



## FORMATION OF ELEMENTARY MATHEMATICAL CONCEPTS IN PRESCHOOL CHILDREN

Muyassar Boboyeva<sup>\*1</sup> and Zulxumor Qutliyeva<sup>2</sup>

<sup>\*1</sup>Department of Theory of Primary Education, Bukhara State University, Bukhara, Uzbekistan

<sup>2</sup>School no. 44, Bukhara district, Bukhara, Uzbekistan

**Abstract:** Following article deals with modern pedagogical technologies of the formation of elementary mathematical concepts in preschool children. Some interactive methods used in teaching are presented.

The process of discovering the potential of educational process on the basis of introducing modern pedagogical technologies into educational practice is being continued in our country. Teachers are also aiming to improve the efficiency and quality of teaching through the inclusion of innovative technologies in the educational process. To this aim, preschool education is the foundation for educating young generation. Scientists say that about 70 percent of the information that a person receives during their lifetime is up to the age of five. Indeed, during this period, the human being understands the world, learns his native language and develops love for his parents, family, neighborhood and motherland provide the foundation for lifelong learning. In the first place, the family plays the main role, and the contribution of the preschool is also important. Therefore, preschool education in our country has become an integral and preamble part of the system of continuous education.

Considering the speech of the President of the Republic of Uzbekistan Shavkat Mirziyayev at the solemn ceremony dedicated to the 25th anniversary of the Constitution of the Republic of Uzbekistan: "... I think there is no need to prove to anyone today how broaden the point of view and upbringing of kindergarten children". Indeed, pre-school education is a very important institution for the education of a well-developed personality and instilling in the hearts of the younger generation the knowledge and values that determine their future.

It is worth noting that in the fastest-growing science and technology age, we need to pay a great attention to the preschool education so that children can learn and apply their experiences in various fields. Mathematical knowledge, in particular, plays an important role in human life. The role of the teacher in teaching mathematical concepts to children in preschools has special importance. This is because during the lessons conducted by the teacher, the child acquires mathematical concepts and increases his or her interest in the subject.

The teacher should always pay attention to the rational choice of methods and their rational use. These are:

- Successful formation of elementary mathematical representations and their reflection in speech;
- the ability to think and differentiate relationships of equality and inequality (by the number, size, shape of the item), to determine the final relationships (increase or decrease by size or number), to determine the size, shape, size of the analyzed objects and their connections;
- the practical methods possessed by children (for example, contrasting, counting, measuring, comparing) to new conditions and directing them to search for practical ways to find features, properties, connections that are important to the situation. For example, while playing a game we can teach order of signs, regularities of variations and finding common features.

The practical method is the leading method in the formation of elementary mathematical representations. The essence of it is to organize children's practical activities aimed at mastering seriously defined ways of working with items or substitutes (images, graphics, models, etc.).

In preschool, the most widely used methods are the instructional, verbal and practical techniques that are used in close interrelationships. For example, expressing (demonstrating) a method of action is an example of an educator. It is the main method of teaching, which has instructional-demonstrative-practical features, involving various didactic means, which allows children to develop skills and abilities.

One of the main ways to form elementary mathematical concepts in all age groups is to ask children questions. The following classification of questions in pedagogy has been adopted: reproductive - mnemonic (hypothesis) questions (How many? What is it? What shape is it? What is the difference between square and triangle?); productive – questions of knowledge. (What do you need to make the circle 9? How do we divide the rope into several equal parts?)

The questions activate children's cognitive, memory and speeches providing insight and understanding of the material.

The use of auditing and evaluation techniques in training sessions is also effective. These methods are connected inextricably. Checking is followed by the results of their work, their responses to follow-up activities of children. These methods are accompanied by direct assistance, guidance, explanations, presentations and examples of adult actions including error correction.

The tutor corrects mistakes in the individual and teamwork with the children. Practical impact and speech errors should be corrected. The tutor explains the reasons for the error, gives an example or uses other children's actions and responses as an example. The facilitator will accompany the step-by-step self-examination and cross-examination. Children are aware of the typical mistakes that they can make in counting, measuring, and simple calculations.

