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ENVIRONMENTAL AND LEGAL LITERACY AND CULTURE OF
STUDENTS IN CONDITIONS OF EDUCATION

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Abstract

Environmental safety is an important part of national security, potential of wellbeing and further development. Environmental culture and environmental literacy are considered critical in preserving the nature, maintaining ecological stability and wellbeing of society. The paper considers theoretical and practical aspects of the level of ecological and legal knowledge and skills, as well as ecological and legal culture of different groups of educational community in one of the constituent entities of the Russian Federation – the Chuvash Republic. The study was aimed to analyze the ecological and legal education within the educational community, level of ecological culture at different stages of education (preschool education, school, colleges, higher educational institutions), as well as parents and teachers. The authors come to a conclusion on the need to integrate ecological and legal disciplines in the formation of ecological culture and ecologically competent behavior of future citizens. The obtained data will allow developing further measures to optimize educational and teaching processes, create ecologically reasonable behavior and lifestyle within the standards of ecological imperative, ecological legislation and according to the concept of sustainable development.

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Keywords: Legal literacy; environmental and legal culture, students.



1. Introduction

Environmental safety is an important part of national security, potential of wellbeing and further development. According to Fundamentals of the State Policy of the Russian Federation in the Field of Sustainable Development until 2030, high quality of life and health of population as well as national security can only be guaranteed provided the natural systems are preserved and the corresponding quality of the environment is maintained (Fundamentals ..., 2012).

Any public relations are governed by legal standards and hence the law always remains a critical element of interrelations both within the 'person-society' and 'person-environment' system. Despite a fairly large number of laws and regulations in the field of environmental protection and rational environmental management, there is no political willpower of states regarding sustainable and efficient implementation of such actions. A failure to implement the most critical regulations in this field has detrimental effect on environmental conditions and health conditions of an individual and the entire population (Dimitriyev, 2011).

Unfortunately, the present society is characterized by such negative features as disregard of the environment resulting in irrational use of natural resources, pollution with household and production wastes, unwillingness to adhere to environmental requirements, statutes of environmental legislation, as well as legal nihilism. In this regard the younger generation shall urgently develop skills of ecologically responsible attitude to the environment based on compliance with the requirements of ecological law and ecological imperative.

Environmental, social and economic aspects of human life form the basis for education for the benefit of sustainable development. The objective of education is to develop competences, which will make it possible to make decisions regarding the improvement of the quality of human life and society without threatening the environmental future of the planet (Moiseyeva & Peresunko, 2011). The comprehensive role of environmental education is considered by scientists as the strategic tendency towards modernization of all educational systems for the benefit of sustainable development (Mamedov, 2015).

Moiseyev (2010) indicated that the new civilization shall start not with the new economy but with the new scientific knowledge and new educational programs. Education for sustainable development implies high quality, which in the conditions of civil society may be achieved due to public administration and supervision, as well as public support and control. Certain individuals and public organizations shall act as indicators of educational quality and its compliance to requirements of sustainable development. A.D. Ursul, T.A. Ursul (2016) stated that these days the society faces the prevalence of the environmental component of education, which acts as the basis of a new system model of education for the benefit of sustainable development. The solution of environmental problems directly depends on the level of environmental literacy and public education (Anisimov, 2014; Levchenko, 2016; Yasvin, 2007).

The relevance of environmental and legal culture of students is also caused by changes in education and upbringing inspired by the competence-based approach.

Due to the aforesaid it is urgent to understand and further study the development of environmental and legal literacy and culture of students.

2. Problem Statement

In conditions of an adverse environmental situation in many territories, solution of pressing problems of environmental pollution and nature protection remains important in general. Proceeding from the axiom concerning potential negativity of any human activity, an important issue is formation of environmental culture of every person. It is necessary to pay closer attention to the issues of formation of environmentally literate behavior in early training periods of a child. At the same time, it is necessary to proceed from the principles of systemacy and complexity of environmental education, from the need to form environmental competence based on knowledge and from compliance with the requirements of environmental law and environmental legislation, as well as participation of teachers and parents in this process.

3. Research Questions

In the present paper, research questions of studying the level of environmental and legal knowledge, participation in activities concerning protection of nature and careful attitude to it, peculiarities of behavior in nature, way of life, a level of motivation for environmentally rational activity of students, as well as teachers and parents, as the most important participants in the educational and nurturing process, are put. The following questions are posed in the work:

- What is the level of environmental and legal literacy as a part of the common ecological culture of students?
- Do the participants in the educational process know requirements of environmental laws and legal norms regulating environment protection?
- What is the attitude of the students to the natural environment and to what extent are they ready for a way of life that requires compliance with the requirements of the environmental imperative and environmental law?
- What measures are necessary to prepare for further professional activity of students based on sustainable skills of environmentally correct behavior and way of life?

