

ENVIRONMENTALLY CONSCIOUS LIFESTYLE ANALYSIS AMONG HIGH SCHOOL AND UNIVERSITY STUDENTS IN A HUNGARIAN RURAL TOWN OF THE HEVES COUNTY

András Szeberényi

Szent István University, Gödöllő, Hungary

The new generation of young people has different level of knowledge about environmental awareness and environmentally friendly behaviour. The online space can be one of the most valuable keys among others which can help to spread this kind of behaviour even more (Begley, 2008). In this study, secondary school students' awareness of environmental issues and the level of their active participation in these activities have been identified in the online space answering the question how the social media can help in the environmental awareness by the help of smartphone applications. The study was carried out in Gyöngyös city by conducting a survey on students in high school and university. The name of the high school is the Berze Nagy János Gimnázium where the total amount of 493 students were asked but only 465 questionnaires were evaluated because 28 students were not present or they filled it out in a wrong way. In the Eszterházy Károly University the total amount of 147 students were asked. The results of the study showed a high level of environmental awareness among participating students. Students also gain experiences in the field of environment from mass media and social media (Kovács, 2010).

Keywords: environmental awareness; environmentally friendly behaviour; online space; social media; high school students

Introduction

The environmental awareness has an unquestionable importance and this will be an even more serious topic year by year (Semberly and Tóth, 2004). Therefore, this subject has been chosen to be studied. This is a continuous research because asking these high school students was only the first step in this rural area. Gyöngyös, the chosen destination of research was a great choice because several projects have been available in the recent years in connection to green- and renewable energy solutions. Most of the projects were focused on solar energy and biomass

consumption, installing solar panels properly on buildings and innovative developments which can help in reducing the pollution not only in air but in ground as well.

As the Figure 1 shows, Gyöngyös can be found in the region of the Northern Hungary close to the capital city Budapest which is 75 km far from there. Its beaded area is 55 km² and it can be found in the Heves County. The current population is 29,510 and it has been continuously decreasing annually by about 300 people. For example, in 2005 the population was 32,789; in 2012 there was a huge job shortage which indicates why it has decreased its number to 31,018 people.

Afterwards, the city's situation has not improved much in the following years because by 2015 this number went down to 29,920 (TelR, 2017). One of the main reasons is that the capital has much more job opportunities, the wages are more competitive and therefore, the actively working inhabitants of Gyöngyös rather choose to work in Budapest even if they need to use public transport every day and travel for hours (Kassai and Ritter, 2011).

In the recent years the Municipality of Gyöngyös, the Eszterházy Károly University and the High Schools which can be found in the city, participated in several green- and renewable energy projects. In these projects, many developments have been made such as solar panel installation on buildings (hospital, house of culture, schools, etc.) or biomass recycling and production improvements. The town began to perceive that further steps must be made in this direction and the author also saw the potential in researching here.

Material and methods

As a first step in the research, high school students were questioned a total amount of 493 but only 465 questionnaires were evaluated because the rest were not present or they filled it out in a wrong way. The chosen place was the Berze Nagy János Gimnázium where 16 classes have participated in the research. In the following table (Table 1) there can be seen the division of the classes.

