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S Anzorova[1, *], S Sarbassova[2], Z Dzhubalieva[3], A Meldebekova[3], M Zhapanova[4], G Zhumadilova [5] and A Zubets[6]

[1] Moscow University or Industry and Finance "Synergy", 80E Leningradsky prospect, Moscow, Russia.
[2] Kazakh University of Economics, Finance and International Trade, 7 Zhubanov street, Nur-Sultan, Kazakhstan.
[3] Abai Kazakh National Pedagogical University, Department of Economic specialties, 121A Maulenov street, Almaty, Kazakhstan.
[4] Gumilyov Eurasian National University, the Department of Russian Philology, 2 Satpayev street, Nur-Sultan, Kazakhstan.
[5] NJNSC "University named after Shakarim of the city of Semey", 20A Glinka street, Semey, Kazakhstan.
[6] Financial University under the Government of the Russian Federation, 86 Leningradskiy prospect, Moscow, Russia.

E-mail: anzorova@inbox.ru

Abstract. The complex and contradictory situation in the relationship between society and the environment has raised a number of important problems, the solution of which lies in the field of environmental education. The environmental problem is one of the most exciting and dramatic human problems of the 21st century. Signs of the global ecological crisis of humanity, set before each individual the task of mastering the principles of managing their lives, which are in constant interaction with the environment, the tasks of rational nature management and awareness of the role, place and importance of man in the evolution of the Earth and Space. The priority of any educational system is the formation of a holistic worldview and ecological culture of the individual and society, within which it is necessary to perform a socio-ecological function. The growing interest and concern of both the public and State institutions to the problems of nature surrounding humans in developed countries is becoming obvious.

1. Introduction

In the last decade, changes in the nature of learning have taken place in the context of global educational trends. It is necessary to take active actions aimed at developing reasonable needs in humans to act in such a way as to ensure the establishment of optimal relations between nature, society and humans. Therefore, environmental education is recognized as one of the priority areas for the development of the education system.

Environmental education as an integral process is an uninterrupted process of teaching, upbringing and personal development, aimed at the formation of an environmental culture of the individual and society.

Ecological culture determines the nature and quality level of relations between man and the natural environment, manifests itself in the system of value orientations that motivate ecological activity. The

key element of greening education is the search for competent and effective scientific and technical solutions; and also - the ecological component of secondary, special and higher education, which should become an integral part of the training of any specialist in the field of technology, natural sciences, medicine, economics and even the humanities. Environmental education can be viewed as a necessary element in the life of society. According to many scientists, one of the important reasons for the current state of affairs in environmental education is the lack of a deep and holistic scientific and pedagogical elaboration of the issue of greening the educational process on an interdisciplinary and inter-cycle basis.

A strategically important task arises of a kind and general greening of the school educational process, saturation, within reasonable limits, with ecologically valuable material of various curricula of secondary general education schools, aimed at the formation of the ecological culture of students. Naturally, this circumstance raises the need for scientific and pedagogical, first of all, didactic comprehension of these processes, which are deeply innovative in their essence.

Greening education is the introduction of elements of an ecological approach into the teaching practice of various disciplines, which focuses, first of all, on the study and reflection of human interaction with the environment using the methods of a specific discipline, as well as on the training of environmentally competent graduates of an educational organization [1,2]. Of particular importance are the developed didactic models of teaching schoolchildren, aimed at the formation of the ecological culture of students:

- a model of teaching high school students in a general education school, implemented through the algorithm - "knowledge + relations", and describing the means and methods of forming their ecological culture at three levels: information-cognitive, operational-activity and practice-oriented, as well as a set of pedagogical conditions for its formation (Osokina V.N.);
- a model of the formation of the ecological culture of senior students, based on the ecologization of school education (disciplines of the natural science and humanitarian cycles), including as structural components: target, meaningful, activity-based and evaluative-productive (Biryukova N.A.).

However, in these and other models, the greening of high school students' education is revealed within the framework of a specific training profile (in connection with the transition of schools to specialized training: universal, natural science, humanitarian, etc.), they did not reveal systemic signs to justify the mechanism the formation of environmental culture (and, accordingly, environmental competences) of senior pupils, and the corresponding goals and content of the greening of their education [3-5].

