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## ECOLOGY AND ECOLOGICAL EDUCATION IN THE ERA OF GLOBALIZATION AND IN THE CONTEXT OF INCLUSIVE AND GLOBAL SOCIETY DEVELOPMENT

*In the third millennium, the formation of global structures – economic, political, cultural, social – is proceeding at an accelerated pace. Today, not a single country in the world can consider itself self-sufficient. E. Giddens called the increasing interconnection of the world community globalization. From a modern perspective, we can say that “globalization is the process of transforming a heterogeneous world social space into a single global system in which information flows, ideas, values and their carriers, capital, goods, services, standards of behaviour and fashion move freely, changing the world view, activities of social institutions, communities and individuals, mechanisms of their interaction”. The accelerator of global transformation is the global reorientation of culture, and consequently of education. The strategic task of the world community is to create a global network of environmental education, in which all educational systems include familiarity with the environmental problems facing humanity and form an understanding of the relationship between man, society and nature on a planetary scale. The development of a general strategy for environmental education and nature conservation, the coordination of the efforts of different countries in this area is carried out at the level of the United Nations Educational, Scientific and Cultural Organization (UNESCO). One of the controversial points at all ongoing forums is the problem of orientation of environmental education. The fundamental question is whether the focus should be on the natural environment (environment) or the natural world. Despite the fact that it is the first orientation in environmental education (on nature as an environment) that has received the greatest development in the world and support at the international level, recently more and more specialists have come to understand that without emphasizing environmental education on the natural world, a comprehensive solution to the problem is impossible ecological crisis. Environmental education and training should be inclusive, involving and increasing the degree of participation of all members of society, and also aimed at developing, firstly, a system of ideas about the natural world as a collection of specific natural objects (and their complexes), secondly, a subjective attitude towards natural objects as having uniqueness, inimitability and intrinsic value and, thirdly, ensuring non-pragmatic interaction with them.*

**Key words:** community, culture, environmental education, environmental problems, inclusive society.

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## ЕКОЛОГІЯ ТА ЕКОЛОГІЧНА ОСВІТА В ЕПОХУ ГЛОБАЛІЗАЦІЇ ТА В КОНТЕКСТІ ІНКЛЮЗИВНОГО І ГЛОБАЛЬНОГО РОЗВИТКУ СУСПІЛЬСТВА

*У третью тысячулеті прискореними темпами відбувається формування глобальних структур – економічних, політичних, культурних, соціальних. Нині жодна країна світу не може вважати себе самодостатньою. Посилення взаємозв'язку світового співтовариства Е. Гідденс назвав глобалізацією. Із сучасної точки зору можна сказати, що «глобалізація – це процес перетворення неоднорідного світового соціального простору на єдину глобальну систему, в якій рухаються потоки інформації, ідеї, цінності та їх носії, капітал, товари, послуги, стандарти поведінки та мода, вільно змінюючи світогляд, діяльність соціальних інститутів, спільнот та індивідів, механізми їх взаємодії». Прискорювачем глобальної трансформації є глобальна переорієнтація культури, а відповідно й освіти. Стратегічним завданням світової спільноти є створення глобальної мережі екологічної освіти, в якій усі освітні системи включають ознайомлення з екологічними проблемами, що стоять перед людством, і формують розуміння взаємозв'язку людини, суспільства і природи в планетарному масштабі. Розробка загальної стратегії екологічної освіти та збереження природи, координація зусиль різних країн у цій сфері здійснюється на рівні Організації Об'єднаних Націй з питань освіти, науки і культури (ЮНЕСКО). Одним зі спірних моментів на всіх форумах, що відбуваються, є проблема спрямованості екологічної освіти. Фундаментальне питання полягає в тому, чи має бути зосереджена увага на природному середовищі (навколишньому середовищі) чи на природному*