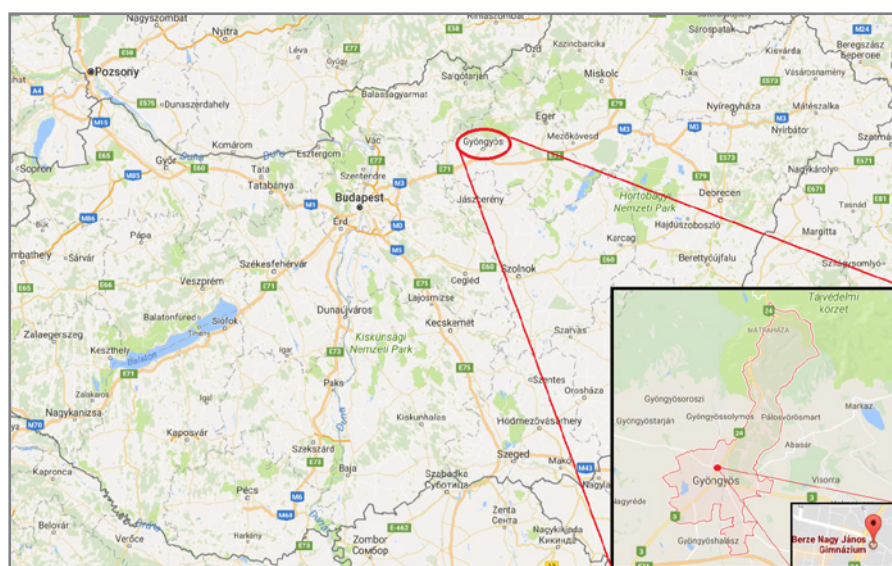


Figure 1 The location of Gyöngyös and the Berze Nagy János Gimnázium on the map, 2017

Source: Own compilation by the help of Google Maps, September 2017.

Table 1 The division of the high school classes which were participated in the research, 2017

Grades	Classes	Class full number	Number of participants
Class 9	9.A	31	30
	9.B	30	28
	9.C	30	27
	9.D	31	30
Class 10	10.A	29	28
	10.B	33	31
	10.C	32	31
	10.D	32	31
Class 11	11.A	30	30
	11.B	31	27
	11.C	30	28
	11.D	32	30
Class 12	12.A	32	31
	12.B	31	27
	12.C	29	27
	12.D	30	29
Total		493	465

Source: Own compilation based on own research, 2017

In this study, an overall research has been made in this high school and another one has been made in the Eszterházy Károly University among 147 university students, at the Faculty of Economy and Management. This was necessary because I wanted to know the difference among the students' knowledge and how they have changed their minds about environmental awareness over the years. Standard questionnaires were used as a method because a standardized questionnaire guarantees that the same monitoring process is

applied to each respondent. It is a very effective but also a simple way to gather primary research. The questionnaire was carried out in person to both in the High School and in the University in order to make it easier to evaluate for the students and answering their questions was easier as well. The questionnaire contains the total of 33 questions about environmental awareness, environmentally conscious lifestyle, online communication knowledge, some about the social media impact on green- and renewable energy

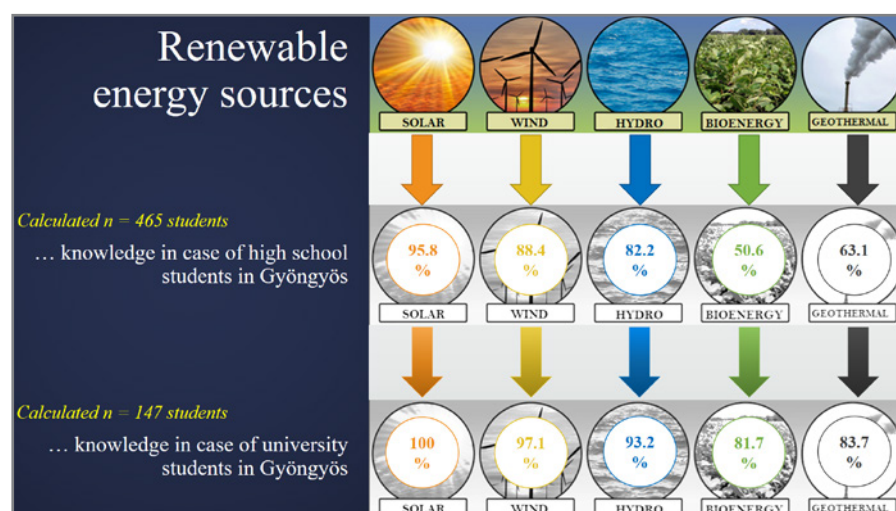
sources and application development skills. The same questionnaire has been used for the studied high school as well as for the university. The Faculty of Economy and Management has been chosen because university students have some courses which have relation to the environmental protection, environmental awareness and online communication methods – for example the courses of Globalization, Environmental Economics, Innovation Methodology, Service Marketing or Online Communication in Marketing.

