

# World Experience and Educational Opportunities for the Formation of Ecological Moral Competence in Students

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**Abstract:** In the conditions of the acceleration of global environmental problems in the world, it is one of the important tasks of today to treat nature and society on the basis of high humane and ethical criteria from an ecological point of view. With the global ecological situation on the brink of destruction, the problems of educating the ecological characteristics of human qualities, the trend of environmentalization of social relations determine new tasks of education. Hence, it is a priority to research the ethical aspects of ecological activities and work on the basis of specific strategies. These aspects put the development of eco-ethical competence in students through integrative methods in the framework of pedagogy and other social sciences.

This article discusses the emergence, development, importance of ecological ethics and the criteria of eco-ethics in the countries of the world. Specific methods and characteristics of developing eco-ethical competence in students during the educational process are compared and researched.

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## 1. Introduction

Nowadays, environmental ethics has become a direct or indirect object of research in various fields of science, a number of directions have been separated from its structure and are being formed as a particular science. Problems of forming ecological responsibility [1], sociology of ecology and its social laws, issues of forming moral responsibility in nature protection[2], issues of strengthening environmental activism and civic position, systematic and comprehensive study of philosophical aspects of ecological ethics, existing empirical, statistical, sociological information generalization[3], the need to create their universalized, theoretical and methodological bases, nature protection strategy and tactics, retrospective characteristics of the genesis of environmental responsibility, the importance of environmental responsibility in the field of nature protection [4], social demographics of ecological socio-political activism and civic responsibility, ethnographic, geographical features, issues of formation of environmental moral values [5], analysis of the ecological education system, its methodological foundations[6] are researched. However, until now, the problems related to the development of ecoethical competence in students have not been sufficiently and systematically studied.

The interrelationship of nature and human relations, in the field of nature protection, requires bringing the socio-political responsibility of a person to a new level of quality. Therefore, it is crucial to develop the ecological moral competence of the population based on the traditions of using nature along with modern innovative approaches in the solution of socio-ecological problems.

In such a circumstance, the need to form ecological ethics, to treat nature, the environment and the ecosystem as a whole on the basis of high ethical criteria, to increase responsibility, to preserve and look at it with a clear conscience is increasing. It means the natural environment that surrounds a person, that is, his place as a biological species in existence, and human activity. As a result of climate change on the planet, the melting of glaciers in the Arctic, the water level in the world's oceans will rise by 44 cm in the 21st century, and this environmental stress will negatively affect the daily life of 140 million people. During the next 50 years, 3 million km of sea ice disappeared in the world[7]. On the threshold of such a global ecological crisis, the formation of global ecological moral consciousness is one of the priority social tasks.

The task of ecological ethics is to abandon the old view based on non-human relations built on the basis of interests that a human is the ruler of nature, and to form a new ecological worldview that nature is not only for man. Because in the conditions of the scientific and technical revolution, the large-scale use of natural resources and the increase in industrial and household waste pollution the environment have sharply increased the negative impact of man on nature. Some species of flora and fauna are disappearing.

The formation of ecological ethics as a social worldview in society is an effective tool for preventing ecological destruction, protecting against the emergence of new global ecological problems, and warning humanity about the emergence of ecological dangers. For this, it is necessary to improve the teaching of environmental ethics in

higher education, to develop social movements that clearly demonstrate the attitude of humanity to ecological problems, and at the same time to develop a competent attitude to nature, eco-ethical knowledge, skills and qualifications in future personnel.

“Ecoethics,” initially formed in the west in the 1970s, affirms that nature protection cannot be implemented without ecological ethics. Environmental ethics was the first to actively develop in America (The United States of America) in 1971, and later in Great Britain, Australia, Norway and Canada. “Ecological ethics is the doctrine of moral relations of human to nature, seeing nature as an equal partner, all living beings as equal and valuable, as well as the right to limit human needs and rights.” [8] This practical field works in two directions. First, it is assumed that people will protect nature for themselves, and secondly, they will act on the basis of moral principles without economic benefits.

**Competence:** is the ability of students to “creatively use the theoretical and scientific knowledge acquired from subjects during the course of study to solve educational problems arising from the content of the subject.”[9]

**According to the author’s definition, eco-ethical competence:** is the development of students’ ecological-ethical thinking, consciousness, moral-scientific worldview, eco-ethical knowledge, skills, abilities, and decision-making in order to prevent ecologically dangerous situations as a result of eco-ethical education, as well as, the ability to identify environmental problems in professional activities, to promote responsible practical activities aimed at their elimination, and to carry out propaganda.

