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Students activities organization technology in environmental communities

Технология организации деятельности студентов в экологических сообществах

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Abstract

Environmental education in modern world is becoming an essential element in the harmonious development of society, and each individual in particular. Ecological problems lead to irreversible processes that negatively affect the whole world, therefore, environmental awareness and conscious consumption must be developed already at the college age. The purpose of the article is to study the experience of organizing students' activities in environmental communities to develop an environmental culture and responsibility towards the environment. University is stated to be actively developing in the Ecological Movement field and supports the principles of the "Green" Universities Association in Russia. The article shows a part of students' survey conducted to identify the level of environmental culture development, the level of consumption awareness; and environmental awareness. The survey was organized in 2016 (before the active students' involvement in environmental activities) and in 2017 and 2018 (after the students' environmental movements development). The article considers the results of students' environmental projects. Discussions, interactive and information technologies that were actively used contributed to the students' activities improvement. Large-scale discussions

Аннотация

Экологическое образование в современном обществе становится крайне необходимым элементом гармоничного развития социума, и личности, в частности. Экологические проблемы порождают необратимые процессы, которые негативно влияют на весь мир, поэтому экологическое сознание и осознанное потребление необходимо формировать уже в студенческом возрасте. Цель статьи: изучение опыта организации деятельности студентов в экологических сообществах для формирования экологической культуры, ответственности по отношению к экологии окружающей среды. Отмечено, что университеты активно развиваются в сфере экологического движения и поддерживают принципы Ассоциации «зеленых» вузов России. В статье отражен фрагмент опроса студентов для выявления сформированности уровня экологической культуры, уровня осознанности потребления; уровня осведомленности об экологической ситуации. Опрос проводился в 2016 году (до активного включения студентов в деятельность, непосредственно связанную с экологией окружающей среды) и в 2017 и 2018 годах (с развитием студенческих экологических движений). В статье рассмотрены результаты экологических проектов студентов, в процессе подготовки

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were held among all participants to solve common issues. Partially, the discussions were organized with the help of electronic means. As part of the university environmental activities, students made projects that were subsequently presented at the university competition. The analysis of the environmental projects presentations conducted over several years has shown that the number of projects has increased significantly and has reached the regional and national level. The research found the environmental indicators growth from 2016 to 2018.

Key Words: environmental communities, environmental culture, environmental education, ecology, technology.

которых активно использовались дискуссионные, интерактивные, информационные технологии, способствовавшие улучшению деятельности студентов. Для обсуждения общих вопросов проводились масштабные дискуссии среди всех участников. Частично они были перенесены в электронную сферу. В рамках экологической деятельности вуза студенты выполняли проекты, которые впоследствии защищались ими на вузовском конкурсе. Полученные результаты анализа защиты проектов за несколько лет, позволяют говорить о том, что количество проектов, вышедших на региональный и Всероссийский уровень экологических проектов значительно возросло. Исследование позволило установить рост экологических показателей с 2016 по 2018 год.

Ключевые слова: компетенции, опорный конспект, профессиональное образование, самостоятельная работа, студенты.

Introduction

Significant environmental problems attracted many countries governments attention, including Russia (Raven et al., 2017). 2017 was declared the year of ecology. This contributed to the public involvement in resolving this issue (Rakhimbaeva et al., 2019). The most active layer of the population is students; therefore the maximum development of activities in this area is carried out precisely in the Russian Federation universities (Nikishina et al., 2017). Despite the fact that the environmental issue has been developed for a long time – it is still not fully resolved (Chirva et al., 2018). Environmental education is a process carried out as part of the higher education institutions educational activities with the help of various environmental communities (Vaganova et al., 2019), developing environmental knowledge (Denysenko et al., 2018), skills, deep awareness of the global environmental situation (Nikonova et al., 2019a) in your country and in your city, shaping experience, values and competencies based on respect for the environment and nature (Garnevska et al., 2018). Ecological communities play an important part in this direction (Ihnatenko et al., 2018). Due to ecological communities, the following important tasks are being solved: saving natural resources (regardless of whether they are in short supply or not); predicting the consequences of people's activities both at the local and global levels; studying existing problems and possible solutions. In this regard (Pichugina et al., 2019), it is important to consider the concept of environmental education, which is inextricably linked with environmental education (Markova et al., 2018). This is the development of an ecological thinking style, views on nature and a person's place in it (Smirnova et al., 2019), the development of environmental problems awareness and people's behavior in relation to these problems (Kamenez et al., 2019). Higher educational institutions are actively joining various environmental movements (Vaskovskaya et al., 2018), attracting students to participate in these organizations activities (Klinkov et al., 2019). One of the largest environmental associations involving Russian students in its work is "green" Universities Association in Russia (this is an environmental national youth association of student teams' representatives) (Koshechko et al., 2018).

