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FORMATION OF ENVIRONMENTAL CULTURE IN STUDENTS DURING THE TEACHING OF SOILS OF THE FERGANA VALLEY

***Abstract:** This article explores the formation of ecological culture in students within the unique context of teaching soil science in the Fergana Valley. The Fergana Valley, known for its distinct ecological characteristics, serves as a backdrop for understanding the intricate relationship between students, their environment, and the importance of sustainable soil practices. The article delves into innovative teaching methods and curriculum design aimed at fostering a deeper understanding of the ecological significance of soils, encouraging responsible environmental stewardship, and promoting a culture of sustainability among students in the Fergana Valley.*

***Keywords:** ecological culture, soil education, Fergana valley, environmental stewardship, sustainability, curriculum design, innovative teaching methods, student awareness, soil science, ecosystem preservation*

Introduction:

Environmental culture plays a crucial role in promoting sustainable development and solving current environmental problems. It includes people's knowledge, attitudes, values and behavior towards the environment, influencing their decision-making processes and actions. Educational institutions play an important role in the formation of environmental culture, especially among young people who will be leaders and managers of the environment in the future.

is of great importance in terms of agricultural and ecological factors. It is a fertile region spanning parts of Uzbekistan, Kyrgyzstan and Tajikistan, known for its rich soil and agricultural productivity. However, the region's rapid population

growth, industrial activity, and unsustainable agricultural practices have led to a variety of environmental problems, including soil degradation, water pollution, and biodiversity loss. Solving these problems requires a comprehensive approach that includes education of environmental culture in students.

This study is aimed at studying the formation of environmental culture in students during the teaching of soils of the Fergana Valley. The specific objectives of the study are as follows:

1. Evaluation of the initial level of environmental knowledge, attitude and behavior of students of Fergana Valley.
2. To study the impact of soil-oriented educational activities on students' environmental awareness and attitudes.
3. Evaluating the effectiveness of various methods and approaches of teaching in the education of environmental culture in students.
4. Determination of the main factors affecting the formation of ecological culture in the conditions of soil education.

soil education and environmental culture formation, this study seeks to contribute to the existing knowledge base on environmental education and sustainable development. The results provide insight into effective strategies for integrating environmental education into the curriculum and promoting environmentally responsible behavior among students in the Fergana Valley .

Methods:

In this study, mixed methods were used to study the formation of environmental culture in students during the teaching of the Fergana Valley soil topic. Purposive sampling was used to select schools representing diverse socioeconomic and geographic locations within the valley.

Educational approach:

The educational approach used in this study was a combination of classroom instruction, field-based activities, and interactive learning methods. A specialized

soil education curriculum has been developed that incorporates principles of environmental science, sustainable agriculture and conservation practices. The curriculum was designed to increase students' understanding of the importance of soil health, its role in ecosystem functioning , and the impact of human activities on soil degradation.

Data collection methods:

and after the soil education program to assess changes in their environmental knowledge, attitudes, and behaviors. The survey consisted of multiple-choice and Likert-scale questions covering various aspects of environmental culture .

Interviews were conducted with some of the students to gain deeper information about their perceptions, motivations , and experiences of environmental culture . The interviews aimed to explore the impact of the soil education program on students' environmental awareness, and the factors influencing their attitudes and behavior.

3. Classroom Observations: Classroom observations were conducted to observe and document the teaching methods used by teachers during the soil environmental education program . In the observations, the main attention was paid to the interactive elements of the lesson, the activity of the students, the combination of practical activities and life examples.

Interventions and educational programs:

Several activities and educational programs were implemented during the study to strengthen the formation of environmental culture. These include:

1. Soil Education Curriculum : A specialized soil education curriculum has been developed to align with the National Education Framework. The curriculum emphasized hands-on activities, field trips, and hands-on demonstrations to strengthen students' connection and understanding of soil concepts.

2. Guest Lectures and Expert Talks: Local experts, scientists and environmental practitioners were invited to deliver guest lectures and conduct interactive sessions with the students. These activities were designed to provide

real-world perspectives and inspire students to take an active role in protecting the environment.

were encouraged to actively engage with the local community through initiatives such as tree planting campaigns, waste recycling projects and awareness raising. These activities are aimed at developing students' sense of responsibility and ownership of the environment .

