

Forming students' environmental culture: modern educational approaches and technologies

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ABSTRACT

Humans are primarily biosocial creatures. Aside all significant social characteristics and advantages, the main feature of a human being is being a part of a vast self-sufficient system. What differs our species from others is the ability to live in the environment while creating our own culture and living conditions in it through mental and physical labor. With the emergence of innovations, the environment inhabited by humanity undergoes global changes. The speed and volume of technogenic factors on the environment are impossible to assess considering a wide range of factors including the multiplicative effect of the negative impact products of modern civilization have on the environment. Therefore, the science of ecology has gained special relevance. To realize the dream of many generations to create a befitting environment for humans and ensure the harmony between humanity and nature come into life, every person must have ecological knowledge. Ecology can allow evaluating the scale of the impact of human life on the environment. The study of ecology cannot be limited to the scientific community level, every person has to be aware of basic problems and has an image of how they should personally lead their life to contribute to the harmonious development of society to the maximum extent. Thus, the present work examines the problem of environmental education of people including the use of modern developments like information and telecommunication technology. The formation of environmental consciousness is necessary to make the global problems not appear as only mythical threats.

Keywords: Tourism, Ecology, Environmental culture, Upbringing, Technology, IT

Introduction

The modern conditions and features of the development of human society raise the need for constructive and adequate organization of activities to develop the most harmonious interaction between a person and the environment. The formation of an objective image of the world, the view of nature as an integral system, and the reinforcement of cultural values are only several of the long list of primary objectives on

the path of creating the most humane and enlightened person possible. Ecology should not be viewed exclusively as a natural science as it is closely intertwined with all humanitarian, social, and other spheres of knowledge. Since the environment is a part of the human world, the attitude towards it forms along with people's basic cultural and value orientations. This aspect of socio-natural relations includes the subject of social ecology as a branch of sociological discipline.

Aside from the general theoretic view of the meaning of environmental culture, there are certain specifics in examining the problems of environmental culture depending on the level of the study. Every society has its order and unique characteristics of the natural environment and territory have to search for its approach to the study of ecological problems [1]. Thus, every person has to have a clear understanding of the possible consequences of irrational use of resources and barbaric attitudes toward nature. In this study, we primarily focus on personal value orientations since ecological welfare and nature's

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benefits have to be of no less importance to the individual than, for instance, social status and financial prosperity.

Materials and Methods

The object of the study is the environmental culture of student youth in modern Russian society. The subject of the study is the factors of forming environmental culture in youth through tourism activities. The goal of the study is to identify the main characteristics of environmental culture in Russian youth.

The following hypotheses are proposed as part of the study:

1. The level of environmental culture of modern Russian youth is low due to the lack of ecological knowledge.
2. The formation of environmental culture in youth is primarily influenced by the education and upbringing process.

Following the goal of the study, the following objectives have to be met:

1. To examine the sociological approach to the study of the environmental culture of society;
2. To examine the issue of forming environmental consciousness in the process of socialization in modern society;
3. To provide a characteristic of the main directions in the development of scientific thought in the field of ecologization of the individual from the point of the value approach;
4. To identify the factors affecting the formation of environmental culture;
5. To assess the level of environmental culture of youth on the example of university students.

The theoretical foundation of the study is formed by M. Weber's conception of social action. In his works, Weber argues the existence of "the ideal type" primarily focused on value orientations in their way of thinking. Consciousness and meaningfulness of action are the foundation of Weber's ideas. Ascribing meaning to action helps a person in relating themselves to the world. The meaning ascribed to an object is linked to a person's perception and their inner system of perception. In this theory, ecological knowledge is defined as a value that has to guide cognitive activity. Thus, both ecological knowledge and the main attitudes of ecology have to be viewed specifically as an object of goal-setting and be semantically linked to their objective meanings. In other words, the issues of ecology have to take their rightful place in the process of forming personal value orientations [2].

