

THE DEVELOPMENT OF ECOLOGICAL AWARENESS IN THE REPUBLIC OF SERBIA

VUJIČIĆ Sladjana¹, COGOLJEVIĆ Maja², NIKITOVIĆ Zorana³

¹ Faculty of Business Economy and Entrepreneurship, Belgrade (SERBIA)

² Faculty of Business Economy and Entrepreneurship, Belgrade (SERBIA)

³ Faculty of Business Economy and Entrepreneurship, Belgrade (SERBIA)

Emails: sladjana.vujicic@vspep.edu.rs; maja.cogoljevic@vspep.edu.rs; zorana.nikitovic@vspep.edu.rs

JEL: Q56

DOI: 10.5937/intrev2202059V

UDK: 316.644:502/504

502.17

COBISS.SR-ID 71619081

ABSTRACT

The present time is characterized on the one hand, by a wealth of material goods and a high level of technological development, and on the other hand, by the destruction of nature and the environment. Not often, man is deprived of pure nature, clean water and air. Today we can firmly state that if nature defines our existence and our relationship with it in general, the development of ecological awareness can help change our relationship with nature, and promote more responsible behavior towards it.

This paper analyzes the concept and elements of ecological awareness, ecological news factors, the importance of ecological awareness. The research that is presented was conducted in several cities in the Republic of Serbia, by filling in a survey of 10 questions, in the period from April to May 2021. Based on completely random sampling, 105 participants from the territory of several cities in the Republic of Serbia (Kragujevac, Niš, Belgrade, Vranje and Loznica) were selected.

Keywords: ecological awareness, the environment, education

INTRODUCTION

In the era of technological revolution, transition and overall globalization, changes are happening at breakneck speed [17]. Ecological awareness influences the creation of a certain way of life which takes from nature only as much as necessary to provide for basic human needs without disturbing the environmental balance. Raising ecological awareness results in the acceptance and taking on ecological and social responsibility [1]. Bulatović [2] defines ecological awareness as an awareness of the environment, which includes the interpretations, behavior, motives, desires and expectations regarding our natural environment. Ecological awareness is a historical category, because it occurs as a result of disturbing the ecological balance in nature which we call an ecological crisis. As the ecological crisis grows, ecological awareness should also increase. Therefore, ecological awareness consists not only of knowledge regarding the relationship between nature and society, and disruption of the ecological balance, but also the knowledge and readiness of people to engage in the protection of nature and therefore be responsible to future generations [3]. Ecological consciousness is closely related to ecological culture and includes all the acquired knowledge and habits, the adopted values and beliefs, the enforcement of norms regarding what is quality and health in a natural and social environment, and what is not, how health and nature are preserved, what threatens them and how the awareness and quality of life of people can be improved in existing conditions.

Knowledge related to ecological awareness involves:

- knowledge of the limits of nature which man is an integral part of;
- knowledge of the necessity of abolishing the dominance of man over nature and establishing a dynamic balance between natural and social systems;
- awareness of the global character of the ecological crisis;
- awareness of possible solutions for the ecological crisis;
- awareness of the need for a global social development strategy in all its dimensions (educational, political, cultural, industrial, economic) and
- awareness of the existence of social forces that can implement reform, which is why ecological consciousness has several dimensions (theoretical or scientific, values, social, historical, political and subjective) [4].

The basic elements of ecological awareness are:

- ecological knowledge related to the limits of nature and its resources, knowledge of the natural systems that must be harmonized with the needs of the social system, knowledge of the causes which created the ecological crisis, as well as knowledge of concrete forms of disturbing the natural equilibrium;
- evaluation of the ecological situation dependent on the system of the values of the society or social group, which means that there are different opinions in society regarding ecological issues;
- ecological behavior of individuals or groups regarding ecological issues and their actions to solve problems that depend not only on the level of ecological knowledge, but also their personal character, human needs and opportunities for their satisfaction [5]

ECOLOGICAL AWARENESS FACTORS

The formation of ecological awareness of man in this day and age is influenced by a large number of factors such as:

- *Science* – if we state that the psychology of science deals with the study and behavior of man, then it can be said that the development of psychology can influence the search for causes of ecological pollution by humans. Namely, none of the existing ecological problems can be solved if there is no change in human behavior and understanding of the situation, we find ourselves in, because we will be met with the same or even greater dangers and problems. The main question that psychology should deal with is what determines how people will treat their immediate or extended living habitat and what are the factors that form or change ecological views and human behavior;
- *Political activity* – ecological problems belong to a group of issues that need to be solved by city and state authorities where the individual has a key role in the entire system. The awareness of social groups, political parties, governmental and non-governmental organizations regarding the real dangers and vulnerability and their behavior is a key factor in changing the entire ecological status of a country. Unfortunately, the situation in our country was such that certain groups and political parties dealt with this issue only on paper during elections, but not in reality. Only recently, various eco-projects have been created within government organizations and the non-governmental sector;
- *Various social factors* such as family, peers, media – *mass media* can play a major role in raising people's awareness regarding environmental protection. With its service networks and channels, various interviews, documentary films, debates or advertisements can be shown, and various scientific papers on this topic can be published which can have a positive effect on the subconscious of people. *The family* forms a necessary level of ecological awareness by raising children from an early age, which is continued by the educational system. The family is the first social environment the child encounters, along with the social habits they adopt and the attitude they build towards the environment and nature. Therefore, it depends on the family what kind of person the child will become. *Peer education* implies the establishment of eco-clubs and projects within the school, club or local community and useful activities such as: recycling packaging, making village or residential complexes greener, cleaning beaches, which also has a social effect on the locals;
- *Education* – Through the process of education, which should be organized from preschool through schooling so that at the end of the process of education a fully-formed person will have the

ecological awareness and upbringing necessary for properly maintaining a healthy relationship with the environment. Knowledge can be defined as a synthesis of information, professional and research knowledge and experiences that have practical value [14]. However, it is not enough for employees of business organizations to just possess the necessary knowledge, but also to be able to use it and share it effectively [15]. Learning and education are an important component of the lifelong learning process [12]. The open model of education has experienced explosive growth in the last decade thanks to the increasing availability of modern technologies [13].

ENVIRONMENTAL EDUCATION AS A FACTOR OF DEVELOPMENT OF ECOLOGICAL AWARENESS

The development of ecological awareness is influenced by many factors, and one of the most significant factors we can single out is education [6]. The process of education is realized by a multitude of social influences and activities performed in different circumstances of different content and forms, with the common goal of forming new capabilities and skills [7]. Knowledge can be defined as the use of information [8], as a “current mix of experience, values, information within a context and professional knowledge that provides a framework for determining and using new experiences and information [9]”.

In order for us to require and expect that humans behave in an environmentally responsible way they need to be previously educated which can be achieved by introducing ecological content at each and every level of the educational system. The educational process in the function of protection and improvement of the environment is a conscious and planned development of knowledge regarding the human environment throughout life that aims to develop awareness of the basic characteristics of the human environment, the relations within it and relations towards it, based on which man will strive to preserve and improve the environment. Ecological education should provide basic knowledge about the main ecological issues of modern society, develop a critical attitude towards the growing environmental degradation and indicate the necessity of rational use of natural resources [10].

The basic principle of ecological education is not only informing about eco-facts, but the application of knowledge that preschoolers, pupils and students acquire in the process of developing ecological awareness. The basic factor of eco-education is a school with established program content that not only provides significant opportunities for the acquisition of certain knowledge but also builds certain habits in subjects related to the environment and its protection such as e.g., The world around us, Nature and Society, Biology, Ecology, but also in ecological workshops, community service or eco-events, etc. In higher-educational institutions, studies in the field of environmental protection are represented everywhere in special departments, study majors or implemented specializations aimed at nurturing a visionary, problem-orientated, interdisciplinary, research and working approach, and how much ecological content will really be represented in elective, free and optional activities depend on the individual motivation and affinities of the teaching staff. The inclusion of experts in the field of ecological protection in the education system as lecturers, associates or consultants in educational work from an early age could improve the educational process.

Environmental education should influence man to change his attitude towards nature and change his behavior with respect for natural laws because nature is the source of all life, i.e., environmental education creates environmentally aware and active citizens who advocate the preservation of a healthy environment. In order for this to be achieved, humans must only use nature and its resources, not be their master. For this reason, different reforms must be implemented on both a local and global level in order to encourage people to take concrete action. We can see that an increasing number of multinational companies have turned to sustainable production and promotion of the same, so it can be said that ecological awareness in our country is growing and the importance of a more environmentally-friendly lifestyle for us and future generations is being accepted.