In many countries, the practice of systematically inculcating environmental moral knowledge and skills in young people began many years ago. In the countries of Northern Europe and America, the strategy of environmental protection was directed towards the control of its condition at all stages. The inclusion of environmental protection issues in all spheres of the internal and external policies of these countries was monitored, and the international community’s attention was strengthened to ensure that all human activities in the environment are fully compatible with the principles of sustainable development. One of the notable aspects of the new approach is that the public is given broad rights to freely receive and disseminate various environmental information. Furthermore, it is one of the urgent tasks to see the formation of ecological moral attitude as a work at the government level, to guide youngsters and elderly people to care for nature.

In accordance with international standards, ecological ethical education includes education about the environment, with the help of the ecology, and for the environment. These three components provide a holistic solution to the fragmented issues of environmental ethics education and training. For example, in Western Europe, ecological moral education and upbringing begins with children interacting with wild and domestic animals in special farms, and even taking care of them.

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In the regions and countries that are among the top 20 “ecologically clean” countries [10], the formation of the potential of an “Ecologically cultured person” begins in the kindergartens. The main goal is to create the first elements of ecological culture in preschool children through ecological education and upbringing based on moral criteria. In general, in Western Europe, they try to create all the conditions for children to communicate with wild and domestic animals in special farms and to start environmental education and upbringing from the age of three by taking care of them.

Needless to say, in Uzbekistan, some forms of ecological moral education are integrated into subjects such as biology, geography, history, natural science in general secondary education and are not conducted by environmental pedagogues. Though information about ecological situations and ecological protection is provided, knowledge and skills about forming an ethical attitude to ecology are not formed.

A similar situation is evident in higher education. With the popularization of integrated education, the integration of natural sciences and social-humanities is gradually taking place, and this is creating the ecoethics of environmental ethics in higher education. Today, environmental education, that is, personnel training, was conducted in a way that did not rely on the competence of students. Until 2019, non-ecological subjects accounted for 70-75% of the curriculum of “Ecology and environmental protection” education. Using world experience and studying the experience of developed countries in order to eliminate such non-ecological education, bringing their important aspects into the national education system is one of the crucial pedagogical tasks.

Below we will consider the ecological ethical approach and system of attitudes in environmental education of developed countries.

**In Austria,** formation of moral responsibility in environmental education and upbringing, teaching of environmental ethics issues are also included in school programs. For example, organization of special school projects ("School garden", "Environmental history", "Ecology at school", "Ecological workshop", "Creativity for nature"); carrying out nature protection actions ("Ozone", "Alpine activities"); preparation of various didactic materials and special training manuals; [11] seminars for pedagogues-ecologists and retraining courses for all specialists involved in environmental education of children; "Environment, school and community" preparation of special ecological education programs in this regard; creation of a national data bank on environmental education issues; implementation of coordination functions; consultations with teachers and other specialists who express their desire to participate in the activities of various projects related to school and extracurricular environmental education related to children's environmental education. It should be noted that, in Austrian higher vocational education, environmental education has begun directly with electives in special and vocational subjects. General environmental education and training is included in the education system.

Every student of environmental education in Austria is engaged in scientific and research work. Modern environmental education is a specialty in demand in industry, construction, geology and other areas of the economy. [12]

**In Denmark,** the problems of environmental education and upbringing are included in all pedagogical professional education systems. Compulsory environmental education, interdisciplinary independent education in the training of pedagogues was manifested in the popularity of relevant educational materials. Denmark which holds the Nordic Symposium with the Scandinavian countries and implement the international and national educational projects, such as "Environmental Education in Scandinavia", "Baltic Sea", "North Sea" and "Clean Rivers", "Acid Rain", "Green Flag" is a permanent participant of long-term cooperation projects by mapping and studying the ecological condition of coasts.

**In Germany,** environmental education is aimed at changing young people's perception of the environment and developing their knowledge, increasing their readiness to protect nature, and forming environmentally responsible behavior in the growing generation. The main emphasis is on revealing the relationship between human, society and the natural environment. There is a world view that the human factor is the main reason in ecological education and upbringing, which leads to the destructive pollution of ecosystems.

**In Ireland** environmental education aims to: help explain the complexity of the relationship between people and the natural environment; stimulate interest in economic, social, political and ecological relations in cities and villages; to provide each trainee with the practical knowledge and skills necessary to protect and improve the natural environment while acquiring the knowledge, attitudes, values and skills to make responsible environmental decisions; creation of new ecological models of activities and behavior in the environment in individual, group and collective consciousness and its implementation in practice; help to form a new attitude to nature in individual citizens, different social groups and communities; to assist the population to acquire broad practical environmental skills; identification and classification of ecological issues, solving problematic issues and situations, participating in the process of accepting solutions to environmental problems.

**In Sweden,** environmental education and upbringing were created in 1970 in the preparation for "the European Year of the Environment" and environmental protection was included in the new nine-year compulsory education. Also, the National Program on environmental issues was prepared and adopted. According to its demands, new textbooks and guidelines for teachers and students were published in Sweden. Environmental education and upbringing has become a primary issue in the cooperation of countries located in the Scandinavian Peninsula of Europe. A nationwide information system on environmental education issues was created in cooperation with the Swedish Environmental Protection Society and the National Agency for Education.

