



IMPLEMENTATION AND MANAGEMENT OF THE INTERNATIONAL EXPERIENCE OF PRESCHOOL ECOLOGICAL EDUCATION IN THE NATIONAL EDUCATION SYSTEM

Bakhodir Odiljon ugli Amonov

Teacher of the Department of Educational Management of the Kokand State Pedagogical Institute

Khurshida Aliyevna Ustadjalilova

PhD., docent, Head of Department of Education Management of Kokand state pedagogical institute, <https://orcid.org/0000-0002-4412-5708>

Abstract. The article analyzes the international experience of “ecologically clean” and ecological education in preschool education of the developed countries of the world. Taking into account the real situation and cultural heritage, the ways of their implementation in the preschool education system of Uzbekistan are given.

Key words: Ecology, preschool education, international experience, national education, implementation, digital economy.

The urgency of the issue. At the “Climate Summit” of the 26th session of the UN held in Glasgow, Scotland in October-November 2021, 25,000 delegates from more than 200 countries participated, 120 heads of state and government attended the conference with a speech, "Climate change in order to avoid a global environmental crisis 1, It was agreed not to increase ⁵⁰. To do this, it is necessary to find a solution to a number of urgent environmental problems, namely: increasing the environmental awareness and culture of the human society, reducing and adapting to climate change, effective waste management, preserving biological diversity and establishing a green economy, wide use of alternative energy, and their there was a need to implement it. Deputy Prime Minister A. Abdukhakimov, who gave a speech on behalf of the Republic of Uzbekistan at the summit on November 9, emphasized Uzbekistan's active participation in all measures aimed at solving the above-mentioned global environmental problems at the national level, the international forum of "green economy" in Nukus in 2022, 2023 and in 2008, he proposed to hold the 6th UN Assembly on "Environment" in our republic [1].

The problem of "increasing environmental awareness and culture of human society" is one of the most urgent issues of pedagogical education in our republic. Therefore, the decision of the President of the Republic of Uzbekistan dated May 8, 2019 "On approval of the concept of development of the preschool education system of the Republic of Uzbekistan until 2030" No. PQ-4312, December 16, 2019 " On preschool education and training of the Republic of Uzbekistan Law No. 434 of the Cabinet of Ministers of May 27, 2019 "On Approval of the Concept of Development of Environmental Education in the Republic of Uzbekistan" and of the Ministry of Preschool Education and the State Committee for Ecology and Environmental

Protection of August 6 , 2019 7/1 and No. 6 joint decisions on the development of a plan of measures for the organization of environmental education in the preschool education system and its introduction into the general education subjects of the relevant education system, including advanced training courses .

The purpose and objectives of the research. *The goal of the research* is to study the international experience of preschool environmental education and to find ways to implement it into national education based on the above-mentioned national normative legal requirements of environmental education . To achieve this goal, the following *tasks* research was put forward: determining the state of preschool environmental education and its effectiveness in "ecologically clean" and economically developed countries; analysis of the state of environmental education in national preschool education; making proposals on ways to implement relevant international experience into the national preschool education system.

Research methodology. The system of pedagogical methods for the analysis of the international situation of preschool environmental education and its introduction into the national education system was determined and placed on the following hierarchical level:

- ✓ *collection and analysis of information related to the topic ;*
- ✓ *monitoring the process of ecological education and upbringing in the area of ecologically clean and developed countries ;*
- ✓ *determining the effectiveness of activities and evaluating the state of implementation of experiments ;*
- ✓ *to test and implement in the advanced stage of pre-school education.*

Research results. Our republic is on the 118th place in the ranking of the " Index of ecologically clean and polluted countries " carried out by international organizations according to the maximum index for Uzbekistan (Table 1). The index is a generalized ranking of indicators of the state of the environment . In order to raise our country to the top places in this rating, it is among the "ecologically clean" and economically developed countries Pre -school ecological educational experience learning is appropriate .