4. Collaborative Projects: Students were assigned group projects that involved researching local soil problems, proposing solutions, and presenting their findings to the school community. This collaborative approach aims to develop critical thinking, problem-solving skills and teamwork while deepening understanding of environmental issues .

Through the implementation of these activities and educational programs, the study sought to create a holistic learning environment that contributes to the formation of environmental culture in students of the Fergana Valley.

Results:

The results of this study provide insight into the level of environmental culture of students before and after teaching the soils of the Fergana Valley. Findings are based on analysis of survey responses, interview data, and classroom observations. Statistical analysis and visual representations such as graphs and tables were used to effectively present the findings .

1. The initial level of environmental culture:

- Surveys conducted prior to the Environmental Education Program in Soil Education indicated that a significant percentage of students had limited knowledge of soil health, its importance to agricultural practices, and its relationship to broader environmental issues.

- Attitudes towards environmental protection among students vary, a small part of them express a strong concern for the environment, while others are indifferent or not at the level of awareness.

Behaviors related to sustainable practices such as recycling, energy conservation and waste reduction were found to be relatively low among students.

2. The impact of the environmental education program on soil education:

– A significant improvement in students' environmental knowledge was observed after the environmental education program in soil education. The results of the survey showed a significant increase in correct answers related to concepts related to soil, ecosystem functioning and the impact of human activities on soil degradation.

- Positive changes in relation to the environment were also clearly visible. Students gained a greater appreciation for the importance of soil conservation and the role it can play in protecting the environment.

- Behaviors related to environmental protection have shown positive changes. An increased adoption of sustainable practices such as waste reduction, recycling and water conservation was noted among a large proportion of the student body.

3. Factors affecting ecological culture:

- During the conversations with the students, it became clear that interactive methods of teaching, practical exhibitions, real life examples are important in forming a positive attitude and attention to the environment.

- Community initiatives, including tree planting campaigns and recycling projects, have been found to be effective in promoting a sense of responsibility and encouraging students to actively participate in environmental protection.

- Collaborative projects allowed students to deepen their understanding of environmental issues, increase their critical thinking skills, and develop a strong connection with the local environment.

In general, teaching the soil of Fergana Valley had a positive effect on the formation of environmental culture in students. The results show that incorporating soil education into the curriculum and using interactive teaching methods can significantly increase students' environmental knowledge, attitudes, and behaviors. The results show the importance of combining practical activities, community participation and collaborative projects to promote a more holistic and effective approach to environmental education .

It should be noted that although positive changes in environmental culture were observed in the study, there are opportunities for further improvement. In order to ensure the long-term development of environmental culture among students in the Fergana Valley, it is necessary to carry out consistent efforts and educational activities.

Summary:

are consistent with existing literature on environmental education and culture. Previous research has highlighted the importance of incorporating environmental education into curricula to promote sustainable practices and build environmental awareness among students. The results of this study further support the idea that targeted educational programs such as soil education can effectively increase students' environmental knowledge, attitudes, and behaviors.

The observed positive changes in students' environmental knowledge are consistent with research explaining the role of interactive teaching methods and hands-on demonstrations in achieving effective learning outcomes. This result reinforces the importance of practical experiences and real-life examples in environmental education.

Furthermore, the improvement in students' environmental attitudes after a soil education program is consistent with research showing a positive relationship between environmental education and environmental attitudes. The program's special emphasis on the importance of soil conservation and active participation of students in community initiatives helps to increase their sense of responsibility and motivation to protect the environment.

The results of this study have important implications for promoting sustainable practices and conservation efforts in the Ferghana Valley and beyond. By including soil education and ecological culture formation in the curriculum, educational institutions play an important role in raising a generation of environmentally conscious people.

in environmental knowledge, attitudes and behavior among students indicate a positive shift towards more sustainable practices. This suggests that targeted

educational programs, interactive teaching methods, and community engagement initiatives can effectively promote sustainable behaviors such as waste reduction, recycling, and water conservation among students.

In addition, the positive results of collaborative projects show that there is great potential for interdisciplinary approaches in environmental education. Encouraging students to research, propose solutions, and present their findings not only enhances their critical thinking and problem-solving skills, but also actively contributes to environmental conservation efforts. allows you to add

In conclusion , this study shows that teaching the soils of the Fergana Valley has a positive effect on the formation of environmental culture in students.

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