In its development, Weber's theory merges with the theory of "noosphere orientation" that proposes the development of ideological and spiritual thinking, the way of which to some extent will correspond to the way of interaction between society and nature determining the nature of the social activity. Noospheric thinking presupposes the formation of a "noospheric intelligence" involving the ideal projection of one's actions and their practical realization.

The empirical basis of the study is formed by the study of the environmental culture of students presented below, as well as research data provided by the Russian Public Opinion Research Center (VTsIOM).

Results and Discussion

The main problematic aspects of environmental upbringing

Since the process of environmental upbringing typically takes place at the stages of the educational process, it should be examined based on the example of both secondary and higher education.

Considering school education, the main goal of pedagogical activity aimed at upbringing is instilling values that include the range of skills, abilities, strivings, and behavioral sets that sufficiently correspond to scientific developments necessary for every person in the modern social conditions [3].

The same can be applied to higher education. The incorporation of ecology in educational programs has to go beyond highly specialized areas such as geoecology and the like and spread to all specialties [4].

The main problem area in the current state of environmental education is the need to change the approach deployed in it since social development is transforming and improving the ecological state of the environment is becoming the main objective. In these conditions, it is necessary to develop and reinforce people's striving to reevaluate the existing spheres of life and prioritize the preservation of the biosphere. The preceding anthropocentric paradigm defined nature as the sphere of human activity and, accordingly, prioritized humans in it. As for the question of morality, it did not extend to the "society-nature" system [5-7].

As time has passed and the importance of ecology in global societal development has increased, more attention has been given to environmental education. In 1992, the UN conference identified the main objectives of environmental education in the framework of "Sustainable Development":

1. Education on all matters relating to the environment.
2. Incorporating environmental concepts into educational programs.
3. Inclusion of governing bodies in research activities.
4. Development of graduate programs.
5. Encouraging educational institutions in any environmental activity.
6. Working with the media, etc.

Thus, the issue of environmental education is a global issue and is addressed at the level of the world community.

Considering the current state of affairs, it should be noted that the existing system of environmental education is insufficient. School subjects such as Life Safety Basics and Ecology do not adequately promote environmental awareness and the study of the environmental paradigm. One of the important problems is

also the strict division of academic disciplines into humanities, technical, natural, etc. Ecology incorporates both natural science knowledge and the knowledge of economics, society, and technology [8, 9]. This condition interferes with the most complete understanding of this science. In the educational process, the study of ecology should not be limited to the transfer of knowledge in the "teacher-student" system, it is necessary to have a comprehensive, full vision of this science which subsequently contributes to the formation of noosphere consciousness to which human society should aspire [10].

Concluding on the essence of environmental upbringing and education, we should note that the issues of ecology draw increasing attention in the educational process. Learning programs are being developed and introduced both in higher and secondary education. The need for the formation of environmental consciousness strengthens its position and is recognized by society at the global level. At the same time, it is becoming increasingly obvious that the goals originally set for environmental education remain unattained. What can currently be recognized as the result of environmental education is only the spread of environmental knowledge among the population, the improvement of people's general awareness about environmental issues but not a qualitative change in environmental awareness or the formation of a new environmental worldview [1].

Thus, environmental culture is typically defined as a system of values and norms adopted in society regarding the interaction with the environment. At the same time, within different approaches, this definition also includes other components reflecting the cultural perception of the human environment in greater detail. The development of environmental culture in society is due to the need to revise the views on the consumption of resources and the attitude toward nature as a treasure. The process of its formation is recognized at the state level, and the measures taken in this vein are also regulated by public authorities.

Regarding the system of environmental education, its main goal is to form the necessary knowledge and skills in the field of ecology. This system also focuses on creating conditions for each student to strive both to understand the system of interrelations between nature and society and to see the value of nature in itself. The process of environmental education continues not only at the stages of school or university education. Throughout life, a person receives knowledge, skills, and abilities that shape them as a person capable of coexisting organically in the current natural and social environment without violating the principles ensuring its preservation. However, at the present stage of development of human society, the inclusion of environmental knowledge in the general education system is lacking. This fact gives rise to the problems associated with the absence of both the necessary knowledge and the desire to contribute to the preservation of the natural environment [11]. That is why the environmental education system has to be further developed and improved.