Results and discussion

In the first part of the survey, questions were compiled about environmentally conscious lifestyle, asking the respondents when they first heard about this topic, how to reduce the environmental damage and also on comprehensive knowledge about shopping habits, human qualities that influence the opinions on the environment and environmentally conscious education. The following figures show the results and comparative analysis of this research.

Based on Figure 2 it can be seen that 5 different renewable energy sources have been investigated – solar energy, wind, water, bioenergy and geothermal energy. First the high school students were asked, then the university students. In this question the students could choose from more options: "Which types of renewable energy sources do you know?" In case of the 465 high school students, 95.8% have knowledge about solar energy, and among the 147 university students, it is 100% knowledge, meaning that all of them know about solar energy as a renewable energy source. In case of the wind and hydro power, the results are evident but it is different with the bioenergy and geothermal energy. Bioenergy as a renewable source is not well known among the high school students, this is supported by the result that only 50.6% – close to half – know about it. The years obviously help in gaining information and knowledge because the results are higher in case of the university students, 81.7% compared to the 50.6% which indicates the increase.

The next question was an open question in order to get the students' own opinion about environmental protection: "What do you think about the environmentally conscious life as a concept?" → On Figure 3 and 4 the results can be seen. The longest line indicates the majority of respondents who were catching the thought of the "Environmental protection" when they first saw this concept. The shortest line indicates that

**Figure 2** The general knowledge about renewable energy sources among high school and university students, 2017

Source: Own compilation based on own research, 2017

few respondents who were also thinking of the "Proper use of energy resources" when they first saw this concept.

On Figure 3 the high school students' opinions can be seen about environmentally conscious lifestyle. Collecting the answers, 10 different expressions can be categorized. The most common case was the environmental protection with 68%, followed by the selective waste collection with 62% and the protection of the planet with 56%. We can still mention the proper use of energy resources because this expression was surprisingly less common among the students' thoughts.

On Figure 4 the university students' opinions can be seen as well about environmental

conscious lifestyle. The categories are the same. The most common thoughts were also the environmental protection with 74%, followed by the selective waste collection with 42% and the protection of the planet with 33%. In case of the university students we can still mention the protection of the fauna because this expression was less common, comparing to the Figure 3's proper use of energy resources.

Figures 5 and 6 show when the students first learned about the environmental awareness from nursery to high school term. In this question only one answer could be given and it was possible to choose from the following answers:

1. Daycare.
2. Primary school 1–4. Classes.

3. Primary school 5–8. Classes.
4. High school 1st Class.
5. High school 2nd Class.
6. High school 3rd Class.
7. High school 4th Class.
8. Learned home about it.

Based on Figure 5 it can be stated that most of the high school students – 51% of them – learned about the environmental awareness in elementary school lower levels, class 1–4th. They had environmental knowledge lesson and many of the topics concerned in that subject they learned about environmental awareness and environmental protection. The 31% of the respondents learned first about this topic in elementary school upper level – class 5–8th. This difference is possible as they had been attending different elementary schools and the structure of the curriculum was different, therefore they have gained knowledge about it later. It was interesting to notice that 13% of the students learned about this topic in daycare (nursery) which means a really early period of their life getting knowledge about the environment and why it is important to deal with it.

It was also mentioned that they played quiz games, had drawing competitions or went out to the nearest forest to study trees and plants. This research confirms it has advantages if children begin to learn about the protection of environment because not only they will help the following generations in maintaining this condition but even they could help in improving or supporting these roles. There were a negligible 4% of respondents who later learned about environmental protection, for example 3% of them in high school – 1st class, or the rest 1% in high school – 2nd class. This is a good outcome because in earlier stages of life the acquired knowledge it gets deeper in children and has an overall better influence in the later stages of their lives. It can also be mentioned on the base of the results that 1% ~ 5 students learned home about this topic presumably from their parents.