Thus, these models do not reflect the universality and consistency of approaches to the greening of the content of education in high school, in order to form an environmental culture and a system of environmental competencies in the learning process in a general educational institution.

2. Literature review

In domestic and foreign pedagogy, enough works have already accumulated that comprehensively reveal the problem of environmental education. The general theoretical foundations of continuous environmental education have been studied in the scientific works of G. Gilmiyarova, N. Glazachev, D. Deryabo, Zverev I.D., Zakhlebny A.N., Ignatova V.A., Mamedov N.M., Suravegina I.T. , Sidelkovsky L.P., Tavstukha O.G., Chernovoi N.M., Levina V.A. and etc.

In the studies of Zakhlebny A.N., Maksimova V.N., Ponomareva I.N., Suravegina I.T., Sorokina L.V., Tagariyeva R. 3., Khotuntseva Yu.L. and others reveal the possibilities of educational subjects in environmental education. A number of scientists propose a "system-pedagogical model" of the formation of the ecological culture of schoolchildren, and which describes two interrelated systems:

- a system of greening teaching in a general educational institution, the components of which are goals, contexts of greening, directions (principles) of the activities of school teachers in greening;
- a system of environmental education in a general education institution, which includes as components the goals, content, methods and forms of education, methods of monitoring results.

Systemic signs (or grounds) are proposed to consider the following views:

- firstly, the idea of the educational program as a set of documents that determine the composition and structure of the components of the educational process (target, meaningful, procedural, productive and diagnostic, organizational and managerial).

Consideration of the educational process from the standpoint of integrity means that the greening of the educational program of disciplines in high school involves the transformation of all its components (goals, content, methods of teaching and control, organization and management of learning);

- secondly, the idea of greening as a technological process, which includes a number of stages. At the same time, the proposed by Gershunsky B.S. is taken as a system-forming basis for identifying these stages. the structure of personality formation: "literacy → education → competence → culture, which determines the goals of greening at each stage";
- thirdly, the culturological model of Lerner I.Ya. and Kraevsky V.V., which embodies the idea of reflecting the totality of the main types of experience, the development of which by school graduates ensures continuity in socio-cultural progress;
- fourthly, when creating a model for greening education in a general education institution (school, lyceum, gymnasium), they are based on the continuity of developments on the greening of content in primary, general and higher education.

The most essential is the author's concept of a team of scientists and teachers headed by Academician of the Russian Academy of Education Zverev I.D., who propose three models for implementing the structure of content:

- multidisciplinary;
- one-subject; and
- mixed.

The multidisciplinary model assumes the maximum ecologization of the content of academic subjects of natural science and social and humanitarian cycles. The one-subject model assumes the achievement of the goal of environmental education within one subject.

The mixed model assumes a combination of special integrated subjects in the educational process and the introduction of environmental content into the academic subject.

Taking into account the specifics of the organization of secondary education, a mixed model of the ecologization of the content seems to be the most acceptable, which will allow not only the introduction of special disciplines of ecological content (courses of choice for high school students) and the ecologization of educational disciplines of the natural science and humanitarian cycles, but the introduction of electives of an ecological orientation and the organization of extracurricular activities in this direction [6-9].

And finally, to implement a systematic approach to updating the content of education, taking into account the ecological component of education, the contextual learning model proposed by A.A. Verbitsky is applied. and Dubovitskaya T.D.

The authors consider the context as "a system of internal and external factors and conditions of human behavior and activity that affect the characteristics of perception, understanding and transformation of a specific situation."

A theoretical analysis of the content of education allowed A.A. Verbitskiy. highlight the following contexts in its structure:

- sociocultural context;
- the context of scientific knowledge;
- the context of the subject;
- didactic (context of educational and pedagogical interaction);
- the context of personal significance.

This means that, taking into account this model, the greening of the content of secondary education should correspond to these contexts.

3. Discussion

Environmental education is the most important component of world culture, a continuous process of cognition and transformation of the surrounding reality;

Greening the content of education and, consequently, the formation of the worldview of the individual, the preservation and creation of cultural values is the strategic line of development of the entire modern education and upbringing system of the young generation; recognition and approval of the ecological orientation of education as a state and regional policy and strategy in the development of education at all its stages [10-13].