4. Purpose of the Study

The study was conducted with a view to analyze the environmental and legal education of participants in the educational process, a level of environmental culture among students at different stages of education, as well as among parents and teachers. The obtained data will allow developing further measures to optimize the educational and nurturing process, formation of environmentally sound behavior and a way of life being within the norms of the environmental imperative, environmental legislation and in accordance with the concept of sustainable development.

5. Research Methods

The study of environmental and legal literacy, as well as the level of ecological culture of students was conducted in 8 kindergartens, 36 schools, 2 colleges and 4 higher education institutions of the Chuvash

Republic. In total 2,690 people took part in the survey. The age of respondents: students aged 6-23, teachers and parents aged 22-65 years old.

In order to reach the objective of the study the authors developed a special questionnaire to assess the environmental and legal knowledge, skills, to detect the level of motivation to ecologically relevant activity, to solve specific ecological objectives according to requirements of modern environmental law and principles of sustainable development, to study the level of knowledge on environmental protection and careful attitude to nature and health. The questions were compiled taking into account the age of students, requirements of the Federal State Educational Standard and educational programs. The obtained results were analyzed via statistical methods.

6. Findings

Initially, the study covered a survey of senior pupils, students, teachers and parents on the most important problems of the present. The majority highlighted social, economic and moral issues: low salary, violence, crime, unemployment, public indifference, alcoholism and drug addiction, mortality rate due to oncological diseases. These followed political issues (threat of war, terrorism, corruption), and only then – environmental problems (waste, air pollution, waters and soils, reduction of biodiversity on the planet). The obtained data indicate low interest of students and working population in environmental issues.

Since at present there is no uniform definition of environmental literacy, the authors suggest to understand the environmental literacy as an acquisition and a possibility to use certain knowledge, abilities, skills in life and for the development of the mankind. In modern conditions it serves the factor enabling a person to understand a variety of questions.

A test survey defining the level of basic knowledge in ecology and other environmental issues was used to assess the environmental literacy. The questions were split into several groups: basic environmental concepts, environmental scientists, modern environmental problems, main laws and regulations in the field of environmental management and environmental safety, liability for breaching the environmental legislation.

Figure 1 shows the results of the study regarding the level of environmental literacy.

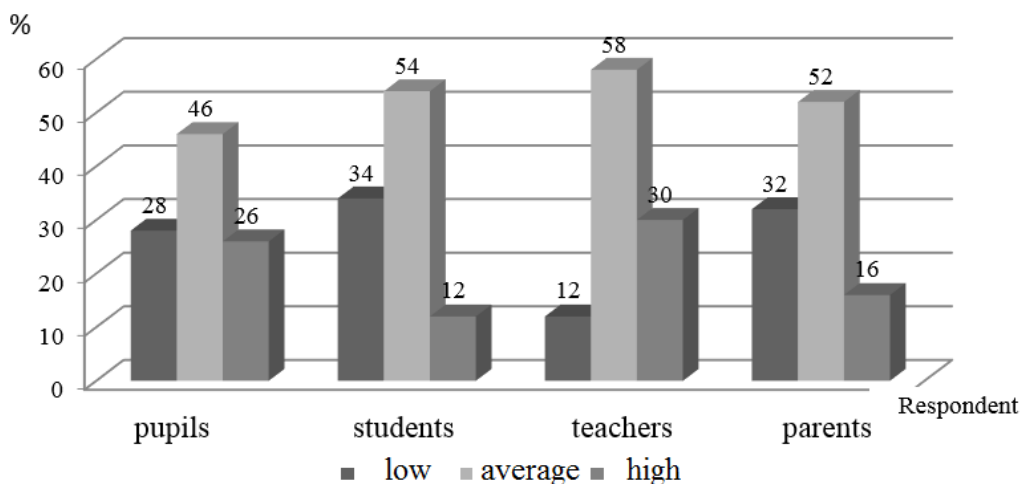


Figure 01. Distribution of pupils, students, teachers, parents by the level of environmental literacy

All groups of respondents demonstrated the middle level of environmental literacy, but at the same time this indicator differs for school pupils, students and parents ($p \leq 0.05$). The teachers' level of environmental literacy is higher compared to other groups of respondents. The proportion of people with low level of environmental literacy is rather high. This indicator is higher in schools, but it decreases in the transition to higher stage of education (colleges and universities). All respondents mentioned global environmental problems but not their reasons unfortunately.