Figure 6 shows that most of the university students, about 45%, learned about environmental protection in elementary school lower levels, class 1–4th. This is less than in the case of high school students (51%), meaning that they likely have been studied about it in later years. The second most-given answer was the elementary school upper level – class 5–8th. Compared to the high school students' answers which is 31%, here can be seen 29%, resulting only a 2% difference among them. The third biggest group is the "daycare" but here it is

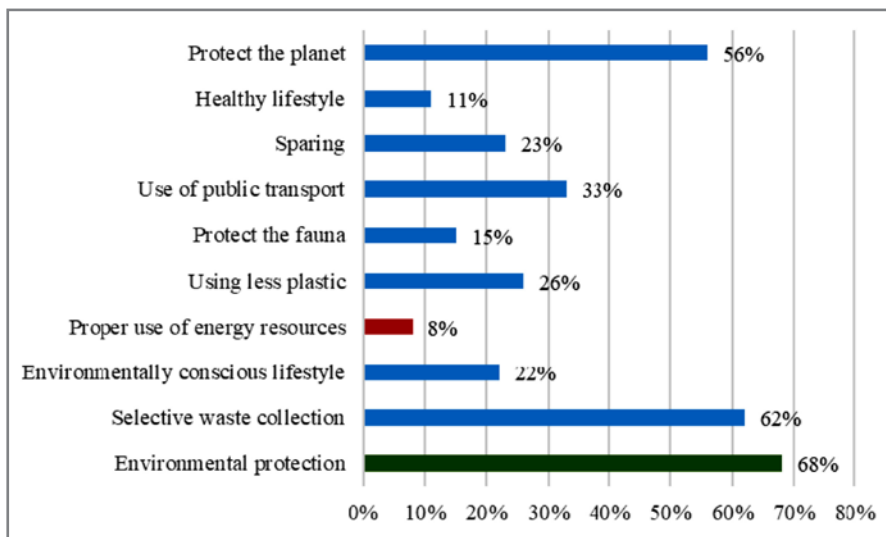


Figure 3 The high school students' opinion about environmentally conscious lifestyle as a concept in Gyöngyös, 2017
Source: Own compilation based on own research, 2017

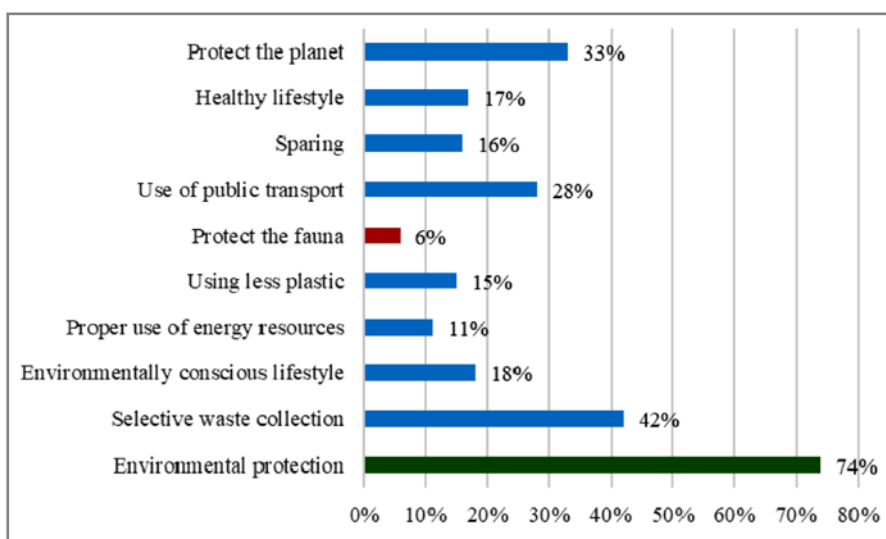


Figure 4 The university students' opinion about environmentally conscious lifestyle as a concept in Gyöngyös, 2017
Source: Own compilation based on own research, 2017

