

# Formation of the Ecological Culture Basics in Preschool Childhood

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**Abstract:** The article discusses on the systemic problems of the ecological (environmental) culture formation in the period of preschool childhood. The authors update the issues of developing the ecological culture components in both children and adults. Also, they analyze regulatory documents that determine the urgent importance and regulate the content of environmental education in preschool children. The concept of environmental culture is defined, its structural components that get their formation at the first stage of personality formation are discussed. The article presents the generalized results of studying the formation of the ecological culture basics in preschool children, the main evaluation criteria of which are (a) the availability of knowledge about nature, (b) the abilities and skills of environmentally safe behavior, and (v) the nature of children's relations to nature. The authors consider those pedagogical conditions that are truly necessary for the formation of the ecological culture in children attending preschool educational organizations.

## 1. Introduction

In the modern world, the problem of establishing a balance in the system of relations "society - nature" is of paramount importance. The universal task is to take systemic measures to protect the environment from pollution and destruction, preserve the genetic diversity of living creatures, and save the planet's gene pool. The environmental consciousness and culture of society is formed from the first stages of the interaction of man and nature.

The world community is witnessing large-scale natural disasters, climatic imbalances associated primarily with the environmentally criminal attitude of man to the natural world. Humanity has found itself in a situation of choosing between continuing a habitat destruction strategy or a consistent solution to problems related to the economic, legal, and environmental support of environmental protection. The productive vector of overcoming the ecological catastrophe lies in the fundamental restructuring of the worldview of the world's population. It is necessary to transform the system of values in the field of material and spiritual culture, which means the formation of a new environmental culture of the individual, established from early childhood.

Developed and first published in 1991 and improved thereafter, the Concept of Environmental Education is understood as environmental education as follows. Environmental education is a continuous process of training, upbringing, and personality development, aimed at the formation of a system of knowledge and skills, value orientations, behavior and practical activities that ensure a responsible attitude of the individual and society to the environment [1].

In Russia, at the level of government, attempts are being made to solve the problem of the environmental education of children and adults. Since 2002, the Federal Law "On Environmental Protection" established universal compulsory ecological education for the younger generation and environmental enlightenment for the entire population of the Russian Federation [2]. In 2012, the "Fundamentals of state policy in the field of environmental development of Russia for the period up to 2030" were adopted that define the tasks of the state in the field of environmental development of society [3].

The national education strategy in the Russian Federation indicates that environmental education is a process that encompasses the entire period of a person's life, going beyond formal education and affects the

value and semantic structures of the individual. Since the value system, lifestyle, and attitude are formed at an early age, education for children is of particular importance [4].

Adopted in 2015, the Education Development Strategy in the Russian Federation for the period until 2025, as one of the priority tasks of environmental education determines the development of ecological culture, respect for the native land, the natural wealth of Russia and the world among children and their parents [5].

In general, these documents determined the principles of state policy in the field of creation and development of a system of universal continuous environmental education. However, the draft federal law "On Environmental Culture" proposed in 2001, which was so crucial in this context, was rejected by a resolution of the State Duma of the Federal Assembly of the Russian Federation in 2009 [6]. The project noted that environmental culture is an integral part of human civilization, which must be formed in the public consciousness and behavior of people in continuous environmental education and enlightenment. Consequently, there is a contradiction between the importance of the formation of the ecological culture of society and the insufficient support of these processes at the legislative level.

Analysis of various concepts of environmental education of preschool children (N. F. Vinogradova, S. N. Nikolaeva, E. V. Nikonorova, N. V. Pakhomova, N. A. Ryzhova, N. A. Samorukova, I. A. Khaydurova, etc.) showed that there is no unambiguous definition of the main goal of environmental education. In some cases, the environmental literacy of a person is designated as a goal. Other sources consider the formation of an ecological worldview, or the development of an attitude towards nature, or the formation of environmental awareness, or the formation of ecological culture, etc. We understand the goal of environmental education as the formation of environmental culture as an integral part of the general culture of modern man. In preschool age, it is impossible to talk about ecological culture in the literal sense. It is necessary to form its initial foundations, which would become the basis for further environmental education of the younger generation.

Since ecological culture is a component of the general culture formed during the period of preschool childhood, the organization of work on environmental education at the necessary levels of ontogenesis: in early and preschool childhood is of particular importance. As well-known, the foundations of values, upbringing, development, and education of the individual are laid precisely in this period (L. S. Vygotsky, A. V. Zaporozhets, A. N. Leontyev, V. S. Mukhina, V. T. Kudryavtsev, etc.). In preschoolers, it's not only possible but also easy enough to form a system of ideas about the natural environment due to their age specifics.

The studies of N. N. Kondratieva, A. M. Fedotova, and I. A. Khaydurova prove that the environmental knowledge of the following is available to preschoolers: about man, animals, plants, as living beings, about the relationships and dependencies in the natural world, about the interaction of man with nature; about the variety of values of nature (cognitive, aesthetic, wellness, moral, practical); about the place of man in the natural environment. Environmental education at preschool age is designed to lay the foundations of the spiritual development of a person based on a love of nature, knowledge, and observance of norms and rules of behavior in the environment, ethical principles of attitude to nature.