In the top 20 "ecologically clean" and economically developed countries [2] educational work is " Ecological










Table 1

Ranking of the "environmentally clean" countries of the world
 (According to the website <https://www.education-medelle.com>)

Position	State name	Index	Position	State name	Index
1.	Finland	90.68	118.	Uzbekistan	63.67
2.	Iceland	90.51	119.	Libya	63.29
3.	Sweden	90.43	120.	Grenada	63.28
4.	Denmark	89.21	121.	Bosnia and Herzegovina	63.28
5.	Slovenia	88.98	122.	Antigua and Barbuda	62.55
6.	Spain	88.91	123.	Kenya	62.49
7.	Portugal	88.63	124.	Swaziland	60.63
8.	Estonia	88.59	125.	Kribaty	60.48
9.	Malta	88.48	126.	Oman	60.13
10.	France	88.20	127.	Ivory Coast	59.89

"civilized person" begins at the pre - school educational institution . The main goal of this is to create the first elements of ecological culture in children through environmental education in

preschool educational organizations (MTT) (Fig . 1). For example, in Finland, children up to the age of 5 receive basic knowledge and skills of environmental education at MTT, and from the age of 5, they continue it one day a week at locally organized "Nature Centers". In general, in Western Europe **they try to create all the conditions for** children to communicate with wild and domestic animals in special farms and to start environmental education from the age of three by taking care of them. In Eastern Europe, including the Russian Federation, morning holidays dedicated to the ecological calendar days of the year have been organized. In Uzbekistan, environmental education is integrated into subjects such as biology, geography, history, and natural science taught in general secondary education , and therefore, in most cases, it is not conducted by ecologists-pedagogues. Environmental education for the secondary special vocational education system (without taking into account the issue of education)

States	The content of environmental education at MTT
Finland 	Systematically, it starts from the age of 5 and it is carried out in specially designed local "Nature Centers".
Sweden 	A state-wide information system was created in cooperation with the Society for Environmental Protection and the National Agency for Education
Denmark 	It is introduced in all pedagogic professional education systems and is mandatory in the training of pedagogues in the field of preschool education
Austria 	Preschool education a permanent seminar has been organized for pedagogues , and courses for their retraining and professional development are in progress
Norway 	A pedagogue in a kindergarten must have special environmental training
Germany 	It is aimed at the formation of children's imagination and knowledge of the environment , preparation for nature protection, environmentally responsible behavior.
Japan 	Highly ecological culture personality training is reflected in preschool education programs in the field of environment
USA 	In the process of formation of children's careful and responsible attitude to the natural environment, it is carried out together with a wide range of public and non-governmental public organizations.
Russia 	May 12 has been declared "Environmental Education Day" and relevant holidays will be held at MTT

1 . Environmental education and upbringing in "ecologically clean " and developed countries

fully current because it has not been done and the number of hours is small, it is mostly conducted by teachers of related subjects. Just like that situation in higher education. In order to enter the bachelor's program in the field of ecology and environmental protection, the applicant is accepted as a student by passing a test not in biology and geography, but in mathematics and chemistry . As a result, personnel training in environmental education is conducted in a way that does not rely on the professional competence of students. Until 2019, non-ecological subjects accounted for 70-75% of the curriculum of "Ecology and environmental protection" education. Such a negative situation in the training of ecological

personnel is also reflected in the directions of preschool education of higher education institutions.

8 modules and 32 lessons in the subject program "Introduction of children to nature" of the educational fields 110000–Pedagogy, 5112700–Psychology and pedagogy of preschool education and 5111800–Methodology of preschool education of higher education institutions conducting the educational process according to the state curriculum "Ilk Kadam" their classes are not aimed at environmental education, but only at introducing them to nature.

In order to eliminate such non-ecological education, using world experience and implementing it in national education, in the above-mentioned joint decision adopted by the Ministry of Ecology and Environment and Preschool Education, MTT **to establish ecological science** the issue of **implementing the following measures** is raised [3]:

- ✓ "First Step" state curriculum on environmental education;
- ✓ creating educational literature taking into account the young aspects of children;
- ✓ "ecological corners" and their effective use in the educational process;
- ✓ holding holidays dedicated to the main "Ecological calendar" days of the year;
- ✓ introduction of educational modules dedicated to "urgent problems of ecology" to the training and retraining courses of leaders and specialists, etc.

this joint decision in pre-school education is not limited to familiarizing children with nature in the state educational programs "Bolajon" and "Ilk Qadam", which are in effect until 2018, but also to make them **ecologically aware**. This means that during the introduction of children to nature, they are charged with the task of *protecting the ecosystems of the local environment (habitation: place, space, house), rational use of its natural resources, and the restoration of damaged ones*.

in MTT the above-mentioned tasks are being implemented in practice by introducing environmental education and training. In particular, the training course "Introduction to nature" is included [8]. But the use of information and communication technologies is not sufficient. **Environmental science** at the stage of preschool education in Uzbekistan differs sharply from science in other types of education. It is necessary that the educational literature related to it should be relevant to both children and educators, methodologists, defectologists, psychologists, i.e. all pedagogues (table 2). Because it cannot be said that 90-95% of specialists who come to MTTDMQTMOI for training have knowledge, skills and qualifications related to environmental science.

