

SOME METHODS OF ECOLOGICAL CULTURE THROUGH GEOGRAPHICAL KNOWLEDGE

Jobborov Azamjon Mashrabovich
Kokan State Pedagogical Institute

Meliyev Muzaffar Saidakbarovich
Kokan State Pedagogical Institute.
E-mail: meliyvmuzaffar8@gmail.com

Abstract

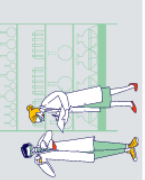
Ecological culture plays an important role in maintaining the balance between people and the environment. In the formation of this culture, geographical knowledge is one of the main tools for the development of environmental consciousness in students. Geography provides an opportunity to approach issues of natural resources, climate change and environmental protection. This article aims to determine the role of geographical knowledge in the development of ecological culture and consider effective methods. Nowadays, as a result of human activities, environmental damage factors are increasing, and global environmental problems are becoming acute. Environmental problems such as climate change, depletion of land and water resources, and air pollution have a negative impact not only on nature, but also on human health and quality of life. In solving these problems, great attention is paid to the need to develop ecological culture.

Introduction

Nowadays, as a result of human activities, environmental damage factors are increasing, and global environmental problems are becoming acute. Environmental problems such as climate change, depletion of land and water resources, and air pollution have a negative impact not only on nature, but also on human health and quality of life. In solving these problems, great attention is paid to the need to develop ecological culture.

Geographical knowledge is crucial in the formation of ecological culture. Geography teaches the interaction between people and nature, the rational use of natural resources, conservation and environmental sustainability. The development of environmental consciousness of the young generation is one of the urgent tasks today, and in this process it is important to integrate geographical knowledge and environmental education in the educational programs of schools and universities.

Therefore, the issue of developing ecological culture through geographical knowledge encourages not only pupils and students, but also the general public to deeply understand environmental responsibility. This is of great importance in ensuring environmental security and achieving sustainable development in the future.



Methodology

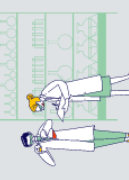
In the course of the research, the existing scientific literature, research articles, books and educational programs on geography and environmental education were analyzed in depth. This analysis was divided into the following areas:

1. **Interrelationship of ecological culture and geographical knowledge** : The science of geography forms ecological culture in students by studying the environment and natural resources. In this regard, the work of researchers such as J. Dougherty and E. Soyuz provides important insights into the interaction of environmental culture and geographic education. According to their research, the formation of environmental responsibility through geography is more related to teaching about climate change, land resources and water use.
2. **Methods of development of environmental culture in geographical education** : Methods of increasing environmental awareness and responsibility among students through environmental education are highlighted in the studied literature. In particular, the effectiveness of practical training, interactive lessons and didactic approaches to solving environmental problems has been determined. Scientists such as R. Kazak and M. Olsson studied the practical application of geographical knowledge in the formation of ecological culture.
3. **Development of environmental culture in school and university education** : Studies have been conducted on the role of environmental education through geography in schools and higher education institutions. Valuable information is provided in the work of T. Harrison and A. Davis on the success of programs for the development of environmental culture and approaches to the study and solution of environmental problems in this educational process .

Didactic Tools to Determine

Geography science within ecological culture in development application possible was different didactic tools choose received This tools of students ecological mind in formation important important have they are through not only theoretical knowledge , perhaps practical skills too is developed . The following didactic tools defined :

1. Ecological Maps : Natural resources , environmental risk - risks and environment protection to do necessity showing ecological maps to the students global and local ecological problems to understand enable gives This maps using students of nature balance to understand , from resources reasonable use according to decisions acceptance to do they learn
2. Statistics : Statistics are an important tool in explaining environmental issues to students. Digital information covering issues such as air pollution, climate change, water scarcity and waste management helps students understand the state of the environment based on real facts.
3. Interactive lessons : Interactive lesson methods play an important role in actively involving students in environmental issues. Through these lessons, students develop environmental awareness through creative thinking, discussion, and teamwork to solve environmental problems . For example, simulation exercises and team projects on solving environmental problems are effective.
4. Multimedia tools : Implementation of environmental education through multimedia tools with the help of current modern technologies gives significant results in the development of environmental culture. Videos, animations , and digital games provide students with important skills to engage in environmental issues and protect the environment.
5. Practical training aimed at solving environmental issues : Practical training allows students to apply theoretical knowledge on environmental issues in practice. Actions on determining water and soil pollution, waste processing, forest and plant protection serve to form students as environmentally responsible individuals.



With the help of these didactic tools, students learn to take an active part in solving environmental problems while gaining a deeper understanding. This is important in the formation of ecological culture.

Experiments and Observations : The practical part of the research was carried out through experiments and observations conducted among schoolchildren on the formation of ecological culture. Experiments were conducted among students of 7-9 grades, and the research was divided into the following stages :

1. Initial assessment: Prior to the start of the experiment, preliminary questionnaires and tests were conducted to assess students' environmental awareness and knowledge. In this process, students were asked questions about environmental problems, environmental protection measures, and their level of environmental responsibility was studied.

2. Experimental process: During the experiments, students were given several practical and theoretical tasks to solve environmental problems:

- Individual assignments: Each student was assigned tasks such as developing personal measures to prevent water and air pollution, drawing up an individual plan for waste processing.

- Group tasks : Students were divided into small groups and they looked for ways to solve environmental problems as a group, for example, they developed an action plan to reduce waste in their area.

- Practical activities: Environmental activities were organized to put the students' theoretical knowledge into practice, including cleaning the area around the school and planting trees.