**In Japan,** the training of highly environmentally conscious individuals is achieved through environmental education programs and it encompasses all aspects of national vocational training. The Japanese are not very religious, so instead of icons, they have a vase of flowers as an altar of beauty. Ikebana is known to all people on earth. The Japanese attitude to nature is a special national psychology based on collective consciousness. Therefore, environmental education has an ancient history.

**In the USA,** environmental education and upbringing is carried out in various forms, directions and methodological approaches, in the process of instilling environmental ethics into all the content of education and

training, and in the process of forming a careful and responsible attitude of the population to the environment, with the involvement of the general public, especially non-governmental public organizations.

Model of formation of professional competences of ecologists -interdependence of components of environmental education. This is related to the specific characteristics of the professional activity of an ecologist and social demand. For example, the main feature of the model created for the formation of professional competences of technical-ecologists is the integration of these components, which strengthens the formation of specialists due to the comprehensive orientation of the educational process. As a result:

*Firstly*, it means that ecological education is one of the main factors of the development of society. Ecological education is aimed at changing people's attitude to nature, formation of behavioral and environmental stereotypes, economic and social development, acceptance of new principles of professional ethics by each state and person, culture and justice, establishment of some restrictions, development of ecosphere laws.

*Secondly*, this situation determines the formation of pedagogical conditions for the professional competence of an ecologist.

Thirdly, the technological algorithm of the structure of the ecological education model will form the introduction of environmental education in the future.

*Fourthly*, environmental education directs to meet world standards and classifies ecologists to connect this process with production, organizational-management and information-analytical activities.

*Fifth*, the introduction of new information technologies shows the rapid adaptability of environmental education.

*Sixth*, along with science, it also develops ecological culture. These, in turn, arise from life experiences and approach moral principles. Thus, foreign experience shows that environmental education is not only focused on specialization, but it is also focused on the education of a person with high ecological spirituality. In foreign countries, environmental education and upbringing is carried out in a way that originates from national mentality and regional characteristics. Hence, environmental education and upbringing is studied in a way that arises from each state and local conditions, and its normative foundations are created.

Deep and comprehensive study of the scientific foundations of ecological education in higher education, analysis of the causes and laws of phenomena occurring in the biosphere as a result of human activity remains one of the urgent tasks.

In the development of students' ecoethical competence, it is important to form environmental legal responsibility in them. One of the functions of ecological legal responsibility is to regulate the process of formation and development of student's nature protection activities, practical behavior. According to V. I. Speransky, one of the researchers of the problem of social responsibility, "with the formation of a sense of responsibility, a person becomes an individual, his social activity begins" [13; p. 148]. In this, the author considered responsibility as the basis of personality formation and raised it to the level of a criterion that determines its quality. However, any level or form of sense of responsibility cannot claim to define "human quality".

Within the scope of our research, ecological legal norms, social demands and obligations can be a criterion determining the environmental quality of a person only if they become personal beliefs. In other words, society and individuals should be interested in following environmental norms based on their inner belief and sense of responsibility towards future generations, not because they are "afraid" of legal laws. Thus, environmental responsibility is determined not by the severity of environmental regulations, the inevitability of punishment, but by the presence of internal respect for it. Therefore, the formation of environmental moral responsibility in students and their unlimited respect for nature is one of the important socio-pedagogical tasks.

It should be noted that environmental legal norms are relatively stable, and its meaning should be explained by its constant development, but in practice, this is not always the case.

A unique and important feature of ecological legal norms: firstly, it is characterized by purposeful orientation of the activities of the subjects of environmental relations, that is, it determines the scope, procedure, and organizational links of ecological activities. Secondly, if internal beliefs and public opinion have priority in the regulation of other social relations, environmental legal norms mainly rely on the state's "coercive" and prohibitive powers. It is in this way that both its effectiveness and its weaknesses are revealed. In particular, today, the relative stagnation of environmental legal norms and acts causes the environmental situation to lag behind the demands of dynamic development. Furthermore, environmental legal norms do not have a clear set of criteria for evaluating anti-environmental behavior. For this reason, it is necessary to form students' respect and attitude to environmental moral norms, not to force, but to form an attitude based on care.