"Ecological corner" should be different from previous "Tabiat corner" in pre-school education organizations. Not only does it reflect animate or inanimate nature, but that animate and inanimate environment is our living space. should be given and it should reflect 3 different situations: protection of ecosystems, rational use of ecosystem resources and restoration of damaged ecosystems [4]. For example, the "Little Ecologist" project prepared by the students of the MTTDMQTMOI Institute under my leadership can be taken as a background or conceptual concept for the organization of the "Ecological Corner". The method of using the exhibition stand is available on the website of the Institute. In order to hold holidays or matinees dedicated to the main ecological calendar days of the year, it is recommended to develop the "Ecological calendar" exhibition posters [9].

Table 2.

Ecological science recommended for pedagogues and children in preschool educational institutions

For teachers	For children
<i>Ecology - a field of science</i> that studies the laws between	<i>Ecology</i> is an action aimed at rational

living beings and their natural environment in specific ecosystems (regarding rational use, protection, restoration), and forms knowledge, skills and abilities related to it <i>the direction of education, the network of practice that optimizes these laws of morality</i>	use of the nature of the place where you live , its preservation and restoration of damaged ones
<i>Ecosystem</i> is the habitat of all living things, including people, living in a certain system (global, regional, national and local).	<i>Place of residence</i> - the room we live in, house, street, kindergarten, neighborhood, village, city
<i>Sustainable use</i> is scientifically based use of natural resources in ecosystems	<i>Smart use of nature</i> is an action aimed at using nature wisely
<i>Conservation</i> - preserving the natural characteristics of the exchange of matter and energy in <i>ecosystems</i>	<i>Conservation of nature</i> is an action aimed at preserving “Mother Nature”.
<i>Restoration</i> is scientific restoration of damaged ecosystems	<i>Nature restoration</i> is an effort to improve damaged nature
<i>Eco-consciousness</i> is the awareness that ecosystems are the only living space for organisms, including humans	<i>Ecological consciousness</i> - understanding how much “Mother Nature” is needed in our life
<i>Ecological culture</i> - level of practical application of knowledge, skills and abilities acquired through ecological education.	<i>Ecological culture</i> is the level of practical application of ecological consciousness

Determining ecological days It is recommended to develop a "Calendar table" based on the local conditions of the location of the MTT and hold holidays or events on those days. For example, in kindergartens located in the desert zone, it is necessary to include the days of combating sun, climate, biological diversity, desertification and drought in the calendar and event plan . In kindergartens in mountainous regions , it is advisable to include days such as protection of the ozone layer of the planet Earth, day of nature reserves, protection of animals, and protection from natural disasters in the calendar plan. Because in children's daily activities or in front of their eyes, the state of the natural environment , process or events are taking place



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The fact that a person , including a child , has become ecologically knowledgeable does not mean that he has yet reached the level of ecological civilization . In order to reach this level, *the child must receive **environmental education** that meets the requirements of the time in MTT* . We know that environmental awareness can be instilled in children through education, and spirituality can be instilled in children through education .

The purpose of recognizing the year 2020 with the words "science" and "enlightenment" is to prepare the Uzbek people, including our youth, to be not only ecologically knowledgeable, but also ecologically knowledgeable , skilled , and qualified to meet the demands of the times . The goal of environmental education in pre-school education is to form children's initial environmental knowledge and skills in order to provide their services to ensure environmental safety at various levels .

the current problems of ecology is included in the curriculum of the training courses of

managers and specialists working in the preschool education system, 2 hours of theoretical, 4 hours of mobile and 4 hours of practical training. it is appropriate to include [9]. The concept, content and essence of ecological education and upbringing are revealed *in the theoretical training*. *K removable training* It is carried out by learning and sharing best practices in MTT organized at the level of ecological demand. Then, based on the acquired knowledge and experience, each trainee will develop and present a prospective program, plan and "road map" for the implementation of environmental education in their region or MTT. *Qualifying project work should* also be focused on the creation of billboards and layouts, the development of methodical instructions, the issuance of recommendations, the development of various options of the infographic multimedia tool specifically for the organization, conduct, and popularization of environmental education and training at MTT.

It is expedient that the "Ecological education and training" educational module is given as 12 hours in the 4-month course of retraining in the direction of preschool education, and as an 18-hour educational module in the 6-month courses. Based on pedagogical experience, we believe that the ratio between theoretical, practical and mobile training is 1 (knowledge): 1 (skills): 1 (qualification). After all, it is difficult to say that the level of ecological enlightenment of the listeners who are coming to retraining nowadays is in demand.