ECOLOGICAL AWARENESS IN SERBIA

Since Serbia is still a developing country that is stepping up to the more developed countries of Europe, it can be said that during the 20th century, ecological awareness did not even exist in our country or was given little attention in both education and upbringing. The emphasis was more on political, economic and social problems so the environment was neglected over several decades, which led to Serbia becoming one

of the most polluted countries in Europe.

This has encouraged ecological activists to fight for their right to a clean environment, so they have mostly influenced the development of ecological awareness and organizing various activities by mobilizing through social media networks and various protests.

With the process of EU accession beginning in the 21st century, the ecological awareness of people in Serbia has been slowly changing and growing, and some of the reasons that lead to that are the:

- increasing use of the Internet and mobile phones leading to the use of different applications regarding air quality, water or land quality;
- availability and exchange of information is more intense than before;
- media space which is provided for ecological issues and green topics;
- high technology that enables energy saving and the use of renewable resources;
- formation of regional and global organizations dealing with the issue of sustainable development and ecological protection;
- legal regulations, which especially came to the fore in the 21st century during the process of our country's accession to the European Union.

The largest eco-problems in our country arise in terms of air pollution, which is especially present in Belgrade as the capital. Numerous companies and industrial plants operate without filters, and there is the problem of excessive use of cars in city traffic. In addition, Belgrade is the only capital in Europe without wastewater filtration systems, sewage is discharged without any treatment into the Danube and Sava endangering our water resources. Over 100 municipal landfills have no conditions for controlling gas emissions and the flowing of toxic substances into the land and groundwater so all the garbage dumps do not differ much from wild landfills. Climate change is one of the most frequently mentioned negative phenomena in recent years [16]. There is also climate change that led to the average temperature being increased by 2% compared to the period before the industrial revolution with a tendency of further growth [11]. All of this has long-term consequences for the environment and the health of people and the economy as a whole, which is why it is necessary to work on the development of the ecological awareness of Serbian citizens.

RESEARCH ON THE LEVEL OF DEVELOPMENT OF ECOLOGICAL AWARENESS

In an effort to examine the level of ecological awareness in the Republic of Serbia during the period from April-May 2021, empirical research was conducted by method of survey, in which a questionnaire was used as an instrument of empirical method. The research was conducted on a random sample of 105 participants from the territory of several cities of the Republic of Serbia.

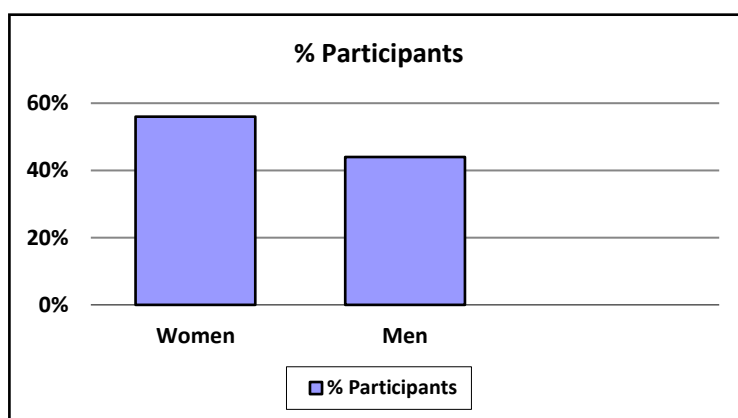


Chart 1. Structure of participants

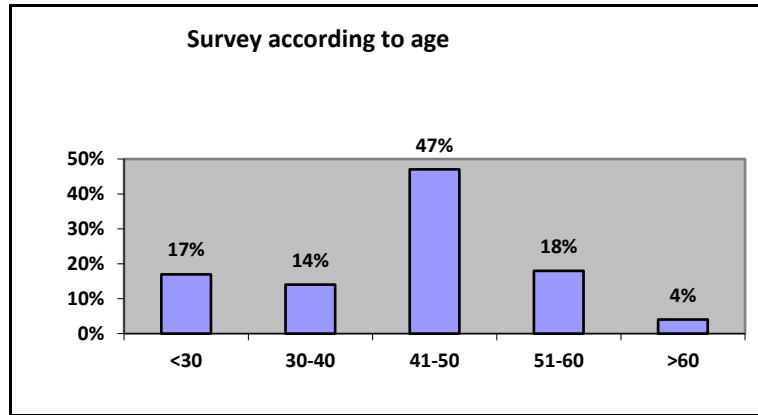


Chart 2. Survey according to age

Questions in the survey are formulated so that we could be able to analyze the development of ecological awareness of the participants in the Republic of Serbia. The questionnaire consisted of two parts:

1. Data on the participant. This part of the survey contained the answers offered, and referred to information regarding the participant.
2. The second part of the survey contained questions related to the environment and the ecological awareness of the participants.

