

Perspectives of Environmental Education and the Formation of Ecological Culture Among School Children

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ABSTRACT The democratic transformation in the Russian Federation is accompanied by the formation of a qualitatively new structure which is an updated civil society. This approach, of course, requires significant adjustments in the relationship between man and his environment. This study focuses on key aspects of environmental education and the formation of ecological culture among schoolchildren. It must be recognized that in most educational organizations, the solution to the problems of educating ecological culture still remains at the level of declarations. To solve the given problem, the researchers used a complex of theoretical and empirical methods. It was concluded that education makes sense as learning for life, and not for a set of “knowledge, skills.” The presence of a socially active nature in various methods of environmental education allows the researchers to steadily form an active civic position and implement the main tasks of the civic upbringing of students.

INTRODUCTION

In the current realities of the first quarter of the 21st century, the need for civic education is still manifested exclusively at a conceptual level and is limited to a formal reflection in general education programs of civic education and upbringing (Ponomareva 2001; Kester et al. 2019).

The analysis and generalization of special literature on the issues under discussion allows the researchers to talk about the existence of a wide discussion on the problems of upbringing students’ ecological culture in pedagogical science. In particular, such areas of a thematic solu-

tion to this problem should be noted as the development of methodological foundations and conditions for the implementation of environmental education; socio-philosophical approach to the interaction between the environment and society; approaches to creating a system of continuous environmental education (Gubareva and Kovalenko 2018).

Undoubtedly, the processes of an ecological culture formation among secondary school students, and primarily in adolescents, are complex and multidimensional, because they often depend on the age-specific characteristics and capabilities developed at students. These processes are focused on the formation of scientific, cognitive, emotional, and moral and other relationships to nature because only ecologically educated people are able to see the presence of environmental problems and deal with them (Dadvand et al. 2017; Yotsukura et al. 2019).

At the same time, the analysis of the most popular works in the field of research allows the

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researchers to state that a number of ecological education problems of students (adolescents), as well as some aspects of the formation of their ecological culture in the theory of pedagogy, are not sufficiently disclosed.

This situation requires an active search and scientific justification of the organizational and pedagogical conditions concerning the educational environment of a school in order to properly educate environmental culture in adolescents. In these conditions, the need for the systematic development of theoretical and methodological provisions and practical recommendations for improving the level of environmental education, which is the basis of students' personal upbringing, becomes especially urgent (Kalinin 1996; Nogteva 2001; Danilov-Danilyan 2009).

Objectives of the Study

1. To study the key aspects of environmental education and the strategic perspectives of it
2. To form ecological culture among school children with regard to the environmental education

METHODOLOGY

The general scientific principles of philosophical analysis on the unity of the general, the special, and the single, activities as a way of self-realization of a person in work and communication, synergetic and axiological approaches to the study of the pedagogical process were made the methodological basis of the study; The concept of a personality-oriented approach to the organization of an educational approach was also included in the scope of instruments for research.

Theories of an interactive approach to the design of an educational approach; concepts of environmental education and student learning, etc. can be noted among the theoretical sources of research.

To solve the given problems, the researchers used a complex of theoretical and empirical methods, such as: deduction and induction; analysis and synthesis; observation, questionnaire, testing, ranking, grouping, detailing, and generalization.

RESULTS AND DISCUSSION

A feature of the last decades of the world community is its focus on the formation of environmental education and environmental culture.

The growing interest in the problems of the development of environmental education, the formation of environmental awareness, environmental culture and other environmental issues is due to globalization accompanied by permanent environmental crises and their depressing consequences, as well as the urgent need to find effective ways out of this situation (Kester et al. 2019).

However, due to the nature of the technocratic thinking of most people, environmental crises are perceived by society as something external and inevitable in relation to humanity, but not as what is enclosed in them. Of course, this actualizes the problems of the formation of ecological consciousness, ecological culture and the systemic worldview of individuals and puts forward environmental education and upbringing as a priority (Gordeeva 2004; Argunova 2010; Kamakin 2013).

The scale of the problems of our time, their threat to the life of human civilization and the surrounding biosphere cause an urgent need for the organization of environmental education in the emerging environmentally-oriented information society. Undoubtedly, the popularization of environmental education will make it possible to assimilate such environmental and ethical norms, values and professional skills and lifestyles that are necessary for sustainable development.