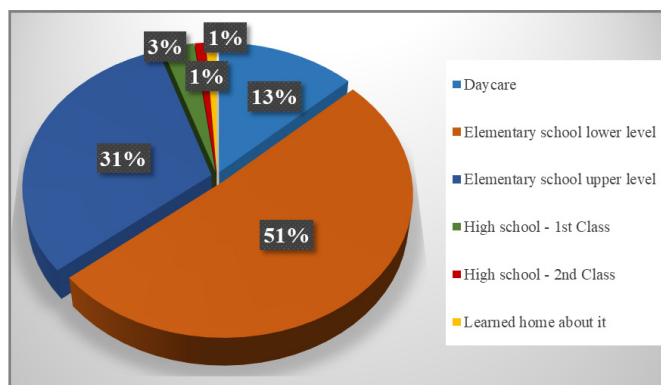


Figure 5 The distribution of high school students according to the first time they learned about environmental awareness, 2017 (%)

Source: Own compilation based on own research, 2017

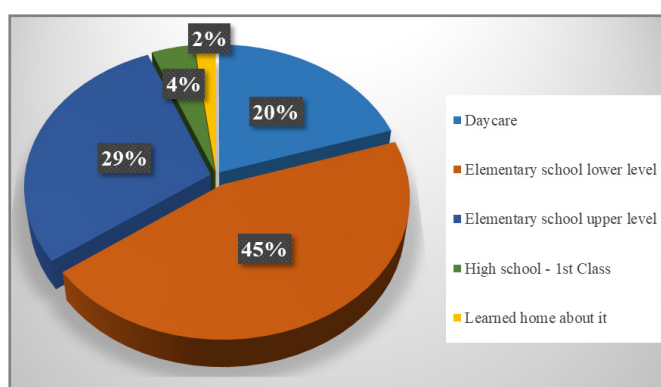


Figure 6 The distribution of university students according to the first time they learned about environmental awareness, 2017 (%)

Source: Own compilation based on own research, 2017

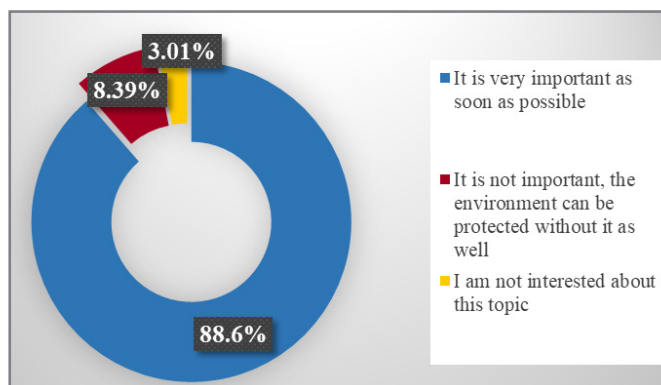


Figure 7 The distribution of high school students' answers about how important the environmental awareness is, 2017 (%)

Source: Own compilation based on own research, 2017

significantly less percent can be found, 20% of the university students learned about environmental awareness.

There could be more questions about these results what influenced that more of them learned about this topic in daycare than in the case of high schools students. Perhaps the attitude of nurseries have changed or they focus on anything else. Another difference on Figure 6 is that there was no one who has been learning about environmentally conscious lifestyle in later than high school – 1st class. But in this case only the 4% of university students have learned about it in this late stage of their life. The rest of 2% have learned home about it probably from their parents, relatives, siblings or from other people.

Overall we can conclude that both the high school and university students received early education from the environmentally conscious lifestyle which is 64% (13 + 51) in case of high school students and a very similar, 65% (20 + 45) in case of university students, even if the ratios are slightly different.

In case of Figure 7 the question was: How important is the education for environmentally conscious lifestyle? The students could choose from 3 different answers as it can be seen on the figure's right side:

1. It is very important as soon as possible.
2. It is not important, the environment can be protected without it as well.
3. I am not interested in this topic.

The distribution of the results was appropriate because the 88.6% of the respondents think it is very important to learn about the environmental awareness as soon as possible in younger age. There are 8.39% of the students who think it is not really important because the environment can be protected even if they do not learn about it or only in later stages of their lives. The rest of the high school students (3.01%) answered that they are not interested in this topic at all.

