
EDUCATION, DISSEMINATION AND ADVISORY WORK IN THE FIELD OF AGRICULTURE

DOI: <https://doi.org/10.23649/jae.2019.1.9.14>

Galkieva Z. Kh.*¹

¹ Federal State Budgetary Educational Institution of Higher Education «Orenburg State Agrarian University»

* Corresponding author (zinfirag[at]yandex.ru)

Received: 08.04.2019; Accepted: 20.04.2019; Published: 29.04.2019

FORMATION OF STUDENT ECOLOGICAL OUTLOOK IN THE EDUCATIONAL PROCESS

Research article

Abstract

This article presents the results of an ascertaining experiment on the formation of the student's ecological outlook in the educational environment of a university based on the Orenburg State Agrarian University, Orenburg State Pedagogical University, Orenburg State University.

Keywords: Ecological outlook; the formation of the student's ecological outlook; educational environment of the university; the level of of ecological outlook's formation.

Галькиева З. Х.*¹

¹ Федеральное Государственное Бюджетное Образовательное Учреждение Высшего Образования «Оренбургский Государственный Аграрный Университет»

* Корреспондирующий автора (zinfirag[at]yandex.ru)

Получена: 08.04.2019; Доработана: 20.04.2019; Опубликована: 29.04.2019

ФОРМИРОВАНИЕ ЭКОЛОГИЧЕСКОГО МИРОВОЗЗРЕНИЯ СТУДЕНТА В ОБРАЗОВАТЕЛЬНОМ ПРОЦЕССЕ

Научная статья

Аннотация

В данной статье представлены результаты констатирующего эксперимента по формированию у студентов экологического мировоззрения в образовательной среде вуза на базе Оренбургского государственного аграрного университета, Оренбургского государственного педагогического университета, Оренбургского государственного университета.

Ключевые слова: экологическое мировоззрение; формирование экологического мировоззрения у студентов; образовательная среда университета; уровень формирования экологического мировоззрения.

Today, the problems of humanization of education and the mechanism of regulation of environmentally significant activities are increasingly associated with the formation of an ecological world view, which is based on values that are aimed at the preservation, restoration and rational use of nature. Against the background of the understanding that the ecological crisis cannot be overcome without changing the dominant anthropocentric consciousness, which is its psychological base, it becomes necessary to purposefully form a system of ecological values that are part of common human values.

The most important characteristic of the ecological worldview is the subjective perception of natural objects. The formation of a subjective attitude to nature in the adult population is fraught with certain difficulties, and some authors believe that under current conditions it is almost impossible to do this in limited time, therefore, strategic work in this area must begin with the younger generation, whose consciousness is not burdened to such an extent as in adults, anthropocentric and technocratic attitudes. Consequently, the formation of the student's ecological outlook in the educational process becomes one of the important tasks of pedagogical science. The concept of "ecological worldview" is a dyad, one of the components of which is "ecology", which first appeared in 1869 to denote biological science that studies the relationship of animals with organic and inorganic environments, in the twentieth century was transformed into a discipline with an independent status and considering the features of the existence of organisms and communities. Being originally a private biological discipline, it has become an interdisciplinary field of science that studies the interaction of living things, both with natural environmental factors and with

the effects of human activity. The modern pedagogical dictionary of E. S. Rapochevich defines “ecology” as “the science of the relationship of organisms with each other and with the environment”.