Determining the level of environmental culture in student youth including through the means of modern information and telecommunication technologies

Studies on the topic of ecology were conducted in the Russian Federation by the Russian Public Opinion Research Center (VTsIOM). Based on the conducted study, the following conclusions can be drawn:

Firstly, students demonstrate significant interest in environmental issues. Most of them touch upon this topic in one way or another and are interested in various information. A very small share of respondents does not mention this topic at all. Accordingly, we can conclude that modern students do not turn a blind eye to the present environmental situation in the country. They show interest in environmental issues, read the news, and discuss them. The main source of such information is the Internet. Special educational programs, lectures, and discussions are less likely to inform young people about environmental issues. Information presented on the World Wide Web is the most accessible to students, as this is the most common way of obtaining information in the modern world.

Secondly, the study shows that environmental education activities are practically absent from school education apart from subbotniks. The exception is the Olympiads and class hours which are held quite rarely. That is, there is little inclusion of environmental programs in school education which ultimately hinders the development of environmental values at the early stages of socialization.

As for the environmental events held at many universities, half of the students either do not know about them or are convinced that they are not present at all. Only a few take part in such events.

Regarding the severity of the environmental situation in the country, a little less than half of the surveyed students share the following viewpoint: they understand the seriousness of the present situation in the country and the world and consider it possible to be resolved through a joint effort. Therefore, we can conclude that if students are sufficiently informed about and involved in programs aimed at improving the environment, they can make a significant contribution to this sort of activity.

A small proportion of students make attempts to do their part to improve the environmental situation, but almost all students are willing to start taking action to the best of their ability.

Environmental education and outreach activities among the population are underestimated by students as they do not see the real results of such activities. This can primarily be explained by propaganda among the population being a generally rare phenomenon. In addition, those involved in this process do not always have authority in the eyes of students.

Practical recommendations based on the study results

Based on the analysis of students' opinions on the ecological sphere of society, it is necessary to propose possible ways of resolving the existing problems.

The most apparent problem is the critically low awareness of the environmental activities carried out in educational institutions. Since students' opinions on this matter are divided, we cannot conclude that such activities are not implemented by universities. They are indeed held but most students are typically simply not informed about them. In addition, students' involvement in such actions is also very weak. It is necessary to develop a campaign to spread information about all environmental events at the university and to attract students to participate in such events. Such activities should include active advocacy among students which can be carried out by both teachers and students themselves. Moreover, a special committee responsible for conducting environmental actions and, most importantly, conveying information about them to students could be created. Such a direction of socially responsible tourism as ecological and volunteer tourism has lately been gaining popularity among the youth. The number of organizations developing and organizing volunteer tour projects is growing [12].

The second problem lies in the fact that despite being aware of the need to do something to improve the ecological situation, students do not take any action. Consequently, it is necessary to develop and communicate to students a set of measures that can personally encourage people to improve the situation. Although students are independent, the university provides them with training and supervises the skills acquired in the course of it. Therefore, the incorporation of environmental disciplines in the educational program is a universal solution to the problem of students' awareness in this sphere. Moreover, the state can task specially trained people with spreading awareness among the population and conduct activities involving advocacy aimed at young people and students in particular [13, 14].

The third problem is the fact that students underestimate both advocacy on environmental issues and general awareness of the issue. Students actively use the Internet and other open sources of information but are less positive about the same information delivered through intermediaries. It is enough to take measures to change people's attitudes towards the way they receive information, thus, to avoid reducing the flow of information, all materials must be made freely available on any media. However, if the so-called third person has enough authority, the information conveyed by them will be perceived as more trustworthy. Accordingly, advocacy among the population should be carried out by individuals who are sufficiently competent in the matter and have authority among the target population group.