Indicators of the personality's environmental culture are environmental education, a culture of activity and behavior, a culture of feelings. Achieving the main goal of environmental education, the formation of the beginnings of ecological culture, is associated with the determination of the content of knowledge about nature, humane-creative skills, emotional and sensory interaction with natural objects.

## **2. Materials and Methods**

In total, 129 preschool children and 145 parents of pupils took part in an empirical study. To study the formation of the foundations of the ecological culture of preschoolers, control tasks by N. A. Ryzhova [7], the methodology "Volunteer assistants" S. N. Nikolaeva [8] were used. They are aimed at assessing children's knowledge of animate and inanimate nature, natural phenomena, methods of its conservation, assessing the ecological attitude to the natural world. The main evaluation criteria were the following: knowledge of animate and inanimate nature; abilities that are ecologically competent and safe for the nature

and for the child's behavior; a careful, humane, caring attitude to the natural world and its objects; the nature of the relationship of children to the world and nature as part of it.

According to S. N. Nikolaeva [8], the following criteria were used as the main criteria for assessing the formation of a conscious attitude of children to nature:

- The child's understanding of the need for a careful and caring attitude to the nature, based on its moral, aesthetic, and practical significance for human;
- Mastering the norms of behavior in the natural environment and observing them in practice, in everyday life;
- The manifestation of an active attitude towards objects of nature (effective care, the ability to evaluate the actions of other people in relation to nature).

### **3. Results**

Assessment of the level of environmental knowledge of children of senior preschool age was carried out based on three preschool educational organizations of Barnaul ("Kindergarten No. 230", "Kindergarten No. 260", "Kindergarten No. 262") and three preschool institutions of the Altai Territory (the kindergarten "Berezka" in the village of Mamontovo, Mamontovsky district, the Rebrikhinsky kindergarten "Ulybka," and the Blagoveshchenskiy kindergarten "Svetlyachok"). The study participants showed mainly an average level of knowledge about nature and its ecosystems. To a greater extent, children showed knowledge about animals and the seasons, showed difficulties in questions about the plant world, natural phenomena, identified the child's unique abilities to preserve the world.

Assessment of the practical skills of children showed their lack of formation. However, with the emotionally high component of pedagogical activity necessary in interaction with preschoolers, it is possible to effectively form primary, environmentally important skills and attitudes of children to them. Based on the analysis of the authors' work on environmental upbringing and education, we attributed the following abilities to leading:

- The child's ability to spiritualize (humanize) the "animate" and "inanimate" nature;
- The ability to identify with objects and natural phenomena;
- The ability to admire the beauty and variety of natural forms, to notice the signs in the inconspicuous, expressive in the unpretentious, to respect nature;
- The ability to carefully handle living creatures and see, understand the state of another living being and respond to it;
- The ability to take care of those who depend on a person to prevent violence against nature.

The relative component is formed in preschool childhood organically and in accordance with the personal and emotional nature of the child. Systematic observations of children's attitudes to nature and its objects in practical activities have shown that most children show a careful attitude to objects of living nature, feel compassion for animals, determined by their understandable feelings (hunger, illness, fear, cold, etc.). Meanwhile, more than 25% of the participants in the experiment show an aggressive, destructive interest in natural objects, since cognitive interest predominates. To a lesser extent, experiment participants understand the environmentally healthy attitude towards plants. This is due not only to a lack of life experience and environmental knowledge but also to the difficulty of accepting plants as living organisms. Also, children without the focused work of adults do not see the dependence of the ecological environment on the negative factors that humanity creates. It is difficult for them to understand their role and the great potential of a person in maintaining the environment and the ecological balance.

However, it is at preschool age that a child can perceive environmental knowledge, acquire value orientations in the process of the environmentally oriented and feasible activity. Observation data for children showed their general interest in objects of nature, in interacting with it together with adults. Children willingly engage in environmentally friendly activities motivated by adults. However, they practically lack environmental knowledge; they find it difficult to determine their capabilities in solving problems related to environmental protection.

A survey of parents of pupils about their participation in environmental education of children shows that 89% of them believe that environmentally oriented knowledge and skills do not correspond to the age of children, are inaccessible to their understanding. According to respondents, their development is advisable in high school classes. With regard to environmental actions, the majority of parents spoke positively and noted that they did not object to the participation of children in a kindergarten in environmental actions and projects together with educators. However, only about 25% of respondents are ready to join environmental protection activities with children and teachers.