For each question in the survey, a response was offered to the participants in order to ascertain how much they agree with the stated claim in the form of answers, “yes”, “no”, and, “I don’t know”.

When asked, “The state of the environment is constantly getting worse” 78% responded “yes”, 11% responded “no” while 11% answered “I don’t know” (Chart 3).

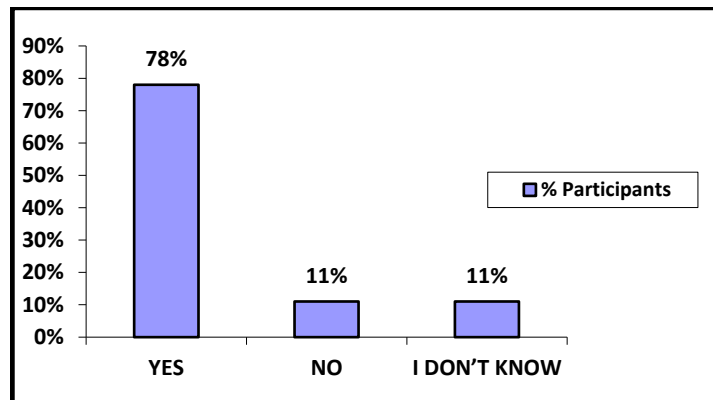


Chart 3. “The state of the environment is constantly getting worse”

When asked “You are constantly taking measures to preserve your environment” 62% of participants responded “yes”, 33% answered “no”, and 5% answered “I don’t know” (Chart 4).

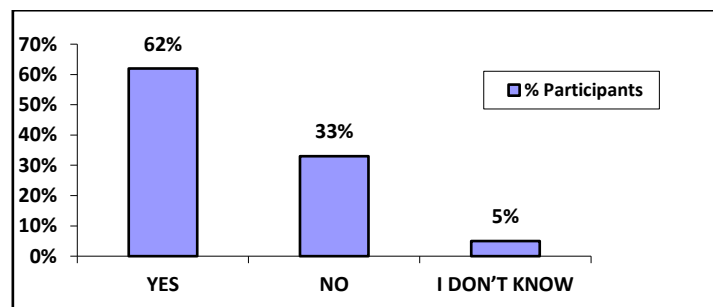


Chart 4. “You are constantly taking measures to preserve your environment”

When asked “You have enough knowledge to preserve the environment” 77% of participants responded “yes”, 5% answered “no”, while 18% answered “I don’t know” (Chart 5).

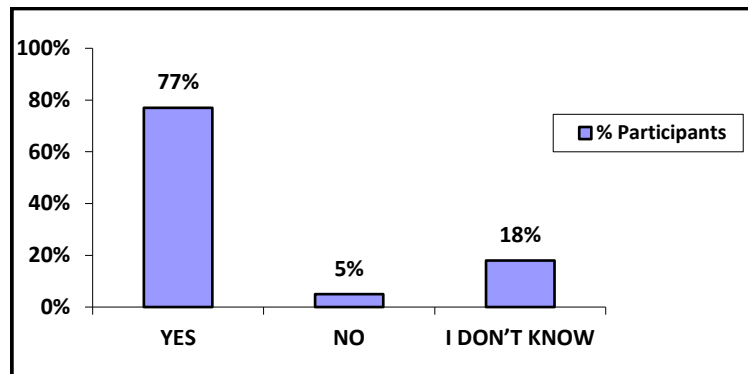


Chart 5. “You have enough knowledge to preserve the environment”

When asked “You are motivated to preserve your environment” 74% of participants responded “yes”, 10% answered “no”, 12 while 16% answered “I don’t know” (Chart 6).

