



THE ESSENCE AND CONTENT OF THE CONCEPT OF ECOLOGICAL COMPETENCE IN PRESCHOOL CHILDREN

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Annotation: this article examines the theoretical essence of environmental competence in preschool children, its structural components, and pedagogical content. Environmental competence is considered an essential factor in developing a conscious attitude toward nature, as well as ecological knowledge, skills, and values in children. The study highlights the importance of environmental education in preschool education systems, its organization based on modern pedagogical approaches, and its role in shaping ecological culture. The necessity of the integrated development of cognitive, emotional, and activity-based components of environmental competence is also substantiated.

Keywords: environmental competence, preschool education, environmental education, ecological culture, competence, sustainable development, pedagogical process.

Annotatsiya: mazkur maqolada maktabgacha yoshdagi bolalarda ekologik kompetentlik tushunchasining nazariy mohiyati, uning tarkibiy komponentlari hamda pedagogik mazmuni ilmiy asosda tahlil etiladi. Ekologik kompetentlik bolalarning tabiatga nisbatan ongli munosabatini shakllantirish, ekologik bilim, ko'nikma va qadriyatlarni rivojlantirishda muhim omil sifatida ko'rib chiqiladi. Tadqiqotda maktabgacha ta'lim jarayonida ekologik tarbiyaning ahamiyati, uning zamonaviy pedagogik yondashuvlar asosida tashkil etilishi hamda bolalarning ekologik madaniyatini shakllantirishdagi o'rni ochib beriladi. Shuningdek, ekologik kompetentlikning kognitiv, emotsional va faoliyat komponentlari o'zaro uyg'unlikda rivojlanishi zarurligi asoslab beriladi.

Kalit so'zlar: ekologik kompetentlik, maktabgacha ta'lim, ekologik tarbiya, ekologik madaniyat, kompetensiya, barqaror rivojlanish, pedagogik jarayon

Аннотация: в данной статье рассматривается теоретическая сущность экологической компетентности у детей дошкольного возраста, ее структурные



компоненты и педагогическое содержание. Экологическая компетентность определяется как важный фактор формирования осознанного отношения к природе, развития экологических знаний, навыков и ценностей у детей. В исследовании раскрывается значение экологического воспитания в системе дошкольного образования, особенности его организации на основе современных педагогических подходов, а также его роль в формировании экологической культуры. Обосновывается необходимость гармоничного развития когнитивного, эмоционального и деятельностного компонентов экологической компетентности.

Ключевые слова: экологическая компетентность, дошкольное образование, экологическое воспитание, экологическая культура, компетенция, устойчивое развитие, педагогический процесс.

Introduction

The formation of ecological competence in preschool children is considered one of the priority directions of the modern education system. In the context of globalization, the increasing complexity of interactions between humanity and nature requires new approaches to solving environmental problems. From this perspective, ecological competence is regarded not only as a body of knowledge, but also as a complex pedagogical phenomenon that shapes children's conscious, responsible, and value-based attitudes toward nature. Preschool age is a crucial stage in which an individual's worldview, values, and behavior are formed; therefore, the effective organization of environmental education during this period determines the ecological culture of future generations.

The concept of ecological competence is multifaceted and is manifested through the integration of cognitive (knowledge-based), affective (emotional-attitudinal), and practical (activity-based) components. In modern pedagogy, organizing education on the basis of a competency-based approach is aimed at developing children's independent thinking, their ability to make appropriate decisions in problem situations, and to demonstrate environmentally responsible behavior. Therefore, the development of methodologies for forming ecological competence in preschool educational institutions, the application of innovative pedagogical technologies, and the creation of an ecological learning environment are considered urgent scientific and practical tasks.



Main part

The concept of ecological competence is considered an integrative category in modern pedagogy and psychology. It reflects an individual's ability to consciously organize interactions with nature, understand environmental problems, and adopt a responsible position toward them. For preschool children, ecological competence implies not only the acquisition of a system of knowledge, but also the internalization of ecological values as a personal need. Scientific studies emphasize that the age range of 3–7 years is a critical period during which the foundational basis of an ecological worldview is formed in children. The ecological knowledge and education provided at this stage have a direct impact on the formation of stable environmentally responsible behavior in later stages of development.

The structural content of ecological competence is a multi-component system, typically divided into three main components: cognitive, affective, and activity-based. The cognitive component includes children's knowledge about nature, the environment, and elements of living and non-living nature. The affective component reflects emotional attitudes toward nature, such as care, empathy, and aesthetic appreciation. The activity-based component is expressed through children's practical actions, such as caring for plants, looking after animals, and engaging in simple environmental protection activities. The harmonious development of these components ensures the full formation of ecological competence.

The process of forming ecological competence in preschool children should be organized on the basis of a competency-based approach. This approach, rather than focusing on the simple transmission of knowledge, emphasizes its practical application and use in real-life situations. From this perspective, in the process of environmental education it is important not to provide children with ready-made knowledge, but to encourage them to think independently through observation, experimentation, and problem-solving activities. For example, by observing natural phenomena and conducting simple ecological experiments, children begin to understand cause-and-effect relationships.

The pedagogical environment of preschool educational institutions plays a special role in the formation of ecological competence. An ecologically enriched environment is an educational space that stimulates children's interest in nature, encourages active learning, and fosters ecological values. Such an environment should include green corners, mini-gardens, aquariums, and opportunities to work with natural materials. When children directly interact with nature, their level of



ecological awareness increases significantly. Therefore, organizing the ecological environment based on natural elements rather than artificial ones enhances pedagogical effectiveness.

