what they do in the natural and technical sciences is the basis for developing interest.

STEAM is very fun and dynamic for children and prevents boredom in children. They don't notice that time is passing, but they are not tired. There is a growing interest in rockets, cars, bridges, skyscrapers, electronic games, factories, logistics networks, submarines, science and technology.

Creative and innovative approaches to projects.

STEAM training consists of six stages: question (task), discussion, design, construction, testing, and improvement. These steps are the basis of a routine project approach. In turn, collaboration or sharing different opportunities is the basis of creativity. Thus, the simultaneous use of science and technology in children can lead to new innovations.

A well-organized, healthy social and spiritual environment encourages children to explore, take initiative, and demonstrate creativity. At the same time, educators need to have a clear idea of how the child is developing, and to do this, they need to be constantly monitored. The educator delivers the learning material to the children in a way that is appropriate to their age. The role of the pedagogical team of preschool education is to set appropriate goals, taking into account the interests, abilities and needs of each child, to support the natural interests of children, to develop in them the skills of joint development [3].

When considering the specifics of a child's development, it is important to understand that all children go through certain stages of development, but each child is unique and unrepeatable.

In order for educators to provide children with exactly the same things and activities, they need to have a complete picture of their own unique, distinctive developmental indicators. Experts also emphasize that educators need to be aware of differences in the abilities and interests of different children of the same age. It refers to the specifics of a child's development, the types of activities that meet the interests of children, that is, their level of mental, social and spiritual maturity. These activities focus on children's interest in nature, their satisfaction with the experience, and their desire to experiment with their ideas. It is important to help children find answers to their questions. Because as the child seeks answers to the question, interest, reasoning, and attention are automatically activated. The role of the educator is to work together to find answers that satisfy the child without simplifying the question and without confusing the child with too much information.

In the process of education in developmental centers, children begin to voluntarily choose the appropriate developmental center. When working with children in independent groups, the educator devises individualized activities in which everyone is given the same instructions, but each child is allowed to succeed independently based on it. The level of individualization can be optimized. By choosing the type of activity that requires dexterity and ingenuity, and by carefully observing the children, the educator can modify or adapt the assignments and materials as needed [5].

In the Republic of Uzbekistan, on the basis of the "First Step" curriculum, the following development centers will be established in preschool educational institutions:

- Center for Construction, Design and Mathematics
- Center for role-playing games and drama
- Language and speech center
- Center for Science and Nature
- Art Center
- Center for Music and Rhythm.

Development centers allow children to independently individualize the educational process based on their personal skills and interests. For example, in an art center, one child cuts a piece of paper, and another child cuts a shape out of the paper with scissors. In the center of the board games, one child makes a shape out of four wooden cubes, and the other likes to make a picture out of twenty-five pieces of cardboard. The educator observes the children in the process and writes down ideas related to their development. After a while, he offers the children materials that complicate the task, or, depending on the situation, directly helps the child to complete these tasks. As a result, the child develops effectively.

Educators play the role of children's assistants in development centers, provide a wide range of opportunities in the classroom, and plan activities so that each child has an individual level of development.

The agenda should include different types of activities: in small groups, together and in collaboration with the educator, individually or independently (time should be allocated to the activities chosen by them, because children learn to make conscious choices, their exercise their interests and abilities). Children need to be able to make their own choices, solve problems, work with others, set and achieve individual goals.

The centers in the groups should be designed in such a way that it allows the child to make independent choices. There are 6 centers in each group, each with enough material for research and games.

The Center for Construction, Design, and Mathematics has a variety of building elements of various shapes and sizes, from which children build structures based on their imagination: for example, the historical monuments they see, houses, garages, farms, and so on. There is a lot to learn about construction here. It helps children develop their math skills, social skills, and problem-solving skills. It is also a place where you can learn to be creative and focus on what you are doing. The center can accommodate a wide variety of items – toys, trucks, planes, pieces of fabric – at the request of educators and children.

In order to further improve the quality and effectiveness of preschool education, it is possible to organize a week of training for preparatory groups. In this case, the training will continue as usual. But each week is named. For example: Math Week, Speech Development Week, Nature Week, Visual Activity Week, Artistic literature Week. These weeks will focus on developing children's math, speech, nature, visual arts, and fiction skills.

Also, every lesson in Math Week is with math, every lesson in Speech Development Week is with speech development, every lesson in Nature Week is with nature introduction, every lesson in Visual Activity Week with one session of visual activity, each session of Artistic literature Week will be combined with fiction.

It is also proposed to organize checkers competitions, intellectual activities, inter-group competitions during mathematics weeks to develop the mathematical imagination of children in preschool education. The task of educators is to create an environment that encourages children's curiosity and to adapt to and monitor the changing needs of children in a timely manner. Assignments for individuals or small groups are developed after talking to parents to focus on certain skills. As parents and other family members come to classes, they feel that their children are growing in enthusiasm, aspiration is growing, and how the learning process is going, how children can become educated, creative people in the future; they will witness that they are constantly communicating, agreeing, searching, choosing, and acquiring knowledge and skills. Consistent implementation of this work will serve as an important factor in improving the quality and efficiency of preschool education. It creates a basis for children to come to school fully prepared and educated.

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