The second component of the dyad - the category of "worldview", is quite developed in the scientific literature. For example, the conceptual approach to the worldview of the personality is the subject of research of such philosophers as Arsenyev A.S., Kovalzon M. Y., Sagatovsky V.N., Spirkin A.G., Stepin V.S., Frolov I.T., Shinkaruk V. I; the grounds for the typology of worldviews are systematized by A. A. Kasyan; the structure of the worldview is studied by Makarova S. G., Minakova S. F., Teslyuk S. S., Fedotova V. G. and other authors. The axiological, gnoseological, methodological significance of a worldview is indicated in the works of Bukin V. R., Voevsky A. V., Ivanova V. G., Israilova R. N., Lokhova A. G., Malyshevsky A. F., Frolova I. T. and other authors. Its general definition in the works of V.S. Stepin, I.T. Frolov and other authors is complemented by civilizational, formational approaches. In general, the “worldview” category includes the thesis of limiting generalization of the fundamental views of the world and the place of man in it and, as the genetic code of a social organism, programs the life positions of large groups and individuals. In the modern pedagogical dictionary of E. S. Rapochevich, “worldview” is defined as “a system of views on the world as a whole, on a person’s attitude to society, nature, and himself; the main form of orientation of the person. Worldview as a holistic view of nature, society, man finds expression in the system of values and ideals of the individual, social group, society. The world view is at the heart of the worldview, i.e. set of certain knowledge about the world. This knowledge and insights apply not only to the present, but also to the past, and to the expected future. They fasten the spiritual world of people into one whole. On the basis of such knowledge and ideas, traditions emerged, were formed and developed in all spheres of human activity”. At the ascertaining stage of the study, we tried to identify the dynamics of the formation of the students' ecological worldview. We used a set of research methods: questioning, testing, interviewing, surveys, direct and indirect observation, analysis of classes, various control measures, university documentation, statistical data processing methods and other valid methods. This allowed us to comprehensively explore the peculiarities of the process of forming the students' ecological outlook. The study concerned both teachers and students, since the formation of the students' ecological outlook is impossible without close cooperation of both subjects of the educational process, and this is the basic pedagogical principle that we adhered to from the very beginning.

Experimental search work was carried out from 2016 to 2017 in the natural conditions of the educational process. The experimental base was made by: Orenburg State Agrarian University, Orenburg State Pedagogical University, Orenburg State University. The experimental work was carried out in three stages: motivational-targeted, substantive-operational, and productively evaluative. Each stage of the experiment was characterized by its tasks, methods of solution and results. In accordance with the stages, the experimental work began with a study of the levels of formation of the ecological world outlook on a sample of OGAU, OGPU and OGU students. The study was conducted in the normal educational process at 1-4 courses of economic and law faculties.

The purpose of the experiment was to test the complex pedagogical conditions identified in the process of theoretical research, and the implementation of the designed structural-functional model for the formation of the student’s ecological outlook.

Experimental work began with a study of the levels of formation of the ecological outlook on a sample of students OGAU, OGPU and OGU. We surveyed 304 students. Of these, 68.8% of the students were graduates of urban educational institutions and 31.2% of rural schools.

The main diagnostic toolkit was the developed research toolkit - “Student and teacher questionnaire”. She allowed to solve the tasks. We took into account that the information obtained through questioning reflected the reality under study only in the form in which it was reflected in the minds of the respondents. Given the possible insincerity in filling out the questionnaires, we included in our toolkit direct, indirect and control questions.

The survey data was complemented by other research methods: the method of expert assessments, targeted pedagogical observation, retrospective analysis of one's own pedagogical activity, conversation, analysis of products of intellectual activity, which contributed to the accumulation of mass empirical material, the presentation of the state of the problem in a general form in the practice of universities.

Pedagogical observation was used in the experiment and as an independent method for solving a research problem, and as an integral part of other methods. Direct observation was the main one, when direct relations were established between the object and the researcher, and connections were made without intermediate indicators, transitions, indicators.

Among the teachers, various diagnostic cuts were also carried out to clarify their relationship to the problem of forming an ecological outlook. We found out how much university teachers are able to create pedagogical conditions for the formation of the students' ecological outlook in the educational process.

The results of the survey turned out to be the following: some of the teachers could not cope with more than half of the questions, it turned out that there are discrepancies in the interpretation of the concept of “ecological outlook”. Ecological worldview was defined as:

1. “part of a general worldview”;
2. “component of ecological culture”;
3. “a system of ideas about relationships in the world, reflected in practical attitudes towards nature”;
4. “people's attitude to their environment”;
5. “the source of a new civilization paradigm”.

