



## HARMONY OF PEDAGOGICAL AND GEOGRAPHICAL RESEARCH IN THE FORMATION OF GEOECOLOGICAL CULTURE

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**Annotation.** The article is devoted to the issues of interrelationship and harmony of various disciplines in order to solve the scientific problem of formation of geo-ecological culture, which is entering the field of modern scientific research, and aims to illuminate the points of contact of geographical and pedagogical research. It considered ecological culture as an integrative process. According to the author, the formation of geoecological culture is decided within the framework of pedagogical researches, and he emphasizes that geoecology belongs to geography by field, ecology by direction, and geography by subject and methodology. In this context, the importance of pedagogic conditions, ecological environment and geographical educational programs and didactic materials in the formation of geo-ecological culture has become the center of attention. During the research of the topic, available scientific literature and sources were reviewed from a critical-analytical point of view, and important pedagogical and geographical scientific conclusions on the formation of geoecological culture were summarized.

**Keywords:** geoecological culture; geoecological education; geoecological educational environment, geoecological problem; sustainable development.

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**Introduction.** In recent years, scientists, methodologists, and teachers have become the subject of intense discussions in scientific publications and publicist articles, and the topic of formation of geoecological culture has become more relevant. The main idea in the discussions was to emphasize that all concepts of geographic education have a common feature, to pay more attention to the study of the geography of one's region, and to emphasize the formation of knowledge about environmental and geographical problems on the basis of local studies. It is within these debates that it seems acceptable to disclose environmental problems based on geographical knowledge. Thus, environmentalization of natural-geographic materials in the educational process helps to formulate questions that reveal the causes, intensity and nature of anthropogenic effects on natural complexes and natural phenomena. When studying them, schoolchildren learn that all the components of natural complexes are interconnected in one system. Because the influence of one of the components inevitably leads to changes in others.

The theoretical root of the need to ensure the harmony of pedagogical and geographical research in the formation of geoecological culture is that geoecological culture is the method, process of cultural and historical development of the environment by man to adapt and understand nature protection activities for harmony with nature and sustainable development of

man, to cultivate anthropogenically changed areas at different spatial levels, it is related to its measurement and its consideration as a result. The dimension of geoeological culture is a geoeological approach that assumes the formation of spiritual and moral qualities of a person, the joint evolution of man and nature, and the preservation of ecological conditions and resources of ecological importance for current and future generations. [13, 192]

It is known that environmental education as a new field of pedagogical theory and practice appeared in scientific circles in the second half of the last century. [1, 27] Initially, it had the nature of nature conservation enlightenment, and first of all, it was formed as a branch of science related to the scientific understanding of the problems of nature conservation and the increase of natural resources in science and society. In order to teach young people to respect natural resources and the skills of proper use of natural resources, it was emphasized in the normative documents of that time that it is appropriate to include teaching the basics of nature protection in school programs and relevant sections of natural science, geography, and chemistry textbooks. The theoretical foundations of the formation of schoolchildren's attitude to nature were developed in the studies of A. Zakhlebniy, I. Zverev, L. Pechko, A. Sidelkovsky, I. Smolyaninov, I. Suravegina [5;6;7,9;11;12] and others.

Based on the ideas of ecological development, modern science, the strategy for the development of ecological culture in the 21st century, the categorical essence and methodological features of geoeological culture as a strategic goal of greening school geography are determined as an advanced educational tool for sustainable development and give it a modern description.

At the current stage of society's development, this issue is more urgent, and the main goal of geographical-ecological education is to form an ecologically literate person. To achieve this goal, it is necessary to improve the tasks of environmentalization and humanization of school education. This means not only that education is saturated with ecological, humanitarian and social content, but also the formation and strengthening of ecological and geographical culture, which includes a deep understanding of the interdependence and interdependence of man, society and nature.