During the assessment of students' knowledge on environmental legislation it was clear that the majority of respondents are not aware of the basic laws and concepts of the Russian environmental legislation (Fig. 2). Thus, 30% of school pupils, 39% of students, 43% of teachers and tutors, 32% of parents are aware of environmental legislation.

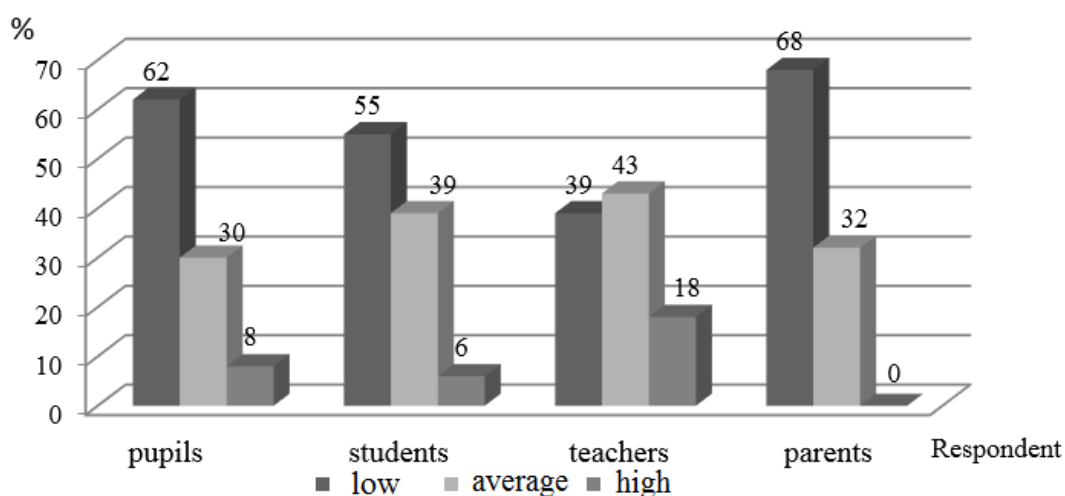


Figure 02. Knowledge of laws regulating environmental management, protection and safety among pupils, students, teachers, parents

The environmental culture is understood as the interaction between a person and the environment. It includes the attitude to nature, to yourself and other people.

Questionnaires and tests were used to assess the knowledge and ecologically reasonable behavior (towards nature, in society).

The analysis of the level of environmental culture allows concluding that students (school pupils and students) estimate it as high, while the majority of adults consider it medium. The expert assessment revealed the prevalence of low level of environmental culture in all groups.

The study also included the comparative analysis of the level of environmental and legal education and culture of three groups of school pupils, which demonstrated different levels of readiness for such lifestyle making them to comply with requirements of ecological imperative and environmental law (Tab. 1). The compared indicator was determined through questionnaires of the given persons.

Table 01. The study of the level of environmental and legal education and culture school pupils, which demonstrated different levels of readiness for such lifestyle making them to comply with requirements of ecological imperative and environmental law, %

Criterion	Group		
	I	II	III
Know basics of environmental concept	32	68	100
Know environmental scientists	8	54	94
Know environmental factors	26	92.5	100
Know modern environmental problems	54	95	100
Know main laws and regulations regarding nature management and environmental safety	5	36	92
Know liability for violating the environmental legislation	48	72	78
Consider the level of their knowledge sufficient for nature preservation and correct behavior in modern environmental conditions	68	75	95
Consider the level of environmental culture high	88	78	98

Note. I group – school pupils with apathy towards environmental issues, II group – school pupils with active civic position, III group – participants of municipal and regional stages of the All-Russian Environmental Competition.

The analysis allows confirming that approximately half of school pupils have insufficient knowledge and skills related to application of environmental laws and legal standards to solve practical tasks. The participants of the Environmental Competition have the high level of environmental culture, knowledge of legal principles to ensure environmental safety, nature protection, standards of ecologically relevant behavior, which allows them to successfully solve the environmental problems. Pupils and students interested in natural sciences, participating in research work, volunteer movements, and environmental actions have higher level of environmental knowledge, including liability for violating the legislation in the field of environmental protection and environmental management.