It is already obvious to everyone that in the conditions of the modern stage of development, mankind needs a new model for the formation of public life in order to adequately resist the growing global environmental crisis. For this it is necessary, among other things, to get rid of the immaturity inherent in the ecological values of the population by providing a systematic environmental education, to immediately begin radical and comprehensive transformations in all spheres of public life (Carlson 1984; Alexandrovich et al. 2017). In other words, the researchers are talking about ensuring the decolonization of society.

In the researchers' opinion, the success of solving complex environmental problems is more

dependent on the organization of environmental education and upbringing of the younger generation. Indeed, it is necessary from an early age, from school, to build strong beliefs and knowledge among young people that natural resources are limited and not renewable, which requires a minimum and rational consumption of materials and energy, etc., which, ultimately, should develop by them an ecological worldview. This approach will allow one to be responsible for nature, to understand the laws of nature, to observe the moral and legal principles of nature management, etc.

All of the above allows the researchers to argue that environmental education allows one to assimilate environmental, ethical values and develop professional skills and an appropriate lifestyle necessary to ensure the sustainable development of a citizen (De Dominicis et al. 2017).

In the specialized literature, there are many interpretations of the “environmental education” concept. So, in the work of Kulnevich (2010), it is proposed to understand under this concept the processes of training, personal upbringing and development, which form a responsible attitude of an individual to the environment.

In Kalinin (1996), the processes of education and upbringing are emphasized to solve socio-environmental problems with concern for future generations.

An interesting approach was proposed by Slastenin and Isaev (1997), who believes that environmental education is not only part of education but a completely new awareness, meaning and purpose of the modern educational process, as a result of which it is a unique means of preserving and developing humanity and the continuation of human civilization.

Other approaches can be noted. In general, all of them are united by the integration of environmental consciousness and behaviour, which are in harmony with the environment. It is noteworthy that the success of the formation of environmental knowledge among schoolchildren depends, among other things, from what they see in everyday life also... Hence, the researchers must assume that in order to achieve the desired pedagogical effectiveness of environmental education, it is necessary to achieve strict compliance of environmental education with the

psychological process, the laws that control the development of the growing bodies of teenagers. The researchers are talking about the need to comply with the natural capacity principle, which implies the mandatory upbringing of students in unity and harmony with the biosphere.

In the context of the growing environmental crisis, environmental education and the formation of ecological culture is undoubtedly one of the most important social tasks and is associated with the need to immediately address the problem of harmonizing the interconnections in the “man-nature-society” system.

Undoubtedly, this is one of the most difficult tasks today, because environmental problems in the conditions of market relations have caused a significant moral crisis and a drop in the level of environmental responsibility.

Experts note that modern textbooks on nature preservation are aimed at considering the technical and economic parameters of natural resources, but not at nature (Mironov 2011; Grúðová et al. 2019). This suggests once again that the vector of environmental education is system-determined and dependent on many socio-economic and psychological-pedagogical factors and conditions, the most important of which are the following:

- The level of public interest in maintaining an environmentally friendly living environment;
- Public awareness of the need for training the population in environmental literacy;
- Psychological patterns of mental activity of students;
- Psychological, age and cognitive characteristics of adolescents;
- General condition and development trends of a comprehensive school and society as a whole (Zverev and Saleeva 1991; Jiménez et al. 2017).

Hence, the content of environmental education manifests itself in the form of a dynamic, constantly evolving phenomenon that has enduring socio-pedagogical significance.

Directly, the essence of environmental education, its content, students learn in everyday activities in the form of independent work with the accumulation of relevant factual material; disclosure of the essence of the investigated environmental problems; development of his creative inclinations, etc. (Abdulkhanova-Slavskaya

1980; Honorato-Zimmer et al. 2019). The researchers use the following algorithm for this purpose:

At the first stage, it is necessary to use special techniques that promote adolescents to obtain environmental value orientations, interests and needs.

At the second stage, when forming an environmental problem, it is advisable to use a set of methods that stimulate the independent activity of adolescents. At this stage, it is very effective to use those tasks that allow the researchers to identify contradictions in the interaction between society and nature, stimulate educational discussions, introduce the researchers to real, local environmental problems, and teach how to find possible solutions.

At the third stage, there is a theoretical justification of the methods for harmonizing the interaction between society and nature; the structural elements of environmental knowledge are being formed there.

At the fourth stage, the skills of a responsible attitude to the environment are formed through the development of environmental awareness. Here it is necessary to teach adolescents to understand and comply with the moral and legal principles of nature management, to promote ideas for its harmonization, to form the ability to manage their physical and mental state.