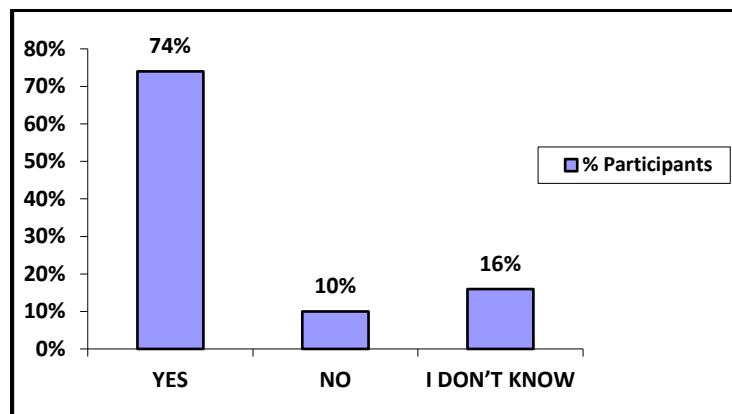


Chart 6. “You are motivated to preserve your environment”

When asked “Education is very important for the development of ecological awareness in humans” 83% of participants responded “yes”, 15% answered “no”, while 7% answered “I don’t know”, (Chart 7).

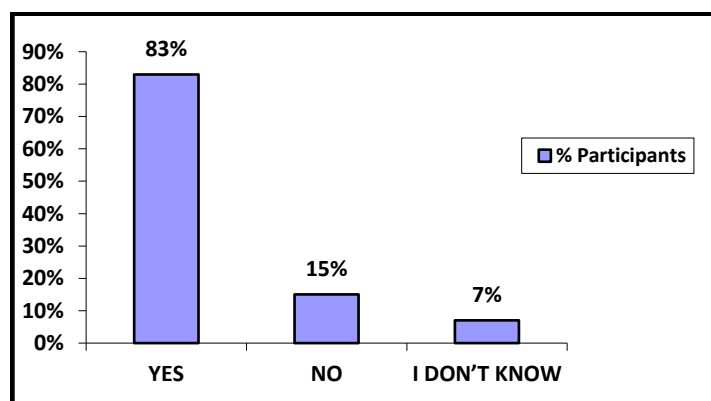


Chart 7. “Education is very important for the development of ecological awareness in humans”

When asked “Are there enough financial resources set aside to preserve the environment” 65% of participants responded “yes”, 13% answered “no”, while 22% answered “I don’t know,” (Chart 8).

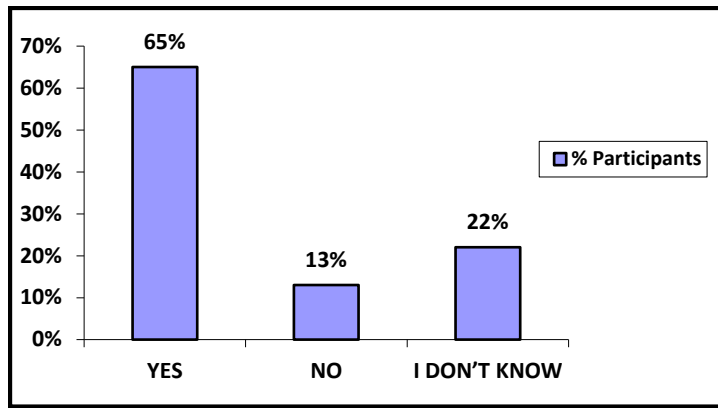


Chart 8. “Are there enough financial resources set aside to preserve the environment”

When asked “The media has a major role in developing ecological awareness”, 79% of participants responded “yes”, 7% answered “no”, while 14% answered “I don’t know” (Chart 9).

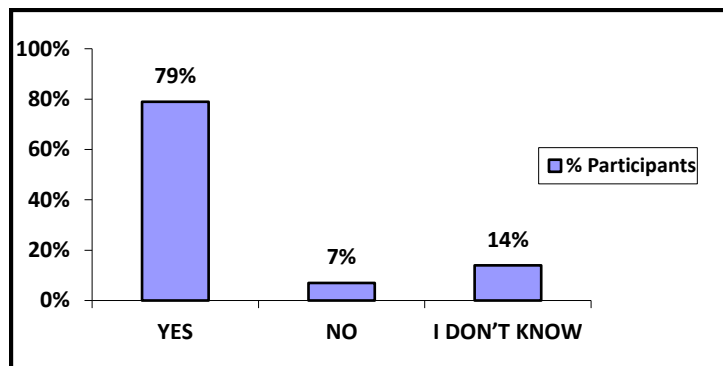


Chart 9. “The media has a major role in developing ecological awareness”

When asked “Local authorities should work on improving the ecological awareness of citizens?” 83% of participants responded “yes”, 15% answered “no”, while 7% answered “I don’t know”, (Chart 10).