The practical importance of the combination of pedagogical and geographical research in the formation of geoeological culture depends on the fact that the formation of geoeological culture is based on the cognitive model of geoeology in the geographical, ecological, social (geoeosocial) system as a method of studying the dialectics of human relations with the integrated environment at different scales. [1,119]

It is also important that this process is a means of ensuring the unity of knowledge, co-evolutionary value relations and creative activity of schoolchildren at the global, regional and local levels.

The emergence of geoeological culture, its becoming the subject of scientific research, is also the result of human efforts to prevent, eliminate and reduce the risk of environmental problems. In fact, in any interpretation, ecology can be discussed only in terms of living conditions in a certain geographical environment. The study of the relationship between society and the natural environment is the main focus of modern geography. The goals and tasks of geographical and ecological education are closely related to each other and have a special place in the formation of geoeological culture. In this place, there is no doubt that the combination of

geographical and pedagogical research will make a significant contribution to the solution of the issues of formation of geoeological culture as a scientific problem.

**Materials and methods.** In the research process, in addition to scientific sources on geoeological culture, the legal-normative, curriculum and literature related to the school ecological education of the educational system in the republic and its scientific paradigm aimed at the formation of geoeological culture, as well as the results of experimental tests conducted in regional schools, analysis, comparison, probability-statistical and generalization methods studied through.

**Results.** The vital importance of the combination of pedagogical and geographical research in the formation of geoeological culture is that geoeological culture is aimed at ensuring the formation of the geoeological culture as an integral quality of a person in the conditions of the model of environmental education based on modern culture and in the process of its ecologization through school geography. It is this process that ensures socialization and self-development of a person based on the ideals of sustainable development. Therefore, its activity corresponds to the components and functions of ecological culture and is manifested as cognitive, axiological, normative, behavioral, creative and functional interrelated components related to the cognitive, axiological and operational aspects of geoeology. That is, the result of manifestation of geoeological culture is geoeological competence and spiritual and moral qualities of a person, which helps to develop school geography in the context of the main goals of education for sustainable development. In addition, it has been noted by many scientists that most of the ecological problems with their biological priorities go beyond classical ecology. In them, complex geoeological problems are allowed to come to the fore in the educational process. In this sense, it is recommended that geoeological problems should become an integral organic part of all geography courses. [8,16]

Some studies describe the "geo-ecological substructure" of ecological culture, i.e., culture in the form of non-structure of the structure. In this, he justified the fact that geoeological culture is a motivation for knowledge of nature, implementation of ecologically reasonable and acceptable behavior and enrichment of the content of activity with the direction of value, as well as formation of a responsible attitude to the environment and adoption of competent environmental decisions. [4,27] This author also summarized and justified the logical structure of the geoeological education content system adapted to school education, including the history of geoeology, general geoeology, global geoeology, landscape geoeology, and geoeological research methods. [3, 99]

In our study, taking into account the hierarchical levels of the methodology of pedagogical research, the concept of formation of geoeological culture of schoolchildren developed on the basis of geography programs was studied in philosophical-methodical, scientific-theoretical, methodological, private and methodological directions. Here is their review:

Philosophical and methodological orientation is represented by the ideas of ecological development, that is, noospherogenesis, coevolutionary interaction, sustainable development. The culture of sustainable development is a new way and result of adapting and organizing human life. Ecological culture is the main culture of education for sustainable development. At the heart of its formation are the modern postulates of cultural and civilizational development, including regularity, ecohumanist, axiological trends.

In the theoretical and methodological direction, mainly a set of hierarchically structured strategic approaches was used. They are cultural-ecological, systemic-synergistic, ecological, axiological, spatial-temporal, problem-situational, personal-activity, cultural-competence, geoecological approaches. It should be noted that here the geoecological approach reflects and implements the specific features of all high-level approaches in the methodological system.

Also, it implements strategic approaches, ensures socialization of the individual, self-awareness and reflects the specific features of geoecological culture, i.e. constructive and ecological activity and spiritual and moral attitude to the world, creation of geoecological culture-creating an educational environment, natural and cultural compatibility, dialogicity, the system of principles such as cultural and historical continuity and ecological development, knowledge of the problem situation, empathy and tolerance of interaction, ecological and creative activity, ecologicalization and integration, global-regional-local relations were studied.