Among the main tasks of the Association are students' environmental education, students' healthy ecological lifestyle development (Ivanova et al., 2019), students' interaction development (Kobernyk et al., 2018). Nizhny Novgorod State Pedagogical University is one of the "green" universities in Russia and implements the principles of this Association. Students participate in various public events: exhibitions, festivals, fairs, conferences (Nikonova et al., 2019b). Due to this, active volunteers teams are formed, students seek to join the Association in order to make their

personal contribution to the development of environmental movements (Prokhorova et al., 2018). Teachers should also have knowledge in this area to educate university students and attract them to volunteer activities (Pliushch et al., 2018). Therefore, the Association holds online scientific conferences, which pay attention to important environmental issues and education (Sedykh et al., 2019). After such conferences, teachers can act as experts and academic leaders (Vaganova et al., 2019a).

Theoretical background

Environmental issues have attracted many scientists attention for a long time. Only a person with an ecological culture is able to build a harmonious system of interaction with the environment, to form the life safety basis (Markova et al., 2019). This is noted in the works of R.Kh. Gilmeeva, G.G. Gabdullina, V.Sh. Maslennikova, P.N. Osipova, G.V. Plekhanova, F.Sh. Salitova. The need for informed consumption, the development of a positive attitude to the world is noted in the works of V.I. Panova, S.L. Rubinstein, A.P. Sidelkovsky, P. Florensky. The importance of environmental awareness, environmental culture is visible in the works of T.A. Nikolaeva, I.S. Kona, A.S. Asmolova, E.V. Saiko. Many authors note that the most important structural component of environmental culture is environmental experience and environmental behavior, formed under the influence of environmental propaganda (Vaganova et al., 2019). Ecological behavior, according to I.V. Astrakhantseva (Astrakhantseva et al., 2016), is formed in the process of continuous environmental education. M.D. Zaripova (Zaripova et al., 2014) also sees wide opportunities for the formation of environmental behavior, the formation of environmental consciousness in continuous environmental education and emphasizes this in her works.

Methodology

In 2016, an anonymous survey was conducted among Minin University students to check the formation of three indicators: the level of environmental culture, the level of consumption awareness, the level of environmental situation awareness. 350 people were selected at random. The survey method showed that students: did not have a formed idea of the environmental situation in the world, the country and the city, many were not interested in this issue, did not seek to resolve it and were not concerned about the situation. Consumption awareness was practically absent. The university advent in the environmental movement and promotional activities on environmental protection changed the situation for the better. In 2017, a sharp leap was observed in the field of responsible attitude to the environment. Students, as part of the university educational activities, were engaged in the environmental projects development, and prepared independently videos to attract public attention to environmental problems. They were involved in interactive technologies and group training. Discussions were held in social networks on the topics “Ecology in the country”, “Let's help animals of the Nizhny Novgorod region”, “Make consumption responsible”.

Students participated in scientific conferences on environmental issues; many students were awarded with diplomas for their activity and their contribution to the environmental movement development. The survey was also conducted in 2018. By 2018, students had taken responsibility for the environment restoration, had joined various environmental movements and had not just supported them, but put forward their own ideas to solve many issues. Nowadays, a positive attitude to joining environmental movements, a conscious attitude to the environmental situation, a desire to take a personal part in solving environmental problems both at the regional, national and the world levels have been revealed. Some students express a desire to participate in international conferences and internships.

Results and discussion

Kozma Minin Nizhny Novgorod State Pedagogical University is actively developing in the field of environmental movement and supports the principles of the "green" universities Association in Russia. For several years, the university has hosted the "green" Minin University student Association, whose main activity is aimed at students’ and teachers’ environmental education in the field of responsible waste materials handling. Environmental education and environmental responsibility theme began to develop at the university long time ago. Since 2016, students at Minin University began to take part in eco-quests, conducted as part of the “Share with Us” program, which is dedicated to separate waste collection at the university. It is worth noting that students actively support the World Wildlife Fund, raise funds to support endangered species, restore the natural environment, and support Greenpeace to attract authorities and society to preserve nature. In 2016, 11 activists joined the environmental movement of Minin University.

