

IMPROVING THE QUALITY OF PRESCHOOL EDUCATION THROUGH INTRODUCING PRESCHOOLERS TO TECHNICAL CREATIVITY

Otashova Lola Shotorayevna*

*Lecturer,

Department of Preschool Education,
Termez State University Pedagogical Institute,
UZBEKISTAN

Email id: jumayeva@gmail.com

DOI: 10.5958/2249-7137.2022.00257.9

ABSTRACT

Today, society needs socially active, independent and creative people capable of self-development. Innovative processes in education require new approaches. The formation of motivation for the development and learning of preschoolers, as well as creative cognitive activity - these are the main tasks that the teacher faces today within the framework of federal state educational standards. These difficult tasks, first of all, require the creation of special learning conditions. In this regard, design is of great importance. In the article, we reveal the conditions for working on LEGO technology and robotics with the children of our group.

KEYWORDS: *LEGO Design, Creative And Productive Activity.*

INTRODUCTION

“In constructing, the child acts like an architect erecting a building of his own potential.” J. Piaget.

Robotics is a creative process in which a child manages to create his own product - a robot.

Modern children live in an era of active informatization, computerization and robotics. Technical achievements are increasingly penetrating into all spheres of human life and arouse children's interest in modern technology. Children have an inherent desire to explore the world around them. In this, a special place is given to preschool upbringing and education, since during this period all the fundamental components of the formation of the child's personality are laid. The formation of motivation for the development of preschool education and creative cognitive activity are the main tasks that the teacher faces today as part of the implementation of the SES DO. These tasks require special learning conditions. In this regard, we attach great importance to constructive activity through design and robotics. [1]

The main goal of using LEGO technology and robotics is to form a person who is able to independently set goals, design ways to achieve them, control and evaluate their achievements, work with different sources of information, evaluate them and, on this basis, express their own opinion, judgment, assessment; developing key competencies of pupils. [2]

Technology:

Allows for the integration of educational areas;

Gives the teacher the potential to combine play with research and experimental activities;

To form cognitive actions, the formation of consciousness; development of imagination and creative activity;

Develop the ability to work in a team.

We take into account the conditions:

The presence of the "Design Center", which contains designers of various modifications;

once a week (in addition to independent constructive activities) I organize an "Hour of Play", with the obligatory inclusion of various forms of organizing training, according to the developed algorithm for working with design material. [3]

I spend each hour strictly according to the algorithm.

The algorithm for working with the constructor:

Examination of a drawing, picture, diagram, drawing, sample.

Selection of the necessary parts from the general set.

Assembly of model elements.

Sequential installation of all assembled parts into one whole model.

Comparison of your assembled model with a drawing, picture, sample, diagram, drawing (or analysis of the assembled structure).

All work is aimed at developing the ability to establish a connection between the buildings being created and what they see in the surrounding life; creation of various buildings and structures. Children learn to distinguish the main parts and characteristic details of the structure, analyze buildings, create buildings of the same object that are different in size and design. [4]

Our pupils master various forms of organization of education, as well as "construction on the topic." We offer children the general theme of the design, and they themselves create designs for the designs. The main purpose of this form is the actualization and consolidation of knowledge and skills acquired earlier. [5]

In our work we use "construction by conditions". Without giving children a sample of buildings, drawings and methods of its construction, defining only the conditions that the building must meet. The design tasks in this case are expressed through conditions and are of a problematic nature, since there are no ways to solve them. In the process of "designing according to conditions" children are fluent in generalized methods of analysis, both images and buildings; not only analyze the main design features of various parts, but also determine their shape based on the similarity with familiar three-dimensional objects. Free buildings have become symmetrical and proportional, their construction is carried out on the basis of visual orientation. Children quickly and correctly select the necessary details, quite accurately imagine the sequence in which they will carry out the construction. [6]