Methodologically, the process of formation of geoecological culture of schoolchildren was considered within the methodological system of geography. In this, mainly the following components were studied:

- targeted component reflecting the strategic goal of geoecological culture formation;
- an important component that realizes the two-dimensional geoecological composition, which reflects the components of external - geoecological culture and internal - individual characteristics;
- a procedural component reflecting the process of cultural development of personal and semantic dominants of the geoecological space, including cultural-adaptive, cultural-semantic, cultural-creative stages;
- a technological component aimed at creating situations of geoecological and cultural interaction;
- a performance-evaluation component that allows evaluating the results of knowledge covering environmental aspects acquired by schoolchildren from geography, in accordance with the criteria developed for the formation of geoecological culture. This includes geo-ecological competence (motivational, value-normative, informational-cognitive, communicative, practical-creative aspects) and human spiritual and moral qualities, especially features such as sympathy, tolerance, citizenship and patriotism.

The specific and methodological direction consisted of a set of educational geoecological models (local, regional, global) that provide integration of geoecological content based on the greening of basic geography courses, step-by-step geoecological modules, integrated geoecological courses, and social and personal important forms of extracurricular activities were integrated into the activities of schoolchildren. .

According to the results of our research, from the point of view of ensuring the harmony of pedagogical and geographical research in the formation of geoecological culture, it is appropriate to classify the results of pedagogical analysis of the methodological conditions of the formation of geoecological culture of schoolchildren as follows:

- 1) geo-ecological culture - regular stimulation of an ecological creative approach that ensures the sequence of creating an educational environment, awakening ecological feelings, organizing ecologically oriented meanings, and forming the geo-ecological culture of schoolchildren;

2) interactive methods and forms related to the types of geoeological and cultural interaction situations and aimed at the consistent formation of geoeological competence and personal qualities in the context of sustainable development ideas;

3) relationships between regular and extracurricular activities of schoolchildren, which ensure socialization and self-development of the individual in the conditions of geoeological culture for sustainable development;

4) methodological support (programs, textbooks, manuals) that ensures the effective formation of geoeological culture.

The above-mentioned methodological conditions are pedagogical tools aimed at determining the formation of geoeological culture of schoolchildren through the geography curriculum, and when creating a geoeological educational environment, they must be taken into account and form the basis of the environment in terms of content.

The results of the study reflect the effectiveness of the methodological system created for the formation of geoeological culture of schoolchildren using geography. The introduction of ecological culture into the educational space in the context of a new quality of universal culture is actually related to ecological education, which has become an important part of the process of human inheritance and expansion of ecological culture. This process has its own historical stages and each of them has its own qualitative characteristics of ecological culture formation. Therefore, based on the study of the development trends of environmental education, clarifying how geography is closely related to the elements of environmental problems, the formation of the geoeological paradigm in school education, its interpretation in scientific circles, and the development directions are created.

Another important aspect of the combination of pedagogy and geographical research in the formation of geoeological culture is that human society not only uses nature, satisfies its urgent needs, but also changes the environment in which the process of interaction between society and nature takes place, and educational factors are clearly visible in this process. By influencing nature and changing it, humanity changes itself. Consequently, every significant change in the life of society is inevitably reflected in nature, and the change of nature changes the living conditions of society, therefore indirectly changes society itself.

The natural-historical basis of ecological education is the understanding of nature as a whole in the dialectical relationship between nature and society. The social nature of the human relationship to nature is of great importance.

There is some progress in the greening of school geography. Currently, environmental and ecological problems have entered all school geography courses and have become the main intersection, "guidance" direction for them.

Geography teaches us to perceive the processes occurring in nature, to see environmental problems in everyday life; to be able to apply the obtained ecological and geographical knowledge in practice, to manage the current environmental situation.

Geography must identify, map, and raise awareness of the risk of ongoing degradation of all natural life support systems spanning the globe.

