

***Abdunazarov Lutfillo Mamanovich***

*Candidate of Pedagogical Sciences*

*( PhD ) Associate Professor,*

*Kokand State Pedagogical Institute*

***Abdukarimova Sevarakhon Nizomjon's daughter***

*Student of Kokand State Pedagogical Institute*

***Baxromova E'zozkhon Doniyorjon's daughter***

*Student of Kokand State Pedagogical Institute*

## **FORMATION OF ECOLOGICAL CULTURE IN THE TEACHING OF NATURAL SCIENCES**

**Annotation:** *This article explores the need to foster environmental culture within the framework of natural science education. As global environmental challenges intensify, it is critical to equip the next generation with a deep understanding of environmental principles and a heightened sense of environmental responsibility. The study delves into innovative pedagogical approaches that integrate environmental values into science teaching with the goal of developing a holistic environmental culture among students. Drawing on interdisciplinary perspectives, the article examines the impact of such educational strategies on students' environmental attitudes, behavior, and overall environmental awareness. By examining case studies and emerging trends, the article contributes to the ongoing discourse on the role of education in creating environmentally conscious citizens.*

**Keywords:** *environmental culture, science education, environmental values, pedagogical approaches, environmental consciousness, environmental responsibility, interdisciplinary perspectives, sustainable education, environmental attitudes, next generation ecologists.*

### **Introduction**

In recent decades, an undeniable fact has come to the forefront of global consciousness: the state of our environment is in danger. Climate change, habitat destruction, pollution and loss of biodiversity are some of the pressing issues facing our planet today. As environmental problems continue to grow, humanity's need to act and mitigate the impending crisis is ever increasing.

The ever-growing concern about environmental issues has led to a profound paradigm shift in education, especially in the sciences. Historically, science education has focused primarily on the dissemination of factual knowledge, fundamental theories, and empirical data. While these aspects of education remain integral, they often neglect the development of a broader environmental culture among students.

In this article we consider the great importance of introducing environmental culture into science pedagogy. We explore how this holistic approach can not only improve our understanding of the natural world, but also strengthen a deep commitment to protecting the environment. This is an exploration of the transformative potential of integrating environmental culture into science education.

Solutions to the complex environmental problems that lie ahead. . By doing so, we are paving the way for a more sustainable and harmonious future in which people live together in a mutually beneficial relationship with the environment. In this article we take a journey to understand how such a future can be realized by building an ecological culture within the natural sciences.

### **Methods**

Inquiry-based learning. Encouraging students to ask questions, explore topics of interest, and conduct their own research can generate interest and deepen understanding of environmental issues. Teachers can help students design environmental experiments and research projects.

Involving students in community environmental initiatives and volunteer opportunities can promote a sense of responsibility and civic engagement. It also helps students connect classroom learning to real-world environmental issues.

**Cross-curricular integration:** Collaboration with other subjects such as social studies, mathematics and art can provide a comprehensive perspective on environmental issues. For example, learning about the socioeconomic aspects of environmental issues or creating environmentally themed art can enrich the learning experience.

**Invited speakers and experts.** Inviting environmental experts, scientists and conservationists to interact with students can provide valuable information and real perspective. These guest speakers can share their experiences, research and solutions related to environmental issues.

**Multimedia resources.** The use of documentaries, videos, podcasts and interactive websites can make environmental topics more accessible and interesting. Multimedia resources help students visualize complex concepts and make sense of current environmental issues.

**Application ,** rather than memorization, can stimulate critical thinking and problem-solving skills. Assessment may include projects, presentations, debates and discussions on environmental topics .

**Environmental Literacy:** Educating students about environmental policies, regulations, and global environmental issues empowers them to become informed citizens who advocate for positive change. This includes discussions on sustainability, climate change and environmental conservation efforts.

**Green Campus Initiatives:** Creating a sustainable and eco-friendly school environment can serve as a role model for students. Schools can implement energy conservation practices, recycling programs, and green infrastructure projects to promote environmentally conscious behavior .