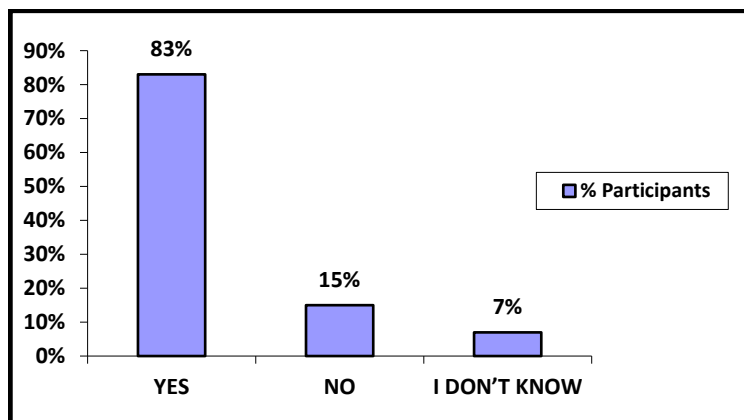


Chart 10. “Local authorities should work on improving the ecological awareness of citizens”

When asked “Does the environment you live in influence the development of ecological awareness?” 74% of participants responded “yes”, 9% answered “no”, while 17% answered “I don’t know”, (Chart 11).

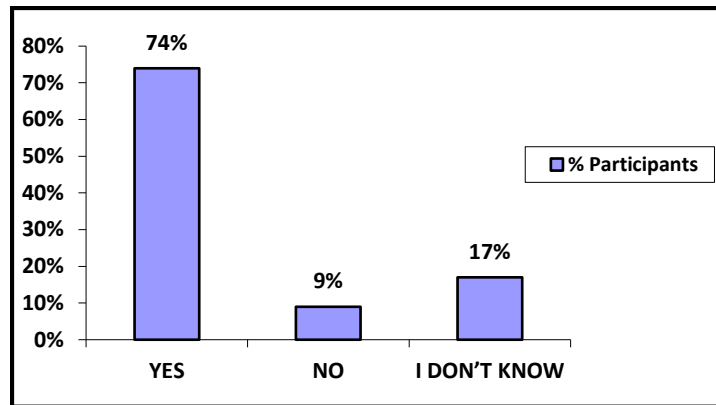


Chart 11. “Does the environment which you live in influence the development of ecological awareness?”

When asked “Legal regulations have an effect on the development of ecological awareness?” 74% of participants responded “yes”, 9% answered “no” while 17% answered “I don’t know” (Chart 12).

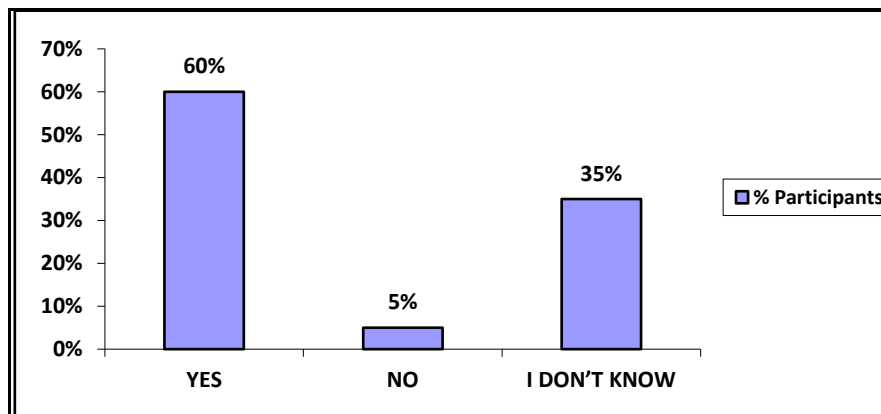


Chart 12. “Legal regulations have an effect on the development of ecological awareness?”

DISCUSSION

Based on the obtained results, it can be concluded that the participants are aware that the state of the environment is constantly deteriorating and measures are being taken to preserve the environment. The participants recognized that they possess enough knowledge to preserve the environment and that the motivation exists to preserve the environment.

Also, the participants believe that education is very important for the development of ecological awareness in humans because 83% of participants responded “yes”, 15% answered “no”, while 7% answered “I don’t know”. The survey showed that a large number of participants, i.e., 22% of participants do not know if sufficient funds are allocated in order to preserve the environment while a large number of participants recognizes the role of the media, the local government and the environment in the development of ecological awareness. Regarding legal regulations, 65% of participants believe that it affects the development of ecological awareness, while as many as 35% of participants responded that they do not know if legal regulations have an effect on the development of ecological news.