The main goal of general secondary education is to form a well-educated and enterprising person. Schoolchildren have a system of views - moral, cultural, ethical principles and norms of behavior are formed in the process of education. In the process of teaching geography, this goal

is realized by forming a certain level of geographical culture among schoolchildren as a necessary component of the general human culture.

This means, first of all, that geography, along with other school subjects, participates in the formation of students' polytechnic, environmental knowledge and skills, outlook, and creativity.

The importance of geography in the formation of ecological culture can be assessed even by the content of global problems mentioned at the international conference held in Rio de Janeiro in 1992. These are the problems of stabilization of the earth's climate, preservation of the main components of the atmosphere, rational use of land resources and prevention of soil erosion, fight against desertification and drought, protection and rational use of fresh water. All these problems have a clearly defined geographical nature.

The main task of the teacher is to arouse children's interest in the world around them, to study the mechanisms of interaction of the components of nature on a global scale; Review of regional features of the Earth's landscape shell, study of the biosphere, etc.

It is not easy to form a conscious ecological and geographical culture, it requires the development of elements of systematic thinking, consciousness and practical skills in schoolchildren.

**Discussions.** In our opinion, the ecological content of school geography courses can be increased and opened in various ways, first of all, by directly expanding ecological information, by including additional information in the study of a number of topics and sections of school textbooks. Undoubtedly, it is impossible to achieve a result without such information in the study of the nature and economy of the region. In recent years, scholars have made many judgments about the changes in geographic education. Basically, all the concepts included a general idea: to pay more attention to the study of the geography of the region, to build knowledge about geographical dimensions on the basis of local history.

However, the more important issue today is to increase the practical importance of school geography, in this sense, it is necessary to truly reveal its potential: knowledge, skills and abilities, successful knowledge of the geography of the region, issues such as the introduction of the principle of local studies into the educational process, namely, the pedagogical approach, through pedagogical research. must find a solution.

The main controversial problem is the application of the principle of local studies in the teaching of geography and ecology. Geography today seems to be a science largely divorced from life. Therefore, in our opinion, it is necessary to use all opportunities to turn the world around us into a real laboratory for geography.

Teachers have the noble task of training a new generation, and our common future depends on how it will turn out. We need to train a new generation that will break the tradition of only profiting from nature. The main thing is up to us: to teach them ecological and geographical knowledge, to apply such measures as to organize practical activities for environmental protection. By giving them such knowledge and skills, it can be said that it is necessary to prepare graduates for environmental specialization in any field of activity.

**Conclusions and recommendations.** Thus, geography and ecology are of great importance in the development of geoecological thinking of schoolchildren. In addition, geography and ecology have great opportunities for educating students and forming a worldview. geography as an educational subject forms a system of scientific ecological and geographical

knowledge, skills, views and beliefs, which ensures the formation of civic responsibility for the state of the environment among schoolchildren. At this point, the issue of harmonizing geographical, ecological and pedagogical research is of great scientific importance. Because it is thanks to the researches and studies in this context that it will be possible to ensure the quality and efficiency of the work of formation and development of geoecological culture.

School geography is a science that provides practical support for the successful formation of ecological and geographical culture. Solving the issues of ecological and geographical culture is related to the universal perspective of the development of civilizations capable of living in complete harmony with the environment and providing the necessary conditions for the well-being of all layers of the population.

Based on the above, the following recommendations can be made:

- in the formation of ecological and geographical culture, from the pedagogical point of view, the family, school and additional education system should have a special place. Because their educational influence is long-term and appropriate, and occurs at that period of the child's life, which is especially sensitive to various influences;

- from a didactic point of view, environmental education should be focused on the formation of environmental culture, geographic culture and, at the same time, geographical-ecological culture of schoolchildren in studying natural-geographical sciences;

- schoolchildren should have scientific knowledge about nature, its integrity and unity with society, and should be an active participant in practical activities related to the impact on nature;

- schoolchildren should understand the multifaceted values of nature for society and man, learn the correct norms of behavior in the natural environment, so that their conscious participation in activities to improve the natural environment is ensured.

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