Methods, results and behavior of children should be assessed. Adults are taught along the way, along with self-assessment. This method is used in the beginning and at the end of the exercises and games.

Comparative **analysis, synthesis and generalization** of preschool children in the formation of elementary mathematical representations are reflected not only as cognitive processes, but also as a methodological method for determining the direction of the child's thinking in the learning process. The amount of similarities and differences between objects are compared by shape, size, spatial location, time-duration, etc.

Analysis and synthesis come together as methodological methods. Examples of using these methods are the formation of the notion of "multiple" and "one" in children. These concepts come from observation and practical action with items.

The tutor brings the same toys as the kid's number. Each baby is given one toy and then collects the toys together. In front of the children of the group, a group of items is broken down into separate items and again, they are formed.

Children are taught to generalize on the basis of analysis and synthesis. It summarizes the results of all observations and actions. Through these methods, we understand quantitative, spatial and time relations, the main and the most important. In the papers [1-5] the theoretical bases of innovation technology and an importance of the modern pedagogical technologies are described. An importance of modern pedagogic technology scholastic-perception process and their place in pedagogical technology are shown.

Summarizing is done at the end of each part of the training and at the end of the whole session. The tutor will then summarize the children themselves.

Comparison, synthesis, analysis, generalization are performed on the basis of the visual representation of various didactic agents. Observations, practical actions with the items, reflection of their results in the speech, questions asked by children are the outward expression of methodical methods. These methodologies are inextricably intertwined and are often used in a complex way.

Much attention is paid to the quantitative observation of everything around, how children use mathematical knowledge and skills in different activities.

By the time of school, children should be more aware of the interconnected knowledge of collections and numbers, shapes and sizes, and learn to manage time. Children begin to understand that the most accurate way to determine the proportions of quantities is to count the items and to measure the magnitude. In them, the skills of counting and measuring are more firmly and consciously acquired.

For example, you can ask the following questions to determine children's first impressions of mathematics:

1. See what the square shapes and rectangles around us say and count.
2. Show me my right hand.
3. What is the number after 7?
4. Number 4 and Number 5? How many times bigger?
5. Draw a tree large and small.
6. Measure the length of your room, etc.

**Summary.** If preschoolers are taught using such interactive methods as elementary mathematical concepts, students will develop independent thinking skills, develop thinking, develop creativity, and increase the effectiveness of collaborative activities between educators and produce guaranteed results in the learning process.

## REFERENCES

- [1] Z.D.Rasulova. Teaching the subject of labor education based on innovative learning technologies as a pedagogical problem. Pedagogical skills, No. 1, 2019, pp. 36-38.
- [2] G.V.Izbulayeva, Z.D.Rasulova. Psychological approach to the development of professional competence of the teacher of labor education. Psychology, No. 1, 2019, pp. 36-40.
- [3] Z.D.Rasulova. Advanced Technology Technological Capacity for Lessons of Labor Education. Scientists of 21st century, 2018, no. 12 (47), pp. 34-35.
- [4] Sh.Kulieva, Z.D.Rasulova. Formation of professional and pedagogical competitors of specialists, based on innovation technologies. Young Scientist, 2016, No. 8 (112), pp. 977-978.

[5] Sh.Kulieva, Z.D.Rasulova. Innovation Activity of the Teacher in Education. Young Scientist, 2016, No. 8 (112), pp. 977-978.

**SHORT BIODATA OF ALL THE AUTHOR**

**Muyassar BOBOYEVA**

She is graduated from the National University of Uzbekistan. Her scientific interests are connected with the applying modern interactive methods to the teaching. At the present M.Boboyeva is a teacher of the Department of Theory of Primary Education at the Bukhara State University.



**Zulxumor QUTLIYEVA**

She is graduated from the Bukhara State University. Her scientific interests are connected with the applying information technologies and interactive methods to the teaching process. At the present Z.Qutliyeva is a teacher at the School no 44 of the Bukhara district.