In addition, in the development of students' ecoethical competence, it is necessary to form their responsibility of environmental control as a member of society. Ecological monitoring consists of determining the ecological situation, its development trend using certain methods, and developing "pure" technical and technological recommendations, while "social-ecological control" is the control of human and society's influence on nature, the

relationship of “pure” subjective factors and its performs the functions of indicating directions for improvement. There are formal and informal forms of ecological social control, each of which performs specific functions. In informal socio-ecological control, the most important feature is that human nature protection behavior is not reinforced by officially accepted authorities and systematized special legal laws. In this case, every conscious person or concrete forms of social units (family, labor team, social classes) can be the subject of informal socio-ecological control. After all, public opinion is a priority in preventing anti-environmental behavior, even their motives, goals, and aspirations. With the development of society, the improvement of official environmental control functions corresponds to the level of ecological needs of mankind, which is to maintain the balance of the biosphere. At the same time, informal socio-ecological control is strengthened in universal moral principles and laws, and it expands the scope of its functional activity. That is, in the understanding of ecological responsibility, the role of motivations such as “shame”, “duty”, “conscience”, “faith” increases, not only the fear of punishment, but also the inner spirituality of a person. In other words, informal socio-ecological control mechanisms are manifested in the impact on the emotional-spiritual aspects of nature conservation and create moral satisfaction or a critical attitude to one’s personal activities. Its effectiveness depends on its ability to focus public opinion on one or another behavior.

Creating an excellent system of monitoring the environmental situation in our republic with modern technical means and strengthening its organizational aspects is an urgent problem. It is important to look for opportunities to become a member of the ecological space control system, which is widely used in developed countries on a global scale. Besides, the organization of an information center-environmental information, data bank about the general environmental situation is on the agenda. Because of the current information gap and the inability of methodological bases, ecological reality is not always correctly reflected. Contradictions in the data raise doubts about their “effect” and “coefficient” of reliability, strengthening the moods of indifference, irresponsibility, and neglect. Consolidation and analysis of information would have created the scientific basis for coordinating the activities of legislative and executive bodies.

Acquiring students with factual information about the anthropogenic impact that intensifies the environmental situation affects the scope, direction and results of informal monitoring. The lack of complete, objective information about the environmental situation among students, “information poverty” causes organizational difficulties of the task of legal protection of nature, that is, the availability of public information is necessary for society to “determine its attitude to the natural environment and protect human health”. [14] Needless to say, as in all spheres, in the legal protection of nature, if there is no sufficient, objective information, disinformation will arise. Therefore, providing students with clear information about the environmental situation affects the formation of their moral attitude.

As well as, in the development of environmental moral competence of students, it is necessary to study environmental stereotypes in them, improve their positive aspects and use them in the educational system, eliminate stereotypes that cause negative environmental irresponsibility, selfishness, create environmental problems, and increase indifference. It should be said that ecological stereotypes are relatively stable and in the process of summarizing the experiences of the previous generation, they become the content of the existing ecological lifestyle. In retrospect, ecological stereotypes appear to be a phenomenon that limits activity and responsibility corresponding to ecological situations through the means of law, however it is the actual manifestation of these ecological stereotypes that represents activity and responsibility in the field of nature protection. However, in most cases, the existing literature prefers to understand stereotypes as dogmatic views that lag behind life.

In accordance with the characteristics of existence of social units, there are direct or indirect forms of environmental preventive control using various methods and tools, and environmental norms, principles, as well as procedures are not enforced, but become a necessary condition of environmental awareness, self-control - activity and responsibility. In a sense, though administrative and legal control tools and methods limit anti-environmental activities, they have an indirect effect on increasing the sense of environmental activity and responsibility. Therefore, it is necessary to strengthen the role of factors that increase activity and responsibility in eliminating such behaviors and conditions.

The legal factors of increasing environmental activism and responsibility do not mean that these qualities become “human personality”. For this, it is important to approach the problem of environmental activism and responsibility education at the state level in a complex and systematic way and move it to the center of the national ideology. Especially, in the situation where environmental activism and responsibility have not yet taken a mass form, increasing the professional activity and responsibility of people working directly in this field is the first priority. Because:



Firstly, increasing environmental activity and responsibility at the professional level is a means of transforming these qualities to the general public.

Secondly, the material, technical and organizational capabilities necessary to increase the environmental activity and responsibility of all its members are currently limited.

Thirdly, professional ecological activity and responsibility, according to its “quality”, serves as a model for other social layers.

In conclusion, the importance of nature protection should be inculcated in the minds and lifestyles of students. This activity is based on the creative development of the historical heritage of nature protection, values, according to the principles of succession, based on the characteristics of the concrete ecological situation. In order to increase its effectiveness, it is important to develop ecological thinking by greening all links and stages of education, and to increase environmental political activity of the public.

## **2. Conclusion**

Teaching environmental ethics in higher education, development of social movements that clearly demonstrate the attitude of humanity to environmental problems, competent attitude to nature in future personnel, formation of ecoethical knowledge, skills and competences will form ecological ethical environment in social relations. Formation of ecological ethics as a social worldview in society is an effective tool to prevent the emergence of new global ecological problems, to warn humanity about the emergence of ecological dangers.

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