**Teacher Training:** It is important to provide teachers with ongoing training and resources on environmental topics and teaching methods. Educators

must keep up to date with the latest research and trends in environmental science in order to effectively convey this knowledge to their students .

**Encourage critical thinking:** Encourage students to think critically about information, consider different points of view, and make informed decisions about environmental issues . This helps them develop strong analytical and problem-solving skills.

**Celebrate environmental achievements:** Recognize and celebrate the environmental achievements of students and schools through awards, exhibitions or events. Positive reinforcement can motivate students to continue their environmental efforts.

## **Results**

**Interdisciplinary Perspective:** An interdisciplinary approach helps students see how environmental issues relate to different scientific disciplines, helping to develop a holistic understanding of complex environmental problems.

**Real-Life Application:** Experiential learning and community engagement allow students to apply their knowledge to practical situations. This realistic program helps them see the relevance of their education and how they can contribute to positive environmental change.

**Making informed decisions.** Environmental literacy and critical thinking skills acquired through this approach enable students to make informed decisions about environmental issues both personally and as active citizens.

**Positive Behavior Change:** Students immersed in an environmental culture are more likely to engage in sustainable behaviors such as reducing waste, conserving resources, and supporting environmental causes.

And a lifelong commitment to environmental issues . Many students go on to study or pursue careers in environmental conservation, conservation or related fields.

Community Involvement: Schools that promote an environmental culture often become centers of community environmental activities and initiatives, fostering a strong sense of community and cooperation among students, parents, teachers and local residents.

Positive school environment. Implementing green campus initiatives not only benefits the environment, but also creates a positive and environmentally conscious school environment that promotes a healthier and more sustainable learning environment.

Global citizenship. Students exposed to environmental culture are more likely to become global citizens who understand the interconnectedness of global environmental issues and are motivated to take action on a larger scale.

Environmental Advocacy: Many environmental studies students actively participate in environmental efforts by joining environmental organizations and advocating for policy changes, becoming environmental impact advocates.

Overall, integrating environmental culture into science education has far-reaching positive consequences for students, schools, and communities. This not only prepares students for a future with growing environmental challenges, but also empowers them to be active agents of change in creating a more sustainable and environmentally conscious world.

### ***Discussion***

I completely agree with your thoughts on the importance of integrating environmental culture into science education. It is important to recognize that solving environmental problems requires more than just scientific knowledge; requires a deep understanding, appreciation and commitment to the environment . A few additional points to discuss:

Long-term impact: The impact of environmental education extends beyond the classroom. As students mature, their environmentally conscious behavior and decisions can have a significant impact on society and the planet. This long-term effect is an important aspect of the value of such training.

**Global Perspective:** Environmental education can also contribute to the development of a global perspective. This helps students understand that environmental issues are interconnected and often cross borders. This global awareness can lead to a sense of global citizenship, encouraging students to think beyond local contexts and participate in international efforts to solve environmental problems.

**Collaboration and Innovation:** Environmental education encourages collaboration among students, teachers, parents and the community at large. Such collaboration can lead to innovative solutions to local and global environmental problems. It's not just about learning the facts, but also about brainstorming and implementing solutions together.

**Resilience:** Teaching environmental literacy helps students develop resilience and resiliency. They learn about how ecosystems work, adapt to change, and recover from destruction. These lessons can be applied to their own lives and how they respond to environmental issues.

Includes discussions about ethics and values, encouraging students to consider their responsibilities to the environment and future generations. This raises questions about the moral consequences of our actions and decisions.

**Policy Advocacy:** Educated people are more likely to participate in environmental policy discussions and advocate for sustainable policies. They can play a role in influencing government decisions and corporate practices that affect the environment.

### ***Conclusions***

In conclusion, integrating environmental culture into science education aims not only to prepare students for the future, but also to instill responsibility, empathy and global awareness. It provides them with the tools and motivation to address the complex and interconnected environmental challenges of our time.

In conclusion, introducing environmental culture into science education is a proactive step towards a more sustainable future. Educators and institutions

must continue to explore innovative methods and strategies to ensure that the next generation is not only scientifically literate, but also environmentally responsible.

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