On Figure 8 the question was the same as on Figure 7 but in that case the respondents were the university students. Comparing the two figures, the distribution of percentages seems similar to each other but not exactly the same, not to mention the number of the students who filled the questionnaires. The results in this case were slightly worse because only 83.23% of the respondents think it is very important to learn about the environmental awareness as soon as possible in younger age. The 11.4% of the university students think it is not really important because the environment can be protected even if they do not learn about it or only in later stages of their lives. Compared to the results of Figure 7, a slightly larger number of students answered that they are not interested in the environment or its protection at all.

On Figure 9 there can be seen the most used social media sites both by high school and university students. From the point of view of the research this matters because social media sites can be used for obtaining information for example on environmental protection or awareness. The most used one among the sites is Facebook (45%) which is not a surprise because in the recent years this is the best known social site and it still continues to grow. There also can be found news about renewable energy and environmental protection which would be able to support applications in connection to these. YouTube is the other well-known site which is used not only for video viewing but also for live streaming, sharing tutorial videos or any kind of videoblogs.

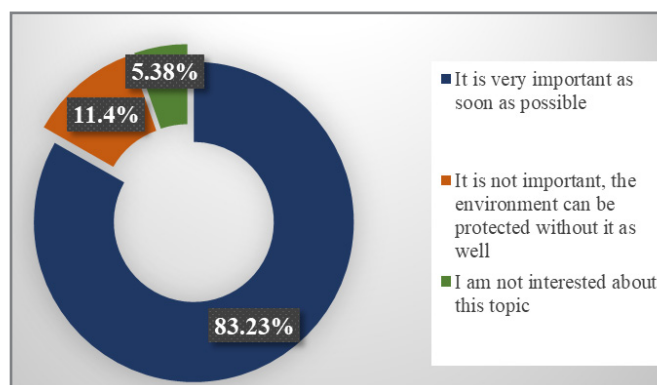


Figure 8 The distribution of university students' answers about how important the environmental awareness is, 2017 (%)

Source: Own compilation based on own research, 2017

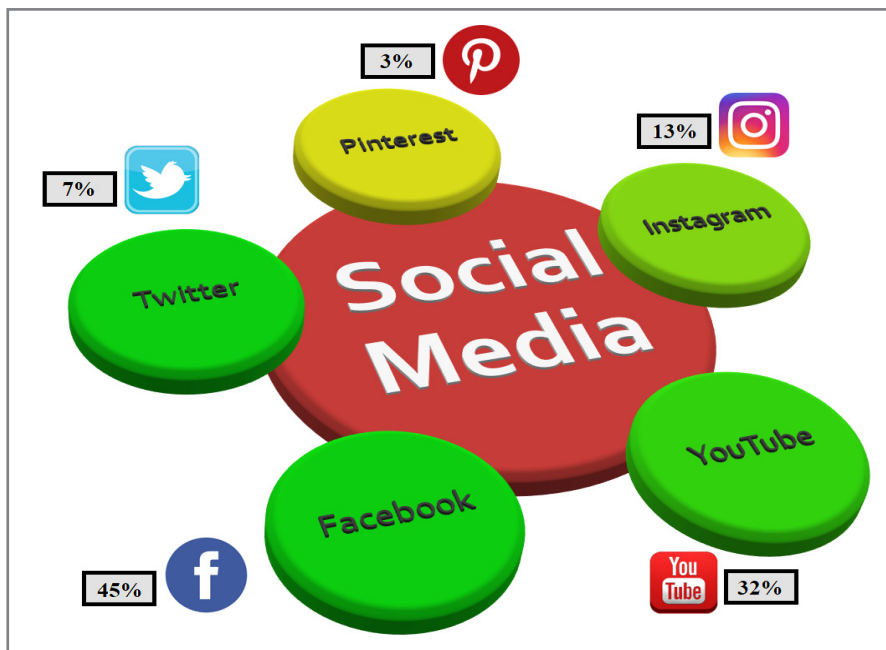


Figure 9 The most commonly used social media sites that are being studied by high school students and college students, 2017

Source: Own compilation based on own research, 2017

At the university where the research was made there were several projects in the past few years which used YouTube for tutorial videos about green economy, renewable energy and environmental protection topics. Instagram (13%) and Twitter (7%) as social sites are different in some way because these are mostly used for daily shares or indicate the users' status, but also "tweeting" news can be found there. In this case there is a possibility to share innovations, news, and advertisements about environmental protection, environmental awareness or anything else connected to this topic.