Thus, the additional study of ecology increases the interest of pupils in environmental problems and issues related to nature protection for the future and forms the basis for environmental and legal competences.

92% of students understand their role in environmental protection through rational use of resources. If 89% of respondents show interest in existing environmental problems, then only 72% of them demonstrated their readiness to participate in environmental actions. Unfortunately, only 28% of pupils and students comply with environmentally friendly behavior. 67% of respondents live a healthy lifestyle. The majority of respondents do not even think about environmental liability for their actions. The anxiety level for environment conditions and modern environmental and social problems is very low.

The study also covered the subjective opinion of students with regard to environmentally correct behavior. This indicator is equal in the group of younger school pupils – 4.2 ± 0.6 points, in the group of school pupils of the 5-8th grade – 3.8 ± 0.95 points, pupils of the 9-11th grade – 3.6 ± 0.7 points, students – 3.45 ± 0.83 points. The obtained data comply with the study of the level of environmental culture of school pupils in other regions of Russia (Alekseev, 2014; Tsvetkova, 2017; Djurakulov, 2017).

The study of environmental and legal knowledge, skills and abilities of student of different educational institutions of the region allowed defining the following:

- level of knowledge in environmental factors, health, modern environmental problems, ecological and legal terms and definitions, as well as rules of conduct in emergency situations is different

for different groups of students and increases with age, socialization and personality development;

- relatively low level of knowledge in environmental and legal aspects, definitions in the field of rational environmental management and environmental protection;
- high level of knowledge and abilities in the field of health, prevention of bad habits;
- very low level of knowledge in concepts and principles of sustainable development;
- the majority of students are not able to solve environmental tasks and analyze certain ecological situations complying with environmental legislation.

Positive correlations between the studied indicators are identified ($p \leq 0.05$). At the same time the highest coefficient of correlation between the level of environmental knowledge and rules of conduct in certain environmental situations is typical for high school pupils ($r = 0.83$). Besides, there is negative correlation between the assessment of individual environmental behavior and rules of conduct in certain environmental situations in the younger group and among students ($p \leq 0.05$).

Thus, the gained environmental knowledge shall create understanding on the limits of sustainable environmental development, reasons of environmental problems, measures of life conservation on the planet.

It is important to create system concepts on biosphere and its components, problems of environmental pollution, drain of energy resources thus developing respect for the nature. Thus, concerning the question of rational use of such resources as water, electric power in family and at the place of study the pupils aged 10-23 years old answered that 75% know the rules and requirements to management of such resources, but only 27% of respondents comply with such standards.

85% of students were engaged in various environmental actions (ecological clean-up days, actions, marches, conferences, competitions, meetings, etc.). It should be noted that 46.4% of them know nothing about the existing youth ecological organizations of the republic and 49% of respondents failed to answer the question concerning the protected areas of the Chuvash Republic. Besides, the majority of school pupils and students participating in this study have no idea of children's environmental organizations of the republic.

86% of respondent do not know about new methods of household waste utilization. Only 26% of pupils and 35.5% of students noted that they participated in practical environmental studies. 86% of elementary pupils participated in actions devoted to installation of bird houses and feeders. 76.8% of students noted that while at school they participated in actions of tree planting and only 12% – in their student years. Other researchers indicate similar results (Alekseev, 2014; Tsvetkova, 2017; Islam, 2015; Djurakulov, 2017).

Almost all students see their future in environmentally friendly conditions. Thus, 72.6% of respondents are ready to participate in environmental actions.

They consider biology, natural sciences, physics, geography, and chemistry as the school subjects pertaining to develop environmental competences. 76% of students consider that school knowledge, skills and abilities in the field of ecology allow them mastering the Health and Safety discipline in colleges and universities.

High school pupils and university students note low role of Law in the development of environmental and legal literacy. The majority of them believe that they have never considered environmental safety and protection from the legal point of view.

The questions related to rational environmental management and environmental protection shall be developed at all stages of education and within all subjects. However, in high school, colleges and universities they shall be more systematized and global and result in special subject cycles or integrated courses taking into account didactic features of pedagogical interaction

7. Conclusion

Thus, the results of the study allowed revealing relatively low level of environmental and legal literacy of students in a particular region. There is a need for further development of measures aimed at sustainable active behavior of future citizens acting in compliance with requirements of ecological imperatives and environmental legislation, as well as special emphasis on the regional component related to maintaining positive ecocultural traditions of the people of the republic.

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