The results are presented in Fig. 1:

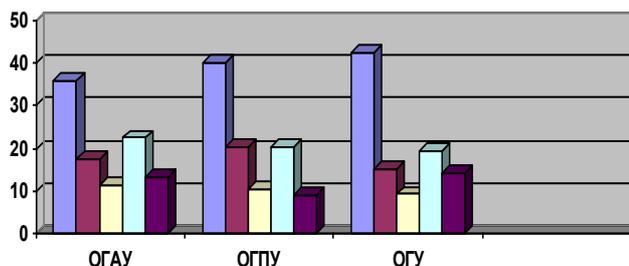


Figure 1. The results of the survey "Student and teacher questionnaire."

We have conducted a series of individual conversations with a significant group of teachers in order to find out what materials on the problem of forming the students' environmental outlook for students, they turn to in the learning process; in what form teachers prefer to conduct classes; what teaching methods are most often used by them in working with students.

This led us to the conclusion that, first of all, a series of seminars and lectures should be held for teachers in order to assimilate and understand the essence of the ecological world outlook and the ways of its formation among students. Without exception, teachers recognized the importance of solving the problem of forming the students' ecological outlook in the educational process of the institute. Many of them expressed their desire to participate in the research and development work as experts, performers.

The next step in the organizational and preparatory stage of the experiment was to determine the level of formation of the students' ecological worldview in accordance with the developed criteria and indicators.

A high level of motivational and value component is characterized by the presence of cognitive motivation, focus on the ecological worldview as a value, a pronounced need for constant replenishment of knowledge and the formation of skills. The middle level is characterized by the development of cognitive motives, awareness of the role of the ecological worldview in the development of the individual. The low level of development is characterized by the absence of a desire to form an ecological outlook.

In our study, the determination of the presence or absence of cognitive motives among students was significant. To the question "Do you like to read books that affect environmental issues?", "If yes, then what works of domestic and foreign writers are you familiar with?" We received a variety of answers. The majority of students (79.3; 76.5; 81.4%) answered these questions in the negative. The rest (20.7; 23.5; 18.6%) answered positively, for example: "My favorite works are "Farewell to Matyor" Rasputin and "Springs of Berendey" Prishvin. "I really like to read the works of Chingiz Aitmatov" And the day lasts longer than a century, "The Cassandra Brand". "I like to read Rasputin and Prishvin."

To this it should be added that the majority of students in their answers called the works provided for by the compulsory literature program in the secondary school, which indicates that they did not read any additional literature.

The results are presented in Fig. 2:

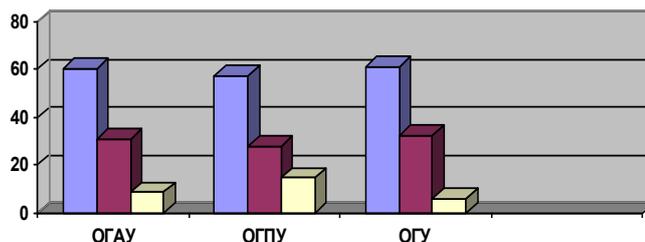


Figure 2. Determining the presence or absence of students' cognitive motives

The following questions were: "Do you like to watch TV programs on environmental issues?" And "If yes, what do you prefer to watch?". An analysis of the answers received showed that the majority of students (60.1; 57.1; 61.3%) watch environmental programs on TV without much interest, for example: "I don't have much interest in environmental programs, I watch them, as a rule, only in those when there is nothing interesting on other TV channels", "I watch such programs very rarely, by mood", "I watch environmental programs only in cases when there is nothing to do".

The second group of students (31.2; 28.2; 32.4%) negatively answer the proposed questions. For example: "I don't spend my time watching such TV shows", "I don't watch TV programs on environmental issues, it doesn't interest me". The third group of students (8.7; 14.7; 6.3%) responds positively to the questions asked. Here are some examples: "I regularly watch TV programs on environmental issues, preference is given to such programs as "In the animal world" and "Avid fishermen", "I try not to miss a single program about nature, for me they are very informative, I like to watch: "The Art of Survival", "Extinct Animals", "Life Before Birth", "I like to watch the Discovery Channels and the National Geographic", their programs carry a lot of new and interesting things, "My favorite shows about nature" "In the world of animals", "In the heart of the jungle."