Play activity serves as a leading means in the development of ecological competence in children. During the preschool period, play is the main form of activity through which children understand their surroundings and acquire social experience. Through role-playing games, didactic games, and movement-based games with ecological content, children develop a conscious attitude toward nature. For instance, games such as “Let’s Protect Nature” and “Let’s Become Gardeners” help foster a sense of ecological responsibility in children. During play, children also develop problem-solving skills by modeling ecological issues.

The role of the teacher is one of the decisive factors in the formation of ecological competence. The teacher is not only a source of knowledge but also a role model who shapes children’s ecological behavior. The teacher’s ecological culture, professional competence, and ability to use innovative methods determine the effectiveness of the educational process. Modern research shows that, in order to develop ecological competence, teachers should apply interactive methods, project-based learning, and innovative approaches such as STEAM. These approaches contribute to the development of independent thinking and creativity in children.

The role of the family in shaping ecological competence in preschool children is also invaluable. The family is the primary environment of socialization, where values formed in early childhood have a lasting impact. If practices such as caring for nature, reducing waste, and looking after plants are present in the family, children naturally adopt these behaviors. Preschool educational institutions should collaborate with parents in conducting environmental education activities. This cooperation can be implemented through seminars, training sessions, and practical activities.

The issue of assessing ecological competence is also of significant scientific and practical importance. In preschool children, this competence is not evaluated through traditional testing methods, but rather through observation, conversation, and the analysis of behavior during play activities. Assessment criteria include the level of children’s ecological knowledge, their emotional attitudes toward nature, and their participation in practical activities. A comprehensive assessment approach allows for a more accurate identification of children’s ecological competence.

An integrative approach serves as an important methodological foundation in



the process of forming ecological competence. This approach ensures the interconnection of various subject areas and facilitates the comprehensive acquisition of ecological knowledge. In the preschool education system, environmental education should be integrated with activities such as speech development, basic mathematics, visual arts, music, and physical education. For example, by drawing natural landscapes, children not only develop their aesthetic sense but also strengthen their emotional connection to nature. Ecological competence is formed in close interrelation with other areas of development.

In modern research, the STEAM (Science, Technology, Engineering, Art, Mathematics) approach is recognized as an effective tool for developing ecological competence. This approach fosters scientific thinking, problem-solving skills, and creative abilities in children. Through STEAM-based activities adapted for preschool children, they learn about ecological phenomena through experimentation. For instance, observing water pollution through simple experiments or monitoring plant growth processes helps develop a conscious attitude toward environmental issues.

Taking into account the psychological characteristics of children is essential in the formation of ecological competence. Since preschool children primarily possess concrete-figurative thinking, ecological concepts should be presented not in abstract terms, but through clear examples, images, and practical experiences. Due to their high emotional sensitivity, forming a positive emotional attitude toward nature is one of the key tasks of the pedagogical process. Without developing a sense of care and affection for nature, children cannot deeply internalize ecological knowledge.

The use of problem-based learning technologies in environmental education demonstrates high effectiveness. Problem situations stimulate independent thinking in children and direct them toward solving environmental issues. For example, questions such as “Why do trees dry out?” Or “What happens if water becomes polluted?” Encourage children to think critically. In this process, children attempt to identify cause-and-effect relationships, which contributes to the development of ecological thinking. Problem-based learning promotes the development of ecological competence not only theoretically but also practically.

The use of information and communication technologies (ICT) in the formation of ecological competence in preschool education is also of great importance. Multimedia tools, interactive games, and educational videos enable



children to acquire ecological knowledge in an engaging and accessible manner. Through virtual excursions, children have the opportunity to become familiar with various ecosystems. However, it is necessary to maintain moderation in the use of ICT, as excessive exposure to virtual environments may limit children's direct interaction with the natural world.

The harmony of national and universal values plays an important role in the development of ecological competence. In the rich traditions and customs of the Uzbek people, ideas related to caring for, preserving, and valuing nature occupy a significant place. For example, practices such as conserving water, planting trees, and showing respect for the land form the national foundations of environmental education. The integration of national values into preschool education serves as an effective means of fostering ecological awareness in children.

International experience shows that the formation of ecological competence should begin at an early age. In developed countries, environmental education is considered a priority direction within preschool education systems. For instance, in countries such as Finland, Japan, and Germany, activities conducted in natural settings are widely practiced with children. These experiences demonstrate that the effectiveness of environmental education largely depends on the level of children's direct interaction with nature. Therefore, adapting advanced foreign practices within the national education system remains an arduous task.

The formation of ecological competence in preschool children is a complex, systematic, and continuous process that is carried out through the integration of pedagogical, psychological, and social factors. In order to organize this process effectively, it is necessary to enrich the content of education, apply innovative methods, enhance teachers' professional competence, and strengthen cooperation with families. The development of ecological competence fosters not only ecological knowledge in children, but also a responsible attitude toward nature and the formation of ecological culture. It is an essential condition for raising a well-rounded generation in accordance with the principles of sustainable development.

Conclusion

The formation of ecological competence in preschool children plays a significant role in their comprehensive personal development. This competence not only fosters a conscious attitude toward nature but also cultivates ecological culture, responsibility, and a commitment to the principles of sustainable development. For



the effective formation of ecological competence, it is necessary to apply approaches in the educational process that integrate cognitive knowledge with emotional and practical activities.

In preschool educational institutions, key factors in developing ecological competence include teachers' professional training, the use of innovative methods, and the creation of an ecologically enriched environment for children. In the future, further improvement of environmental education requires the implementation of integrative approaches, the study of international experience, and the expansion of practical research.

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