Development of children's physical and social activity through involvement in tourism activities

The environmental upbringing of youth deploys various forms, methods, techniques, and means of education and upbringing work. However, the traditional and even non-traditional forms and methods of work are not enough to get people interested in environmental issues.

Tourism activities are used in environmental education as an auxiliary tool. On the one hand, they allow satisfying young people's need for active activity in the framework of environmental education, on the other hand, they promote interest in travel [5, 14-18].

Tourism activities incorporated in the process of environmental education from an early age assist the teacher in solving the following problems.

- Talking with the teacher during a halting walk, students clarify their ideas about living and nonliving nature and the relationship between humans and nature.
- By taking part in hiking trips, students broaden their knowledge in natural sciences and learn to interact with natural objects in practice.
- The incorporation of hiking activities in the educational process allows students to get acquainted with the equipment of an ecological tourist teaching them to pack everything they need for a hike.
- Completing various tasks included in the hike plan, students improve their motor skills and health [14].

Ecological and hiking walks have their own educational and pedagogical objectives. A hiking trip has its objective – the exploration of the natural and social environment. Observations during hikes have another important feature: they awaken students' in certain sciences and the desire to choose a corresponding profession in the future. The transition from familiarization with the environment to studying it is an important link in the complex process of exploring the world and finding one's place in it. It is important to conduct classes in which students learn the simplest topographic signs, common designations of wind directions (north, south, etc.), and how to work with the map. Working with a topographic map, students recognize various objects on it and develop orientation skills.

Tourism and ecology as the elements of the educational system have many advantages:

- First, tourism as a means of physical upbringing allows diversifying children's motor activity around the year and making full use of cyclic outdoor movements which promote general endurance correlating with children's health indicators and improve basic physical characteristics of a child. The inclusion of hiking in the main forms of physical education in the educational institution promotes health and more effective development of children's psychomotor abilities, as well as improves the quality of relationships.
- Second, tourism specifically has inherent communicative functions which can make a significant contribution to solving the problems of moral education given purposeful pedagogical impact.

- Third, the means of tourism have great educational potential and can contribute to greater effectiveness and quality of knowledge assimilation following the program requirements, as well as improve students' cognitive abilities. The use of tourism in educational institutions opens up new opportunities for improving the educational process effectiveness which allows not only improving students' physical fitness and cognitive abilities but also preparing them for the next stage of life [19].

Thus, interaction with nature develops curiosity, expands the horizons, facilitates interest in work, and awakens a sense of beauty. Daily contact with nature is of great importance for fostering a love for the native land and the development of speech. As a result, a young person's worldview expands and deepens, their vocabulary enriches, and the ability to articulate their impressions from what they have seen advances [20].

Conclusion

It is impossible to overestimate the significance of ecology as a science in the modern world. Since the ecological situation in Russia and across the planet worsens with time, it is necessary to take immediate action to stabilize and improve it. This process has to involve every person. People's attitudes towards resource consumption and the principle of interaction with nature cannot be changed through prohibitions or punishments alone. There is a need to manage this process at the value level. In the future perspective, the environment will be subject to a higher risk of irrational consumerist attitude if society does not perceive it as a treasure. Since young people are the foundation for the development of human civilization, it is this social group that should be the primary focus of environmental policy [21]. Environmental education is a process of continuous educational activities aimed at developing the necessary skills and knowledge in a person both to implement the rational use of natural resources and to take measures to improve the existing environmental situation. Environmental education is a way to form a new type of people ready to take responsibility for all actions concerning the natural environment and make all possible efforts to eliminate the existing problems. The main objectives of environmental education are to create the need for and interest in the study of nature, the desire for its preservation, and participation in practical activities. The process of education in the field of ecology should not be strictly confined to the framework of school or university education, this process continues throughout life as forms the environmental culture of the individual [10, 22].

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