Results are presented as percentages in Figure 3:

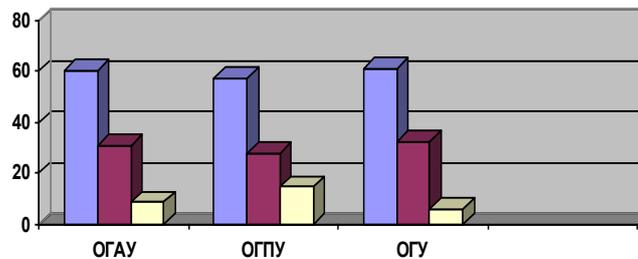


Figure 3. The distribution of the levels of the emotional value component of the ecological worldview's formation

We have identified three levels of formation of the cognitive criterion of the students' ecological outlook. High - knowledge systematized, deep, conscious. Medium - knowledge is deep, but not lined up, not fully realized. Low - fragmentary, unsystematic presentation.

The distribution of the levels of formation of the cognitive component of the ecological worldview is shown in Fig. 4:

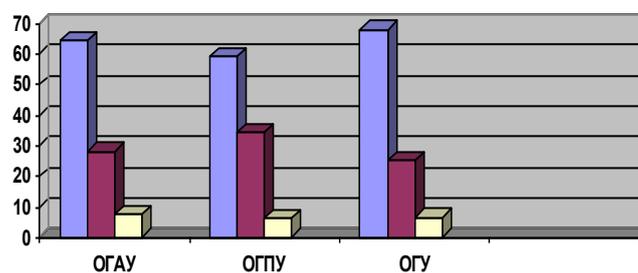


Figure 4. The distribution of the levels of the cognitive component of the ecological worldview's formation.

It turned out that some students correctly understand the meaning of the notion “ecological world outlook” (64.3; 59.2; 68.1%). They noted in the questionnaires that the “ecological world outlook” is “an integral part of the general world outlook”, “people's attitude to their environment”, “a component of the ecological culture”, etc. But still, the full content of the concept, the function of the ecological world outlook indicated only a small proportion of respondents (7.6; 6.4; 6.6%). In other questionnaires, the content of the concept is not analyzed: “the ecological worldview is good,” “only smart people have the ecological worldview,” “everything that I think about the nature around me”, “the ecological worldview is not useful in our work” (28.1; 34.4; 25.3%). We attributed the students who responded in this way to the low level of formation of the cognitive component of the ecological world outlook. In order to make a conclusion about the ability of students to distinguish the characteristics of an ecological worldview from real people, we conducted a series of discussions and dialogues, the topics of which included the questions: “What does it mean to be an eco-friendly person?” ". We asked students to analyze the speech of leading politicians (for example, I. Khakamada and V. Zhirinovskiy, V. Putin and others).

It turned out that even those students who knew the content of the notion “ecological outlook” (gave correct answers in the questionnaire) could not apply this knowledge in determining the presence of the ecological outlook of specific people, writers, famous politicians. For example, when asked to provide arguments in defense of the thesis: V. Putin has an ecological outlook, the students listed: “he is an authoritative president,” “sees flaws,” “knows a lot,” “accurately formulates a thought,” that is, could not bring convincing arguments that support or refute their thesis (80.5; 78.8; 82.6%) (average level).

The ability to lead a discussion (validity, reasoning, the ability to “hold the goal”, bringing examples to confirm the thoughts from works of literature, films, etc.) was demonstrated only by a small number of students (13.1; 15.4; 9.2%) (high). The rest of the students entered the discussion sporadically, without giving any arguments to defend their statements, or did not participate in such forms of work at all (6.4; 5.8; 8.2%) (low level).