UzR In paragraph 3.b-paragraph of the decision of the President of May 18, 2019 "On measures to further improve the infrastructure of the digital economy" and "electronic government" system No. development and implementation of the policy and coordinating the activities of state bodies and organizations. **Digital economy** is an economic activity based on digital technologies, i.e. development of digital goods and provision of services related to electronic business and commerce [5] was introduced to science for the first time in 1995 by Nicholas Negroponte, a professor at Massachusetts Institute of Technology, USA. He considered it better to express the goods not by physical state and movement dimensions, but by numbers. N. Negroponte proved that all things (objects) and people (subjects) involved in economic relations can be reflected in the form of digital technologies and managed electronically [6]. It is the creation, sharing and provides the ability to transmit at a very high speed to the desired distance. For example, there was an urgent need to create an "Ecological Corner" at MTT [10]. To find a solution to this problem in dynamic images, the digital economy is used by performing the following algorithms, i.e. sequential "steps", from our workplace via the Internet:

Step 1: enter the "Educational Service" portal, where you will get acquainted with various options for creating an "Ecological corner" through the "M database";

Step 2, you choose a specific option depending on where you will place the "Ecological corner" in MTT, analyze all its parameters and develop an order project;

Step 3, all the details of the enterprise preparing the "Ecological Corner" are familiarized with, its possibilities are evaluated, its conditions are studied, and the level of guarantee is determined;

Step 4, the order is sent to the website of the relevant enterprise, and a response is received from it operatively;

Step 5, after the conclusion of the electronic contract, you will transfer the relevant financial funds through the bank where our account is located, or the order will be executed through a bank guarantee from the deposit account;

Step 6, control and monitoring of the construction process, i.e. the "Ecological Corner" project, methods of execution, used materials and equipment, safety level, warranty period, will be carried out via the Internet;

The 7th step, control, makes it possible to determine the day when the package will be ready and ensures its timely delivery to the preschool educational institution through an electronic contract with transport companies.

In order to carry out all actions remotely through the digital economy, it is necessary to have a fast working Internet network and information technologies at the national, regional, local and local levels , and to create a bank of digital information and services. That is why “R digital economy” is often called “*Internet* also called “*economy*” [7] .

To increase the gross domestic product by at least 30% by implementing the state program "Digital Uzbekistan-2030" in our republic , the President of the Republic of Uzbekistan has repeatedly emphasized the need to implement digital transformation in economic sectors, develop national information technologies, and attract investments in this direction in order to drastically reduce corruption . noted. Introduction of digital economy in pre-school education is considered as a resource that increases the quality of education and upbringing in the form of "Telebogcha" . It is the activity of a personal society that provides an opportunity to bring education to the highest level by digitalizing educational, educational-methodical, scientific-pedagogical, organizational, legal, financial-economic, personnel, material and technical support. In order to transition to digital environmental education and training at MTTDMQTMOI, *it is recommended to conduct professional project work and scientific research on the following topics:*

1. A digital electronic catalog on the development of environmental education at Preschool education institute.
2. Development of an infographic multimedia tool on the topic “Little Ecologist”.
3. Preschool educational preparation of an infographic multimedia tool on ensuring environmental sustainability in development centers .
4. on the animal world included in the Red Book of the Republic of Uzbekistan.
5. on the flora included in the Red Book of the Republic of Uzbekistan .
6. Organization of "Ecological Corner" at preschool educational institute creating an infographic sample project on
7. Creation of infographic calendar posters dedicated to ecological dates, taking into account local conditions .
8. Development of an infographic multimedia tool on the topic "Mother Nature".
9. Creating an infographic stent project on the topic of " Ecology and environmental protection" for training and retraining courses , etc.

Summary. In "ecologically clean" and economically developed countries, the formation of environmental consciousness and culture of a person is carried out through environmental education. Ecological education starts from the age of 3, and ecological education starts from their childhood, i.e. "cradle". The direct introduction of international experience in this direction to the preschool education system of Uzbekistan is not appropriate from the point of view of not only economic opportunity and social situation, but also the rich cultural heritage of the Uzbek nation that has been formed for many centuries. Therefore, it is necessary to implement ecological education before the national school, that is, to introduce international experience in a way that is adapted to our real conditions. Environmental education in preschool education is the need of the hour to gradually implement the science that takes education to a new level , the education that forms the ecological enlightenment of children and pedagogues, and the digital economy that applies modern information technologies to environmental management .

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