Pinterest is the last one by 3%, but this social media site is a bit different from the others. The users there use "pins" to tag photos, videos or share those in other platforms. Many interesting topics can be found there, but the most useful one is the "Search" option because by its help it is very easy to find information or news about green or renewable energy sources.

Conclusions

Based on the above studies and primary researches it can be concluded that there is much potential in the topic of environmental awareness and renewable energy sources. This study could present only a little slice of the research but even these figures can show how important the environmental awareness is. In the beginning, the first idea had been a research in a high school only but later I realized that a much better study

can be made if university students were involved as well because in this way comparative analyses can be made. It really does matter what age groups are asked and at which level (elementary school, high school, university, etc.). The results will be different because of their age and general level of knowledge but in this way they can give new ideas in improvements like application development, new ways of sharing methods of energy consumptions or social media behaviours. As regards the future it is a must to get more knowledge about renewable energy and also about how it can help to live environmentally responsible life or change behaviour if we have not lived like that yet. We should take notice of how we can do more for the development of environmental awareness. Furthermore, internal resources are needed to help in development (Áldorfaí and Czabadaí, 2014). A good example can be the Figure 3 and 4 because both levels of students get the idea of environmental protection but on the contrary only 8% of the high school and 6% of the university students think of the protection of the fauna, which is a very regrettable result from this point of view. However, according to surveys, mainly the young generation is open to green and sustainable tourism (Varga-Nagy et al., 2017).

Another interesting fact based on the results is that if environmental awareness comes to mind about environmental protection, why environmentally conscious or healthy lifestyle does not? As suggestions there could be more

possibilities to examine this field, for instance, involve the population of the city or the local government into the research, so a truly comprehensive research could be made. These can be the basics of the next research which will help to dig deeper into this question.

Acknowledgments



This study was supported by the ÚNKP-17-3 New National Excellence Program of the Ministry of Human Capacities.

References

- ÁLDORFAI, Gy. – CZABADAÍ, L. 2014. Helyi válaszok a globális kihívásokra (Local responses to global challenges). In *Acta Carolus Robertus*, vol. 4, 2014, no. 2, pp. 9–18.
- BEGLEY, E. 2008. *Living like Ed: A Guide to the Eco-friendly Life*, Publisher: Paw Prints, 2008.
- KASSAI, Zs. – RITTER, K. 2011. Local rural development programs in disadvantaged rural micro-regions. In *Gazdálkodás*, vol. 55, 2011, no. 4, pp. 337–346.
- KOVÁCS, R. 2010. *Megújuló energia kézikönyv (Renewable Energy Handbook)*. Publisher: Poppy Seed Kiadó, 2010.
- SEMBERY, P. – TÓTH, L. 2004. *Hagyományos és megújuló energiák (Traditional and renewable energies)*. Publisher: Szaktudás Kiadó Kft, 2004.
- TEIR – Országos Területfejlesztési és Területrendezési Információs Rendszer 2017 National Regional Development and Territorial Information System). Downloaded 25th September 2017: <https://www.teir.hu/helyzet-ter-kep/kivalasztottmutatok.html?xeiralk=htk&xids=1001,1002,1009,1010,1011,1012,1017,1018&xtertip=T&xterkod=523>
- VARGA-NAGY, A. – KÁPOSZTA, J. – NAGY, H. 2017. Zöldturizmus a jövő stratégiai iránya? (Green tourism as the future strategic direction?). In *Studia Mundi – Economica*, vol. 4, 2017, no. 1, pp. 94–102.

Contact address

András Szeberényi, PhD Student, Szent István University, Faculty of Economics and Social Sciences, 2100 Gödöllő, Páter Károly str. 1, Hungary, e-mail: andras.szeberenyi@gmail.com