We carry out constructive activities with children in an accessible game form from simple to complex. Realizing that children are very easy to cope with various forms of construction and robotics, they made changes to the work. They came up with a game with the children: children in subgroups (or individually) begin to make crafts, on a signal they pass their crafts clockwise to the next table, they continue to design according to their own plan. At the end of the work, the children discuss the finished construction and give the name of the miracle construction. Further complicating the form of work, we conduct a dictation with the children. According to verbal instructions, the children designed crafts. Such forms of construction are built into a certain system of exercises that are, on the one hand, playful in nature, and on the other hand, educational and developing. Creating something whole out of separate elements: houses, cars, bridges and, in the end, a huge city, populating it with residents, is a fun and at the same time educational hobby for children. Playing with the constructor, and then with robotics, is not only exciting, but also very useful. [7]

In the game, as the main form of constructive activity, children become builders, architects and creators, while playing, they come up with and implement their ideas. In our work we use games: "LEGO-gifts", "Name and build", "Remember the location", "Playing in the store", "Construction dictation", "Combinatorics", "Building copies of the masterpieces of world architecture", "Perimeter and area". [8]

LEGO technology is interesting in that it allows you to ensure the unity of educational, developmental and educational goals and objectives of the process of education of preschoolers. It can be introduced into the educational process and successfully integrated with other educational areas "Cognitive", "Speech", "Social and communicative", "Artistic and aesthetic", "Physical". [9]

Combining LEGO construction with research and experimentation, we provide the child with the opportunity to experiment and create their own world where there are no boundaries with the help of experiments: "Windmill", "Why an airplane flies", "What prevents you from falling", "How walkers walk" and etc.

We use LEGO construction in the development of elementary mathematical concepts. Counting parts, blocks, fasteners, calculating the required number of parts, their shape, color, length, I develop mathematical abilities in children. Children get acquainted with such spatial indicators as symmetry and asymmetry, orientation in space. [10]

In addition, construction is closely related to the sensory and intellectual development of the child: visual acuity is improved, the perception of color, shape, size is improved, thought processes (analysis, synthesis, classification) are successfully developing.

LEGO construction also develops communication skills, activating mental and speech activity. Children are happy to talk about their buildings, pronounce the sequence of their actions, evaluate this or that constructive situation. They perform tasks that require the activation of mental activity, for example, to complete the building according to a given attribute or conditions ("Fill the space", "Guess whose part I am?", "Relive your model" and others). Speech situations that arise in the process of creating buildings and playing with them contribute to the development of children's speech, which serves as one of the most important means of active human activity, and for the future student is the key to successful schooling. Many learning tasks

are solved: vocabulary expands, communication skills develop, the ability to generalize and draw conclusions improves. [11]

In our opinion, one of the main opportunities in LEGO construction is to teach children to work effectively together. When working with the construction set, children not only communicate, but also exchange tips on mounting methods, details, or combine their models to create a larger structure, developing social skills: independence, initiative, responsibility, mutual understanding, which are necessary when interacting with other children. By doing LEGO construction, children acquire work culture skills: they learn to keep order in the workplace, allocate time and effort in making models, and plan activities.

The lesson plan includes topics such as "Animals", "Urban and rural buildings", "Toys", "Transport", "Ships", etc. children.

Complicating the tasks of constructive activity, we introduce children to the simplest robotics - this is not just design classes, but a powerful innovative educational tool that contributes to the development of technical creativity and the formation of scientific and technical professional orientation in children of older preschool age. We use the basic Kicky program in our work: "The Tale of the Two Stubborn Goats", "Blind Man's Bluff", the Hunarobo 1 program: we assemble the robot. [12]

As a rule, robotics design ends with play activities. Children use robots in role-playing games, in theatrical games. Thus, consistently, step by step, in the form of a variety of gaming and experimental activities, children develop their design skills, logical thinking, they develop the ability to use diagrams, instructions, drawings.

As part of our work with parents, we hold competitions: "Construction Academy", "Photo stand of my achievements", organizing exhibitions of the created buildings together with children. The results of the competition were summed up by voting of parents and children. All work deserves attention. As a result, the number of families willing to take part in such events has increased. [13]

Due to the insufficient number of robotics designers, the work made by children also has to be preserved - by photographing.