світі. Незважаючи на те, що саме перша орієнтація в екологічній освіті (на природу як навколишнє середовище) отримала найбільший розвиток у світі та підтримку на міжнародному рівні, останнім часом усе більше фахівців приходять до розуміння того, що без акценту на екологічну освіту та природного світу комплексне вирішення проблеми екологічної кризи неможливе. Екологічна освіта та екологічне виховання має бути інклюзивне із залученням та збільшенням ступеня участі всіх громадян у соціумі, а також спрямоване на формування, по-перше, системи уявлень про світ природи як сукупності конкретних природних об'єктів (та їх комплексів), по-друге, суб'єктивного ставлення до природних об'єктів як до таких, що мають унікальність, неповторність і самоцінність, по-третє, забезпечення непрагматичної взаємодії з ними.

**Ключові слова:** громада, культура, екологічна освіта, екологічні проблеми, інклюзивне суспільство.

**Introduction.** In accordance with the identified strategic guidelines in environmental education, there are different trends in its methodological organization, which depends primarily on the state of the educational institution of each country.

Based on the stated general provisions, let us turn to an analysis of the experience of organizing environmental education in a number of European countries and the United States.

Germany's experience in organizing environmental education has a history of more than 25 years. In general terms, the formation of the country's environmental policy in the field of education can be divided into three stages. The first stage – the “offensive” – dates back to the late 60s and early 70s of XX century.

It was during this period that the phenomenon of social “awakening” arose – the activities of trade unions and the struggle of the country's population to improve the quality of life. The second stage – “expansion” – was expressed in a broad social movement for environmental protection, operating “from below”. As a result, laws were passed on sewage, chemicals, waste, etc. A historical milestone along this path was the creation of the Green Party in the early 1980s. Since the 90s the third stage began – “consolidation”. At this time, pan-European standards, guidelines, goals and systems of measures in environmental activities began to be developed.

**Analysis of recent research and publications.** In an increasingly interconnected world, the domains of ecology and education find themselves at a critical intersection. The purpose of this article is to explore the profound implications of globalization on both ecological systems and educational paradigms, emphasizing the need for a harmonious coexistence between the two.

**Globalization's Impact on Ecology.** The era of globalization has witnessed an unprecedented acceleration of economic activities, technological advancements, and human mobility. While these developments have undoubtedly led to remarkable progress in various aspects of human society, they have also raised serious concerns about their impact on the environment.

1. **Environmental Degradation.** The globalization of trade and industry has resulted in heightened production, increased transportation, and a surge in resource consumption. This has led to deforestation, habitat destruction, and the overexploitation of natural resources, all of which have dire consequences for ecosystems worldwide.

2. **Climate Change.** The interconnectedness of global economies has led to the exponential growth of carbon emissions, contributing significantly to climate change. Rising temperatures, extreme weather events, and sea-level rise are putting immense pressure on fragile ecosystems, endangering countless species.

3. **Biodiversity Loss.** As globalization continues to facilitate the spread of invasive species and the disruption of ecosystems, biodiversity loss becomes an ever more pressing concern. The extinction of species and the disruption of ecosystems not only jeopardize the natural world but also have far-reaching implications for human well-being.

**Education Globalization.** Simultaneously, the globalization of education has undergone significant transformations. With the advent of digital technology and the Internet, information and knowledge are now more accessible than ever before, transcending geographical boundaries. This globalization of education presents both opportunities and challenges:

1. **Cultural Exchange.** Education globalization promotes cross-cultural exchange, fostering mutual understanding and respect among diverse communities. This has the potential to create a more inclusive and interconnected global society.

2. **Skills and Innovation.** Access to global educational resources can enhance skills development and innovation, enabling individuals and societies to address ecological challenges more effectively.

3. **Challenges of Standardization.** However, the standardization of education practices can also lead to the homogenization of knowledge and the neglect of local ecological contexts. It is crucial to strike a balance between global knowledge dissemination and the preservation of local environmental wisdom.