CONCLUSION

In a desire to improve the quality of life, man has selfishly and carelessly exploited natural resources disturbing the natural balance by creating a number of issues that now endanger that same quality of life for humans. As our only salvation, firstly the development of ecological awareness and culture is presented, followed by the application of acquired knowledge in various eco-activities as a combination of eco-theory and eco-practice which makes the slogan “Think Globally, Act Locally!” famous throughout the sphere of ecological activism. Plenty of symbolism can be found; even the corona virus

pandemic affects the lung tissue of humans, just like man has been destroying nature, the lungs of our planet, for centuries. Therefore, the issue of ecological responsibility and awareness needs to be developed on a global level in the education system, through learning and culture, which the conducted research has shown.

REFERENCES

- [1] Vujičić S., Nikolić R. (2021), *Ecological Management*, Faculty of Business Economics and Entrepreneurship, Belgrade.
- [2] Bulatović, A. (2011) The impact of preschool institutions and the family on the development of ecological awareness in preschool children, *Ecologica*, 18 (63): pp. 593-596, 2011.
- [3] <https://uf-pz.net/wp-content/uploads/2020/04/VASP-3-Socijalna-ekologija-7.4.2020.-predavanja.pdf> (Social ecology, LECTURES)
- [4] <https://www.docsity.com/sr/ekoloska-svest-skripta-politicke-nauke/281960/> (ecological awareness, script, political sciences)
- [5] https://www.researchgate.net/publication/311976536_EKOLOSKO_OBRAZOVANJE_I_STVARANJE_EKOLOSKE_SVIJESTI (ecological education and creating ecological awareness)
- [6] Urošević S., Riznić D., Stević Z. (2017) Ecological awareness and ecological education in environments with industrial pollution sources. *Proceedings of the International Conference on Renewable Electricity Sources – MKOIEE, [SABLE], V. 5, n. 1, pp. 29-35, Oct. 2017.* Available at:
- [7] Milosavljević G. (2002) *Projecting Training*, Faculty of Organizational Sciences, Belgrade.
- [8] Kermally, S. (2002), *Effective Knowledge Management: A Best Practice Blue Print*, West Sussex, John Willey & Sons, Ltd.
- [9] Davenport, T, and Prusak, L. (2000), *Working Knowledge, How Organizations Manage.*
- [10] Šehović, S. (2012), The role of ecological education in the protection and improvement of the environment, magazine "Danibus", Teacher Education Faculty, Belgrade, p. 16.
- [11] [https://balkangreenenergynews.com/rs/deset-koraka-koje-srbija-treba-da-preduzme-ka-putu-zelenog-razvoja/\(10 steps Serbia needs to make on the path to green development\)](https://balkangreenenergynews.com/rs/deset-koraka-koje-srbija-treba-da-preduzme-ka-putu-zelenog-razvoja/(10%20steps%20Serbia%20needs%20to%20make%20on%20the%20path%20to%20green%20development))
- [12] Šormaz G. (2020) Značaj neformalnog obrazovanja za privredu Srbije, *Trendovi u poslovanju*, vol. 8, br. 2, str. 39-48
- [13] Viduka D., Ličin B., Kraguljac V. (2021) Otvoreni model obrazovanja primenom Open Source principa, *Trendovi u poslovanju*, vol. 9, br. 1, str. 40-48.
- [14] Hebibi L., Naser R., Milićević R. (2019) Knowledge management and the importance of knowledge management for the organization's performance, *Ekonomika*, vol. 65, iss. 1, pp. 117-126.
- [15] Mitrović V. (2020) Knowledge management: A concept for achieving and maintaining competitive advantage, *Ekonomija: teorija i praksa*, vol. 13, iss. 2, pp. 13-36.
- [16] Lakićević M., Kostić M., Pantović D., Žarevac-Bošković M. (2022) Effects of climate change on sustainable tourism development in the Republic of Serbia: A case study of Vrnjačka Banja, *Ekonomika*, vol. 68, iss. 1, pp. 81-91.
- [17] Jovanovic D. (2021) The influence of manager selection on the development of production and service enterprises, *Akademski pregled*, ISSN 2637-2525, University Bijeljina.

Article history:

Received 10 July 2021

Accepted 21 August 2021