We cooperate with preschool educational institutions, which organize innovative work on robotics. Such meetings are unforgettable for children. Schoolchildren are happy to show how robots work, tell how to make this or that design, and help younger children to work with robotics. Due to such cooperation, another resource for providing robotics has appeared: students with a teacher come to our meetings with their robotics. [14]

As a result of the organization of creative productive activities of preschoolers based on LEGO design and robotics, we create conditions not only for expanding the boundaries of the child's socialization in society, enhancing cognitive activity, demonstrating their successes, but also laying the foundations for career guidance work aimed at promoting engineering and technical professions. [15]

REFERENCES

1. Berdieva KhM. The study of the scientific foundations of mechanization and automation of agricultural management in the course of physics in a secondary school (based on the material of rural schools in Uzbekistan). <https://nauka-pedagogika.com/pedagogika-13-00-02/dissertaciya-izuchenie-nauchnyh-osnov-mehanizatsii-i-avtomatizatsii-upravleniya-selskim-hozyaystvom-v-kurse-fiziki-sredney-shkoly-na-m>
2. Berdieva KhM, Shamanov MKh, Abdurakhmonova RKh, Gulboeva BN. Technology and methods of teaching students of secondary schools. Student Bulletin: electron. scientific magazine 2018;29(49).
3. Berdieva KhM. Development of professional communication skills of teachers in the field of education. Available at: <https://s.siteapi.org/d955411c180ee78/docs/khhp4bee6u8g8goowcsg0gcg8os0kw>
4. Berdiyeva MM. Pedagogical Support and Development of the Intellectual Opportunities of Children in Preschool Education. European Journal of Research and Reflection in Educational Sciences. 2019;7(12):33.
5. Berdiyeva MM. The quality of preschool education at the present stage. ACADEMICIA: An International Multidisciplinary Research Journal. 2021;11(10):2267-2272.
6. Berdiyeva MM. Tasks for preschool educators. South Asian Journal of Marketing & Management Research. 2021;11(10):151-155.
7. Berdiyeva MM. Formation of Intellectual Culture of a Preschooler. Available at: <https://scientific-conference.com/images/PDF/2019/55/International-scientific-review-LIV-ISBN.pdf>
8. Berdieva HM. Ways to Train School Students. Available at: <https://sciencecentrum.pl/wp-content/uploads/2020/05/POLISH%20SCIENCE%20JOURNAL%20%E2%84%9626%20282%29%2028web%29%20283%29.Pdf>
9. Berdieva HM. Challenges in Modernization of the Education System and Methods of Overcoming Them. Available at: <https://sciencecentrum.pl/wp-content/uploads/2020/05/POLISH%20SCIENCE%20JOURNAL%20%E2%84%9626%20282%29%2028web%29%20283%29.pdf>
10. Berdieva MM. Intellectual Development of Early Children on The Basis of Pedagogical Support. International scientific-practical conference "Reforms in vocational education: innovative ideas in professional development." Available at: <https://staff.ttiame.uz/storage/users/546/articles/iMJfaUDoPQYZqSxUhG7olj9aZ9XSLff9CSErkMxL.pdf>
11. Usmanova SE. (2021). Formation of spiritual and moral qualities of preschoolers on the basis of public education. Middle European Scientific Bulletin, 2021;11:270-277.
12. Usmanova SE. Possibilities of Using Multimedia Computer Programs in the Development of Preschool Children. 2021. 55-57. <https://www.elibrary.ru/item.asp?id=46438589>

13. Jumayeva MA, Buriyev JJ. (2021). The Role Of Activity In The Upbringing And Development Of The Child. *International Journal of Philosophical Studies and Social Sciences*, 2021;1(2):126–129.
14. Jumayeva MA. Independent Musical Activity in Preschool Organizations. *Journal of Ethics and Diversity in International Communication*, 2021;1(1):9–10.
15. Aliyevna JM. The Social Activity of the Educator with the Family. *European Journal of Life Safety and Stability*, 2021;12:401-403.