3. Observations: Changes in students' environmental awareness during the experiment were regularly assessed through observations. Teachers and researchers recorded students' attitudes to environmental issues, their level of participation in activities , and their suggestions. Changes at each stage helped to track the development process of ecological consciousness.

4. Final evaluation: At the end of the experiments, the level of environmental awareness of the students was again evaluated using questionnaires and tests. In this process, students were compared through initial and final results, and the level of development of environmental culture and environmental responsibility was studied.

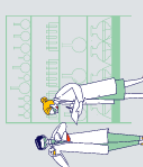
showed significant changes in students' understanding and awareness of environmental issues . These changes have come about mainly through activities aimed at solving environmental problems through individual and collective approaches.

4. Questionnaire and interview : The next stage of the research was carried out through questionnaires and individual interviews designed to assess the level of environmental culture of students in depth. This process made it possible to more accurately analyze the changes that occurred during the development of students' ecological consciousness.

1. Questionnaire: Special questions were made to the students who participated in the study to determine their attitudes towards ecological culture, environment and ecological problems. Questionnaires were developed in three main directions:

- Level of knowledge on environmental protection : In this direction, the level of knowledge of students on issues such as conservation of natural resources, waste processing, water and air protection was studied. Example questions: "Do you know what natural resources should be used?" or "Why do you think recycling is important?"

- Personal attitude to environmental issues : Students' attitude to environmental issues and the level of feeling of environmental responsibility were evaluated. Example questions: "What can



be your personal contribution to environmental protection?" or "What do you know about local environmental issues?"

- **Practical actions** : Students' practical activities and proposals for nature protection were studied. Questions: "What conservation activities have you participated in?" or "What environmental actions do you propose to organize?"

2. **Interviews** : After the questionnaires, individual interviews were conducted with the students. These interviews allowed students to assess their deeper thinking and practical skills on environmental issues. During the interview, more detailed information was collected about the students' environmental culture and their personal approaches to environmental protection. Some interview questions included:

- "How did geographical knowledge help you solve environmental problems?"
- "What are the environmental problems in your area and how do you think they can be solved?"
- "How do you think teamwork can be useful in solving environmental problems ?"

emotional and practical attitude to environmental issues was determined, changes in the level of environmental culture were evaluated. Many students expressed that they are ready to contribute to environmental protection by gaining a deeper understanding of environmental problems.

These results confirmed how effective geographical knowledge was in the formation of environmental culture in students .

, it was aimed to study the influence of geographic knowledge in the development of ecological culture and determine its effectiveness.

Results

According to the results of the research , the following main directions for the development of ecological culture through the science of geography were determined:

1. Explaining the relationship between nature and man: Geography lessons allow students to explain the parts of nature and their ecological balance.

Practical training on environmental safety : By studying important environmental problems such as water and air pollution, use of land resources, waste management, environmental responsibility is formed in students.

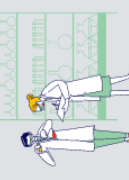
3. Analysis of climate change and its consequences: Understanding climate change builds students' climate protection skills.

and global approach to environmental protection : By comparing global environmental problems to local conditions, students expand environmental awareness.

Debate

This study confirmed once again that geographical knowledge is extremely important in the formation of ecological culture . According to the results of the research , it was shown that the processes of environmental protection, analysis of ecological risks and reactions to them are effective in forming the students' ecological consciousness through geographical knowledge. Through experiments and observations, it is known that geographical knowledge is an important factor in students' sense of environmental responsibility and strengthening their practical approach to environmental issues.

In the study, it was noted that students began to understand environmental problems more deeply, used creative and collective approaches to solve them. This, in turn, shows how



geographical education contributes to the formation of ecological culture. In particular, by studying ecological maps, practical exercises and environmental situations, students not only acquired theoretical knowledge, but also demonstrated their readiness to take on environmental responsibility.

Future Prospects :

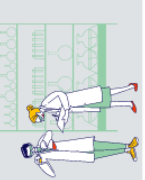
1. **The role of geography in environmental education** : Although this study has shown the importance of geography in the formation of environmental culture, there is still a lot of work to be done in this area. In the future, it is desirable to improve the qualifications of geography teachers in the ecological direction and provide them with modern pedagogical methods. This will make students' attitude to environmental issues more active and deeper.
2. **Textbooks and materials in ecological direction** : In order to solve ecological problems, it is necessary to develop new didactic materials and enrich educational programs in ecological directions. It helps students better understand environmental issues and develops their practical knowledge. By increasing the ecological maps, multimedia tools and interactive lessons, it is possible to increase the students' interest in the lessons and the level of ecological culture.
3. **Expanding practical activities** : Research has shown that practical activities are one of the most effective tools for developing students' environmental awareness. In the future, schools should organize more practical activities on environmental activities, practical projects and learning and solving local environmental problems. It serves not only to develop students' ecological culture, but also to educate them as individuals who actively participate in environmental protection.

Summary

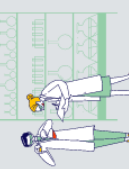
The main directions of the development of ecological culture through geographical knowledge are the formation of ecological consciousness in students and encourage them to approach the environment responsibly. By understanding nature, environmental security , and analyzing climate change, students develop a deeper understanding of environmental issues and take practical steps to address them. As a result of these processes, there is a strengthening of environmental culture in society, which contributes to sustainable decision-making against environmental risks and effective management of natural resources. Therefore, further expansion of geographic education in the ecological direction should serve as one of the main factors for the development of ecological culture in society.

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