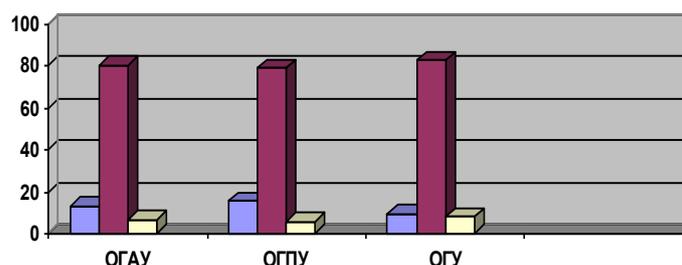


Figure 5. The distribution of the levels of the activity component of the ecological worldview's formation.

A meaningful analysis of the data obtained makes it possible to determine the overall level of formation of the students' ecological outlook as unacceptably low, this becomes an obstacle in carrying out the modernization of classes with high school students; students are not aware of the importance of ecological outlook in the formation of the individual.

Thus, during the ascertaining experiment, we found that the problem of research is relevant in teaching practice and its solution requires analyzing the state of the problem, finding effective ways and means to overcome it, identifying a set of pedagogical conditions for effectively shaping the students' environmental outlook in the framework of the educational process of the university.

The development of a structural-functional model for the formation of a student's ecological outlook in an educational environment of a higher education institution became the final stage of a theoretical analysis of the problem of forming an ecological outlook for a student in an educational environment of a higher education institution. Our model became the support that helped fix the baseline, develop the missing or weakly manifested components of the ecological worldview.

The main conceptual provisions of the model are represented by a set of approaches (systemic, cultural, competence, personality-activity) and principles that allow combining cognitive, emotional-value, activity criteria as criteria of the student's environmental ideological competence:

1. The principle of nature conformance requires, in the formation of the student's ecological worldview, the accounting for bio-, socio-, and psychogenic factors of personality development, a scientific understanding of the relationship between natural and socio-cultural processes;
2. The principle of axiologization determines the selection of the content of noospheric ideas, environmental requirements for the student as a person of culture;
3. The principle of multiculturalism provides an opportunity for self-realization of the participants of the educational process in their environmental communication.

The substantive basis of the structural-functional model of the student's ecological worldview is represented by the leading noospheric ideas underlying the ecological worldview, and is developed on the basis of the state standard of higher professional education in accordance with the requirements of its greening. The procedural basis is provided by phasing in the organization of environmental activities, the correction of its goals, content, technologies, and results at each of the stages.

The result contains the result of the student's ecological outlook formation process, which occurs when a student moves from one level of formation to another while moving from assimilating the system of ecological knowledge, noospheric ideas to the formation of ecological views, beliefs, positions - to environmental activities, by assessing on the basis of uniform criteria. The predicted result (due to the introduction of a set of pedagogical conditions) is a student with an ecological outlook and capable of environmental activities in the "I - World - Nature - Other" system.

The formative experiment allowed us to identify pedagogical conditions that ensure the effective implementation of the structural-functional model. The enrichment of the content of the educational process of the university through the ideas of the noospheric scientific paradigm, as the first pedagogical condition, required the creation of variable, flexible training modules: "The Essence of an Ecological Worldview", "Connection of the Universe with a Man", "Noosphere Ideas". Each student dealt not only with ready ecological knowledge, but with information from which new ecological knowledge must also be obtained.

The basic part of the educational program for the formation of the student's ecological outlook had practically identical content for the students of the experimental and control groups and was developed on the basis of the program "Foreign Language for Students of Agricultural Universities". A significant difference was in the variable part, which was reflected in the educational and methodological manual "Ecological English" (1-2 courses), presented as a copyright. It included ecological texts and dialogues: What is Ecology? Ecological Problems; Environmental Protection; Save the Earth! Pollution; Water Pollution; Our Earth is our Home; Natural Disasters; tests, materials for environmental discussions and dialogues. The way of understanding, understanding by a student of the content of an ecological world outlook went through worldview universals - categories that most commonly characterize the world (man, nature, space, time, civilization, information, globalization).