The main value of environmental education as an integral part of natural science is the upbringing of a person who has embodied the achievements of world environmental culture. At the same time, environmental education itself acts as the development of the individual through familiarization with the world environmental culture, including the culture of preserving and maintaining health. The formation and development of environmental competence as the goal of environmental education has a socially and environmentally determined nature, deep historical and pedagogical roots. In modern conditions of reforming biological education, taking into account international trends, the competence-based approach acts as a methodological basis for the modernization of environmental education of students, designed to contribute to solving environmental problems, implementing the concept of sustainable development. The relevance of this approach is also due to the need to form competence (in a broad sense, including environmental) as a key quality of a person in civil society. From the point of view of the socio-cultural significance of ecological activity as a way of realizing the biosphere function of mankind for the preservation and sustainable reproduction of life, ecological competence has a general educational, key character. The formation of ecological competence is a necessary stage in the formation of ecological culture as a general goal of ecological education of students. At the present stage (environmental education for sustainable development), the competence-based approach serves as a methodological basis for the modernization of environmental education. Environmental competence is an important link in the system of environmental education results: environmental literacy - environmental education - environmental competence - environmental culture. The formation of environmental culture as the general goal of general environmental education should provide as one of the necessary stages in the formation of environmental competence of students. Among them are the preservation of a favorable environment, biological diversity and natural resources to meet the needs of present and future generations, the realization of the right of every person to a healthy environment, strengthening the rule of law in the field of environmental protection and ensuring environmental safety. Achievement of all the designated goals is proposed through the solution of a number of tasks, among which, among other things, the formation of environmental culture, the development of environmental education and upbringing are highlighted. The solution to this problem is revealed through a number of main mechanisms of state policy in the field of environmental development: the formation of an environmentally responsible worldview among all segments of the population, especially among young people; state support for the dissemination of environmental and resource-saving information through the media, as well as holding thematic events; inclusion of environmental issues in new educational standards; ensuring that the process of education and training in educational institutions is focused on the formation of environmentally responsible behavior, including through the inclusion in federal state educational standards of the relevant requirements for the formation of the foundations of environmental literacy in students; state support for the activities of educational institutions providing training in the field of environmental protection; development of a system of training and advanced training in the field of environmental protection and ensuring environmental safety of heads of organizations and specialists responsible for making decisions in the implementation of economic and other activities that have or may have a negative impact on the environment;
inclusion of issues of formation of ecological culture, ecological education and upbringing in state, federal and regional programs.

4. Conclusion

Modern ecology is now perceived as a scientific basis for rational activity in nature, as a field of knowledge about the environment that affects the prosperity of human life and its practice of communicating with nature. Therefore, along with fundamental knowledge about the features of the life of biosystems at different levels of organization of matter, the problems of human existence occupy a significant place in the ecological picture of natural phenomena. At the same time, ecology must solve problems that ensure the preservation of life on Earth, the development of mankind not only along the path of survival, but also along the path of harmony in relations between people, society and nature. That is, the subject of ecology is currently the interaction of man and society with the environment. In order to ensure the ecological safety of human existence, the world community has made a choice in favor of sustainable development. As you can see, environmental education, focused on the development of environmental culture in the younger generation, can make a significant contribution to ensuring the

sustainable development of society and nature. And as an axiom: a practical solution to this problem depends on the appropriate readiness of subject teachers and teachers of the system of sociocultural institutions. Currently, the evolution of ecology as a science has determined the emergence of functions among scientists, inventors and innovators, consisting not only in enlightenment and education of people, but also in management of the vital activity of human communities. The ideas of sustainable development have given a new impetus to environmental education, which is already considered today as a system-forming factor in general reforming education. Acceleration of the greening of the educational process occurs due to the use of the ecological potential of all blocks and modules of professional educational programs in the development of the ecological culture of the future teacher. The greening of the educational process is associated not only with the introduction of special environmental educational disciplines, but also with the formation in the educational organization of a special humanitarian environment consonant with socio-natural dynamics, motivating students in the light of the ideas of sustainable development.

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