**Harmonizing Ecology and Education Globalization.** To navigate the complex web of ecological and educational globalization, there is an urgent need for a holistic and integrated approach:

1. **Environmental Education.** The globalization of education should incorporate robust environmental education curricula that emphasize ecological literacy, sustainability, and the interconnectedness of global ecosystems.

2. **Transdisciplinary Collaboration.** Collaboration among scientists, educators, policymakers, and local communities is essential to address global ecological challenges. This collaboration should be facilitated through international networks and partnerships.

3. **Cultural Diversity.** Education globalization must respect and celebrate cultural diversity, recognizing the importance of indigenous knowledge and traditional ecological practices in preserving the environment.

4. **Policy Integration.** Governments and international organizations should develop policies that promote sustainability, biodiversity conservation, and climate action within the global education agenda.

**The purpose of the article** is to examine and discuss the multifaceted impact of globalization on ecological systems and educational paradigms.

**Presentation of the main research material.** In accordance with the stages of development of environmental policy, the importance of environmental education in the concept of general education in Germany gradually increased. At the national level, an important milestone in the development of environmental education was the first state program on the environment – the “Environmental Program of the Federal Government”. It recognized the enormous role of education focused on the study of the environment and the anthropogenic impact on it at all levels of the education system [2, p. 41].

Germany's experience in organizing higher environmental education shows that of all the countries of Western Europe, it is here that environmental psychology and humanistic pedagogy have found the greatest distribution for the reason that the country has strong cultural and pedagogical traditions and a high potential for environmental and educational development of society. Higher education in Germany is increasingly influenced by the eco-humanistic concept of education. There has been a change in the curricula and programs of higher educational institutions towards an increase in environmental topics and practice-oriented forms. There is a shift in emphasis from traditional teaching methods to non-traditional ones (closed circuit television system, micro-teaching, group-dynamic training, group training, project method and others). A whole network of seminars, training centres and eco-humanistic training courses has been developed, since the study and development of sciences about the nature and economics of human relations, ethics of behaviour, and the language of interpersonal communication will make a person more sensitive to the problems of his natural environment.

Thus, in modern Germany, environmental education, understood as the formation of environmental consciousness and the ability to act in accordance with the interests of nature conservation, which has received broad government and administrative support, occupies a reliable position in the field of education.

The French education system has always been and remains strictly centralized; the non-university sector of science is highly developed in it, which sharply distinguishes it from the higher education system of Germany, Great Britain.

In accordance with the developed international strategy for action on environmental education and training, French ministerial instructions highlight the following approaches as leading ones: continuity, interdisciplinarity, integrativeness, unity of intellectual and emotional perception of the environment and society. Teaching is based on local history. According to French teachers, this helps to develop in young people a sense of pride in their native land and respect for other regions and peoples.

Environmental education in higher education requires specific techniques, which stems from two difficult goals: first, it is necessary to understand the essence and teach a complex of problems related to the environment in their entirety; secondly, to integrate traditional, discipline-based education with interdisciplinary learning.

Universities have a dual task in this regard. On the one hand, they are designed to prepare graduates who understand the meaning and importance of environmental problems in their specialty, on the other hand, universities produce environmental experts who are specialists in various environmental aspects [6, p. 21–23].

Thus, environmental education in universities and colleges in France has got off to a good start, but is not yet well developed. Nevertheless, the achieved level awakens environmental consciousness in people and fosters a sense of responsibility for preserving the environment [9].

The English model of the higher education system has its own characteristics. It emphasizes the importance of personal development, since in the UK the traditional principles are very strong, according to which the main focus is on the development of the individual abilities of the student. This model of “personal learning” is built on the model of the ideal university of J. Newman [5, p. 82].

The place of environmental education in the secondary education system in England is debatable.

However, in recent years, the close attention of most specialists has been paid to working using the project method. The project method is focused on the independent activity of students (individual, pair, group), which is the basis for the education of a free person capable of making independent decisions. This method always involves solving a problem that involves the use of various teaching methods and means, as well as integrated knowledge and skills from courses in various subjects [7, p. 80].