Experimental work revealed that it was productive to rethink the ecological-ideological aspects of a foreign language based on noospheric ideas that are explicitly and implicitly existing in society today. We noted the formation of a nature-oriented picture of the world and worldviews in a student. In the speeches of students at seminars, conferences, discussions it was noted: "The ecological world outlook makes a person active, responsible for the world, nature and man" (Dmitry S.). The topics of course and theses, the protection of environmental projects in a foreign language have been enriched.

The creation of the ecological multicultural educational environment of the university as a second pedagogical condition encouraged the student to show a subjective position and to make free choices in the content, methods and forms of environmental activity, to expand the space of interaction with the world of ecological culture. The ecological multicultural educational environment is not a given, it arises on a certain personality-activity potential: it appears, deepens and expands on the basis of the formation of multicultural and ecological needs of "self-composure", "self-organization" (V.I. Slobodchikov) of a teacher and student. The main mechanisms for the implementation of the second condition were: interdisciplinary conferences, colloquiums, and scientific seminars. Personal and professional self-determination of the student was taking place, connected with the motives of inclusion in the activities of public environmental organizations, the international organization Greenpeace and others.

As our experiment showed, students' teaching and research activities ensured the formation of all components of the ecological world outlook. Encouraging interdisciplinary research projects with an environmental focus, carrying out activities for the presentation and protection of graduation projects on environmental issues, including in a foreign language, contributed to the awareness of fundamental noospheric ideas, self-determination of the student in the system "I - World - Nature - Other", adequate assessment of their own and others' environmental activities.

Conflict of Interest

None declared.

Конфликт интересов

Не указан.

References

1. Алексашина И. Ю. Глобальное образование как путь становления нравственного императива 21 века// Глобальное образование: проблемы и решения: Дайджест/ Авт-сост. И. Ю. Алексашина. - СПб.: СпецЛит, 2002.
2. Бганда-Церера В. Р. Мировоззренческая парадигма экологического образования // Ученые записки. Московский государственный социологический университет. 1998. № 3.
3. Бiryukova Н. А. Проблемы формирования экологического сознания // Педагогика. 2004. № 10. – С. 35.
4. Буровский А. М. Философские основы экологического образования// Философия экологического образования./ Под ред. И. К. Лисеева. - М.: Прогресс традиция, 2001.
5. Мамедов Н. М. Основания экологического образования// Философия экологического образования./ Под ред. И. К. Лисеева. - М.: Прогресс традиция, 2001.

References in English

1. Aleksashina I. YU. Global'noye obrazovaniye kak put' stanovleniya npravstvennogo imperativa 21 veka [Global education as the path to the formation of the moral imperative of the 21st century] // Global'noye obrazovaniye: problemy i resheniya: Daydzhest [Global Education: Problems and Solutions: Digest]/ Avt-sost. I. YU. Aleksashina. - SPb.: SpetsLit, 2002. [in Russian]
2. Bganda-Tserera V. R. Mirovozzrencheskaya paradigma ekologicheskogo obrazovaniya [The World Outlook Paradigm of Environmental Education] // Uchenyye zapiski. Moskovskiy gosudarstvennyy sotsiologicheskiy universitet. 1998. № 3. [in Russian]
3. Biryukova N. A. Problemy formirovaniya ekologicheskogo soznaniya [Problems of formation of ecological consciousness] // N. A. Biryukova // Pedagogy. 2004. № 10. - p. 35.[in Russian]
4. Burovskiy A. M. Filosofskiye osnovy ekologicheskogo obrazovaniya [Philosophical foundations of environmental education]// Filosofiya ekologicheskogo obrazovaniya./ Ed. IK Liseev. - M .: Progress tradition, 2001. [in Russian]
5. Mamedov N. M. Osnovaniya ekologicheskogo obrazovaniya [Foundations of environmental education]// Filosofiya ekologicheskogo obrazovaniya./ Ed. IK Liseev. - M .: Progress tradition, 2001.[in Russian]