In 2017, this number increased significantly and aroused 70 people's interest. This was facilitated not only by the university environmental movement propaganda, but also by the Russian Federation government activities. 2017 was declared the year of ecology, and all activities were aimed at educating society in the field of the ecological environment state. Since 2016, students have developed environmental projects, participated in scientific conferences and other public events dedicated to ecology. As part of the university's environmental activities, students carried out projects that were presented by them at the university competition "The Best Project to Attract Public Attention to Environmental Issues". Interactive technologies were actively used in this process. To discuss common issues, large-scale discussions were held among all participants. Partially, they were organized with the help of electronic means, using the Moodle electronic webinar tool. In these conditions, each student could leave a comment. Thus, the general course of action was determined (Vaganova et al., 2019c). Discussion technologies were an integral part of project implementation, as controversial issues arose and that required each project participant opinion (Vaganova et al., 2019d). Students used multimedia technologies, developed presentations using projectors, laptops, and interactive whiteboards (Vaganova et al., 2019e). The status of the competition has increased significantly, and the projects have been presented at the regional and national levels. Figure 1 shows the number of projects that have been presented at the regional and national environmental projects competitions outside the university.

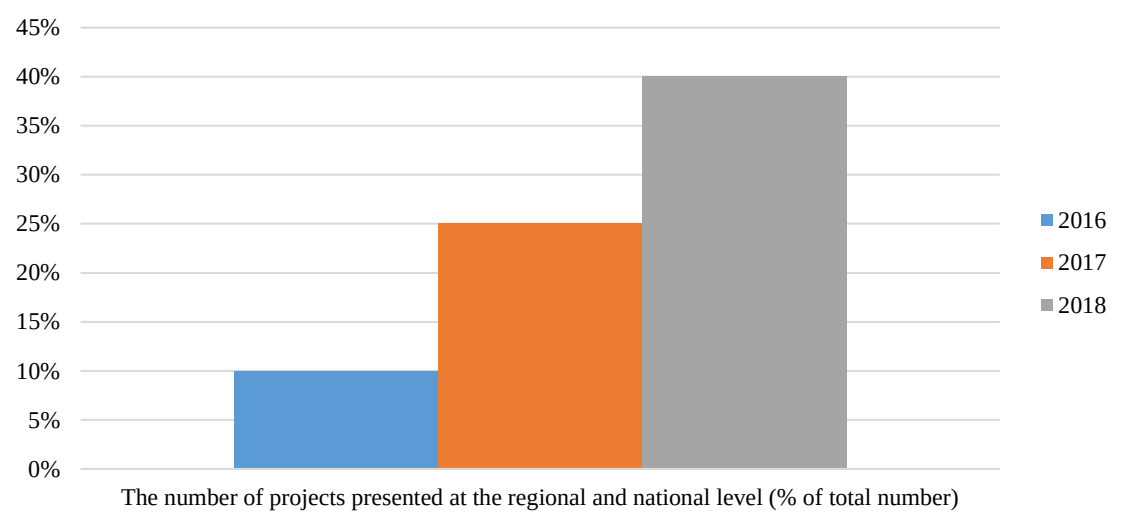

Fig. 1. Analysis of students' project activities for the period from 2016 to 2018 (author's study)

We can say that the number of projects that went beyond the framework of the university competition has increased significantly. This means that students' readiness to this activity has become higher. The active educational technology use in projects work plays an important part. In 2016, an anonymous survey was conducted among Minin University students for the first time, its part is presented in Table 1. 350 people selected at random took part in the survey. This survey checked three indicators formation: environmental culture level; consumption awareness level; environmental awareness. Subsequently, this survey was conducted in 2017 and in 2018.

Table 1.
Environmental survey of Kozma Minin University students.

Are you worried about environmental destruction?	Yes /No
Are you a member of any environmental organization?	Yes/No
What measures do you take to protect the environment?	- I hand over waste paper and household waste to a collection point; - I participate in various environmental actions; - I try not to use plastic bags
Do you take part in city community cleaning day?	Yes/No
How do you find out about the environmental situation in the city / country / world?	- I am not interested in this issue; - Educational activities of the university; - MEDIA
Would you like to take part in solving environmental problems at the national level?	Yes/No

Table 2.
The results of the Kozma Minin university students' environmental survey in 2016, 2017, 2018 respectively.