As an example, we can consider the experience of training environmental protection specialists at the University of Salford, where in 1990 an independent faculty was opened – a department for training specialists in environmental protection. The main goal of training in the new direction is to provide future specialists with a universal basic environmental education. The teaching technology is modular. Environmental knowledge at the university level is formed on the basis of three criteria: course structure; providing scientific information on environmental issues; frequency of field activities. Recommended methods include:

- development of interdisciplinary connections between disciplines aimed at providing students with environmental knowledge;
- establishing cooperation between university teachers and exchanging information and bibliography;
- creation of field study programs in all subjects that are combined in a common project.

These offerings do not require excessive effort or investment, but help students become more aware of environmental issues [4].

The education system in the United States, including higher education, is the most decentralized and built on a regional basis. Each state has the right to organize the educational system at its own discretion, provided that the constitutional guarantees of the rights and privileges of US citizens are fully ensured. At the same time, the state is responsible for the functioning of the system.

In environmental education, the prevailing trend is associated with an emphasis on the formation, first of all, of strategies and technologies for interaction with nature, that is, the “technological” trend. The content of environmental education in this case is focused on the inclusion of the individual in such interaction with nature, which to the greatest extent and provides the opportunity to master adequate environmental strategies and acquire the skills (technologies) necessary for their implementation [2; 3, p. 4].

A distinctive feature of the American environmental education system is its focus on environmental problems of the area where the educational institution is located, and not on environmental protection in general. The programs and courses of the disciplines show a dependence on the geographical, historical, environmental characteristics of the states, and the traditions of local autonomy. Training methods involve working “in the field”. Green social movements play an important role in the environmental movement of American youth. Environmentalists strive for the unity of man, society and nature and believe that modern industrial society is faced with the task of revising the previous system of values and establishing the principle of the “supremacy of nature.” This system of environmental education produces significant positive results: by 2000, there were about 12 thousand environmental organizations in the United States and up to 250 new ones are created annually. Nature conservation has even become a way of life for many Americans. Thus, environmental education in the United States is characterized primarily by its focus on the formation of a system of environmental ideas. The study of existing education systems in the world and models of their development in the direction of greening allows us to believe that modern environmental education does not meet the European and world standards and needs to be modernized. However, at the same time, the reorganization of the education system cannot replicate the European experience, since environmental, economic, political, state and other traditions in our country have their own specific characteristics, historical roots, national character and socio-religious customs. Therefore, at the present stage of restructuring the education system, it is necessary to carefully analyze the European experience in training specialists, and then outline and implement a new approach to training environmentally edu-

cated specialists of the 21st century. An analytical study of the methodology, technology and curricula for training specialists at leading European universities has shown that the most suitable is the experience of training environmentally literate specialists at the University of Salford (UK) [1, p. 38].

**Conclusions.** To summarize, from all that has been said, the following conclusions can be drawn. The main goal of environmental education from the point of view of the world community is to provide conditions for the intellectual, personal and social development of students, to instil in them a sense of personal responsibility for the state of the environment, the desire to deeply understand the essence and contradictions of the ongoing changes in the ecological development of our planet [10, p. 23].

Recently, state educational policies in European countries have contributed to the weaving of an environmental component into all levels of education in traditional education systems. All over the world, environmental problems are studied by a complex of natural and humanities disciplines, and in most countries, teaching is based on the principles of continuity, interdisciplinarity, integrity, integrativeness, and an activity-based and problem-based approach to the study and solution of environmental problems using regional examples [8].

Undoubtedly, the main link in the environmental education system is the higher school, where a whole range of environmental disciplines are taught and innovative teaching methods are actively introduced (micro-teaching, group-dynamic principle, project method, etc.) that contribute to the formation of environmental knowledge of specialists.

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