It is indisputable that in order to achieve the goals of environmental education, it is necessary to use a complex of educational, upbringing and developing innovations that allow us:

- To form a system of knowledge about environmental problems and possible solutions;
- To form motives, needs and habits of environmentally appropriate behaviour and activities, and healthy lifestyles;
- To develop a system of intellectual and practical skills for studying the state of the environment and developing ways to improve it.

Speaking with the use of school vocabulary, to overcome the environmental crisis, it is necessary, first of all, to restore order in the heads of students.

It is clear that only environmental education is capable of forming the ecological culture of a person and environmental responsibility. This situation allows the researchers to assume that if teenagers are ecologically educated, then in

their future life, the norms and rules of environmental behaviour will become a solid foundation and rigid beliefs. But this requires a lot of daily work because most parents and even individual teachers still have a simplified, metaphysical understanding of the problems of interaction between society and nature.

For example, when designing the content of civic education of adolescents on the basis of environmental education, mistakes very often occur, manifested in a fuzzy setting of goals and objectives; insufficient consideration of the influence of external factors; poor analysis and diagnosis of students' value orientations; formal monitoring and controlling, etc. (Misakov 2007; Bagapova et al. 2017; Corrêa et al. 2018).

In this work, the researchers proceed from the fact that pedagogical activity should be aimed at the formation of universal, personal, civic and economic values. Hence, the ultimate goal of teaching is to educate every teenager as a future personality.

It seems to us that environmental education in modern realities has already grown from one subject, which forms only natural scientific knowledge in the field of biological ecology. Today, a multidisciplinary model is needed, involving the use of inter-subject content and thereby aimed at creating a multifaceted attitude of students to the natural, social and other environments, with a predominance of the environmental aspect.

It should be specially noted that in modern (advanced) textbooks on geography, sociology, ethics, philosophy, and others, environmental problems have become an integral part of their content. In the researchers' opinion, this is another confirmation that the knowledge of environmental problems is a serious issue.

Of course, people involved in the formation of a new environmental awareness should have the psychological and pedagogical approaches of environmental education.

An exceptional feature of pedagogical approaches in the education and upbringing of a child is their focus not only on the object, subject world but also on the development of the conditions for self-realization of a person in a developing information space.

To build a strategic plan for the formation of citizenship by environmental education tools in

specialized literature, there are many different pedagogical approaches that, in general, can be classified into two groups:

- One group of teachers focus on personality development (axiological, personality-oriented, personality-activity approaches);
- Representatives of the second group are focused on the structurally-meaningful construction of pedagogical processes and phenomena (synergetic, interactive, and other approaches).

In any case, they all share the fact that education makes sense as learning for life, and not for a set of “knowledge, skills.” The presence of a socially active nature in various methods of environmental education allows the researchers to steadily form an active civic position and implement the main tasks of the civic upbringing of students.

CONCLUSION

The researchers’ theoretical and methodological studies on the issues of environmental upbringing and the formation of ecological culture in adolescents in the educational milieu conditions allowed the researchers to draw a number of conclusions and suggestions.

1. Globalization and the growing threats of the environmental crisis are forcing to intensify the search for promising areas, organizational and managerial forms and mechanisms for the upbringing of environmental responsibility of students.

2. The ecological upbringing of individuals is a multifaceted and multi-aspect problem requiring complex coverage by philosophers, psychologists, educators, biologists, and sociologists. Another feature of environmental education is its humanistic focus, which requires a comprehensive and systematic review of all components of environmental education, providing for their advanced development in comparison with the community needs development.

3. In the context of the growing environmental crisis, environmental upbringing and the formation of ecological culture are undoubtedly some of the most important tasks of society and are associated with the need to immediately address the problem of harmonizing the interconnections in the “man-nature-society” system.

4. Based on the study of the structural components of the educational environment, which are a combination of spatial-subject environment, pedagogical tools and conditions, social environment, etc. The researchers have developed an algorithm for disclosing the content of environmental education, consisting of targeted, motivational, diagnostic, substantive and effective blocks.

RECOMMENDATIONS

This article investigates key aspects of environmental education and the formation of ecological culture of schoolchildren, more scientific studies similar to the subject of the current study on societies other than those covered by the current study and other age groups using different methods and different subjects, can be conducted in order to benefit from its results and generalize its recommendations.

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