Question	The answers	2016	2017	2018
Are you worried about environmental destruction?	Yes	36%	58%	70%
	No	64%	42%	30%
Are you a member of any environmental organization?	Yes	5%	35%	60%
	No	95%	65%	40%
What measures do you take to protect the environment?		20%	25%	25%
	- I hand over waste paper and household waste to a collection point;	10%	50%	50%
	- I participate in various environmental actions; - try not to use plastic bags	20%	20%	25
	- do not take actions	50%	5%	0 %%
Do you take part in city community cleaning days?	Yes	20%	40%	75%
	Not	80%	60%	25%
How do you find out about the environmental situation in the city / country / world?	- I am not interested in this issue;	60%	30%	5%
	- educational activities of the university;	25%	40%	50%
	- MEDIA	15%	30%	45%
Would you like to take part in solving environmental problems at the national level?	Yes	10%	30%	35%
	Not	90%	70%	65%

For three years, the survey results have become much better. While in 2016, 36% of respondents were concerned about environmental destruction, by 2018, 70% of students had this concern. Thus, a responsible attitude towards nature has increased. Awareness of consumption has increased due to various promotional actions and projects carried out by students. Students deliver waste paper and household waste to collection points, participate in various environmental campaigns, try not to use plastic bags, participate in urban community cleaning days and take many other measures. It is not included in the table given in this article, but this information can be found in the extended survey. It is also worth noting that the number of students who want to take part in solving environmental problems at the national level (and even at the world level). Figure 2 shows the formation of indicators in 2016, 2017, 2018.

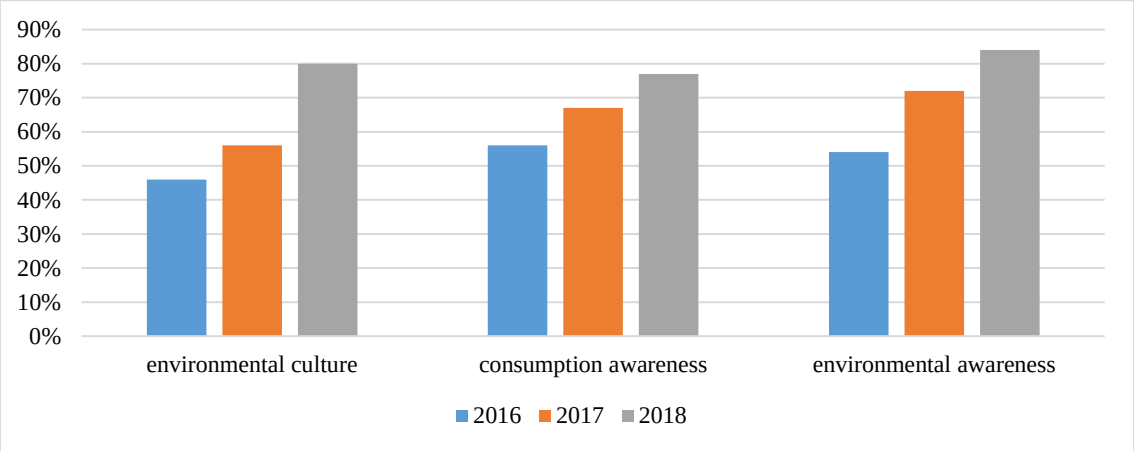

Fig. 2. Environmental indicators formation: environmental culture level, consumption awareness, environmental awareness (in 2016, 2017, 2018) (author's study)

In addition, it should be noted that the level of university educational activity has increased over time. Therefore, students mentioned high awareness. According to the data provided by our research we can say that the university students' environmental activities helped to increase the results of the ecological indicators formation which we highlighted.

Conclusion

During the research conducted, we carried out several students' surveys, noted their activity and identified the number of student projects that students could present at various regional and national competitions. In 2016, students' work in this field was not so active and various technologies were not used so often. However, technologies introduction helped the university students to prepare their projects. Students used interactive technologies, discussion techniques, project work techniques and group training. Due to these techniques, students' work has become more structured and active. Since 2016, the percentage of projects that was presented outside the university (at regional and national level) has increased to 40%. During the period from 2016 to 2018, the results of the students' survey became much better. While in 2016, 36% of respondents were concerned about environmental destruction, by 2018, 70% of students had this concern. Thus, a responsible attitude towards the nature has increased. Due to various promotional actions and projects carried out by students, consumption awareness has increased. 60% of the students asked the question: "Are you a member of any environmental organization?" answered positively. In addition, students take waste paper and household waste to collection points, participate in various environmental campaigns, try not to use plastic bags, participate in city community cleaning days and take many other actions that are not included in the table given in this article, but are included in an extended survey. It is also worth noting that the number of students wishing to take part in solving environmental problems at the national level has increased. Some students gave additional comments and said that they would like to take part in international environmental campaigns. We checked the formation of three indicators: the ecological culture level, the consumption awareness and the environmental situation awareness. And it was found that each indicator formation increased by 2018.

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