From the point of view of solving the problems of forming the foundations of the ecological culture of children, an analysis of the ecological and developmental environment of preschool institutions revealed both positive and negative aspects. The environmental component, aimed at the formation of children's knowledge of nature, is most pronounced. It includes books, encyclopedias, educational games, presentations about different ecosystems in the world, subject pictures, stories, and tales of nature. These materials are aimed at the formation of the cognitive component of environmental culture. However, there are practically no ecologically oriented visual materials about nature conservation and environmental activities of people; natural zones of groups have a minimal species representation. Elements of the ecological path of institutions that contribute to the formation of the foundations of the ecological culture of preschool children are insufficiently equipped and meaningfully saturated. This complicates the formation of practical experience of children, does not contribute to the creation of personal aspects of environmental culture.

#### **4. Discussion**

As a result of the study, the authors conclude that the process of forming the foundations of the ecological culture of preschool children will be effective if:

- The systematic, purposeful work to solve the problems of forming all the components of ecological culture (scientific-cognitive, value, normative, practical-activity) is organized;
- In pedagogical work, the paramount aspect is the formation of the emotional responsiveness and value attitude of the child to nature and to himself as part of it;
- Organizational conditions in the educational organization for the use by children of the acquired environmental knowledge and skills in practical activities have been created (environmental weeks, projects, actions, feasible environmental activities in the environment);
- Children form a conscious, sustainable understanding of their importance in solving the problems of preserving the surrounding ecosystems (a section of a kindergarten, a yard of a house, the nearest public garden, forest);
- Teachers form in children the ability to anticipate the consequences of some of their actions in relation to the environment;
- The consolidation of knowledge and the formation of personally significant experience in the environmental activities of children in everyday life is ensured;
- The formation of the foundations of the ecological culture of children is implemented in a continuous relationship with the families of the pupils, and special attention is paid to the development of parent-child interaction in joint environmental activities;
- Ensuring the relationship of the preschool institution with social partners that implement the tasks of environmental education and upbringing of the population.

At the stage of preschool childhood, the child receives the most vivid emotional impressions of nature, accumulates ideas about different forms of life, the primary principles of ecological thinking are formed in him, the foundations of ecological culture are laid. This happens in a situation where adults raising a child have an ecological culture, are ready to broadcast it in a preschool environment.

First, the teacher must be ecologically educated, show interest in environmental knowledge of ideality. Also, s/he has an idea of the basic ideas and concepts of ecology, demonstrates the ability to environmental thinking, presents own methodology of environmental education of preschool children. Secondly, a teacher

working with preschool children should demonstrate a culture of activity and behavior. It should be distinguished by environmentally sound interaction with nature and the desire to participate in various types of environmental activities. Third, the teacher of preschool education should be distinguished by a culture of feelings, expressed in emotional susceptibility and responsiveness to the natural environment; the manifestation of cognitive feelings, namely interest in new natural phenomena; the manifestation of aesthetic feelings in various types of artistic activity.

The practice of preschool institutions shows that with a clear and understandable motivation for children, including the game and activity context, the process of forming the components of environmental culture becomes effective and acquires a life-oriented environmental focus.

## 5. Conclusion

At the end of the 20th century, scientists increasingly began to turn to culture as a philosophical basis and a methodological principle for the development of civilization. Cultural compatibility is increasingly seen as one of the important principles of the development of education. The education of a person of culture from early childhood has become a priority and universally recognized pedagogical task.

So, a number of studies aimed at studying the pedagogical possibilities of the educational process and the potential of the family in forming the foundations of the ecological culture of preschool children have been carried out. The achievement of the first seven years is the formation of self-consciousness, the child distinguishes himself from the objective world, begins to understand his place in the circle of close and familiar people, to consciously navigate in the surrounding objective world, to isolate and realize his values with the help of adults. Preschool childhood is the first step in forming the foundations of the ecological culture of the younger generations, creating the basis for subsequent pedagogical activity at other age stages of personality formation.

## References

- [1] Skalon, N. V., & Kolmykova, V. A. (2015). *Modern aspects of environmental education*. Kemerovo. Russia: Kemerovo State University.
- [2] State Duma of the Russian Federation. (2002). *Federal Law "On Environmental Protection"* (January 10, 2002 No. 7-FZ). Moscow, Russia.
- [3] Presidential Executive Office. (2012). *Fundamentals of state policy in the field of environmental development of Russia for the period until 2030* (April 30, 2012). Moscow, Russia.
- [4] UNECE. (n.d.). *Action plan for the formation and development of education for sustainable development in the Russian Federation*. Retrieved from <https://www.unece.org/fileadmin/DAM/env/esd/Implementation/NAP/RussianFederationNAP.r.pdf>.
- [5] Government of the Russian Federation. (2015). *Order of the Government of the Russian Federation "On Approval of the Development Strategy of Education in the Russian Federation for the Period until 2025"* (May 29, 2015 No. 996-r). Moscow. Russia.
- [6] State Duma of the Russian Federation. (2001). *Draft Federal Law "On Ecological Culture"* (No. 90060840-3). Moscow. Russia.
- [7] Ryzhova, N. (2011). *Environmental education in kindergarten*. Moscow. Russia: "Karapuz" Publishing House.
- [8] Nikolaeva, S. N. (2016). *Formation of ecological culture and development of a child of preschool age*. Moscow. Russia: INFRA-M.