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The emergence of environmental education and sustainability education in the upper grades of primary school from the perspective of the students

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Abstract

The aim of the research is to assess the effectiveness of sustainability and environmental education among the upper secondary school students in Borsod-Abaúj-Zemplén and Heves County. The survey was done with the help of an online questionnaire, which included both open and closed questions, and used selective, scale and own opinion-based response. The aim was to map students' attitudes which are based on environmental education at school and at home. As a result of the survey, we managed to get a momentary picture of the level of environmental attitudes of the future generation in the upper elementary school, together with its missing elements. The number of participants was 187. Lexical knowledge is stronger than its realization in practice. Students are more interested in environmental problems and are also informed, but environmentally conscious actions are not necessarily part of their daily lives.

Keywords: *environmental education; sustainability; upper grades of elementary school*

Környezeti nevelés és fenntarthatóságra oktatás megjelenése az általános iskola felső tagozatain a diákok szemszögéből

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Absztrakt

A kutatás célja a fenntarthatóságra nevelés és a környezeti nevelés eredményességének felmérése az általános iskola felső tagozatos diákjainak körében Borsod-Abaúj-Zemplén és Heves megye területén. A felmérés online kérdőív segítségével történt, amelyben nyitott és zárt kérdések egyaránt voltak, alkalmaztunk szelektív, skála- és saját véleményen alapuló válaszlehetőségeket. Cél a diákok iskola által formált és az otthoni környezeti nevelési alapokon nyugvó attitűdjének feltérképezése volt. A felmérés eredményeként sikerült egy pillanatképet kapni az eljövendő generáció környezeti attitűdjének szintjéről az általános iskola felső

tagozatában, együttesen annak hiányzó elemeiről. A kitöltők száma 187 fő. A lexikális ismeretek erősebbek, mint a gyakorlatban való megvalósulás. A tanulókat inkább érdeklik a környezeti problémák és tájékozódnak is, de a mindennapi életüknek nem feltétlenül része a környezettudatos cselekvés.

Kulcsszavak: *környezeti nevelés; fenntarthatóság; általános iskola felső tagozata*

Introduction

In our research, we mainly wanted to address how and with what methods and tools sustainability education takes place in the upper grades of elementary school. We examined the implementation of this among teachers, parents, and students from several aspects. Because nowadays, the global destruction caused by environmental disasters is an increasingly pressing problem. The concept of climate change and its effects have become part of our everyday live. That is why we considered it is important to examine whether students are already being prepared at the lower secondary level, and whether their attention is drawn to the factors that surround them and seriously affect and influence their future.

Changes in the environment have long been dealt with by the countries and organizations of the world, for example: Club of Rome, UN Brundtland Report or Rio Declaration (Láng, 2003), whose decisions and guidelines have become decisive at the state level as well. Even the main message of the 1987 Brundtland report was to focus on sustainable development (Láng, 2003). In the National Basic Curriculum governing the life of schools in Hungary (Government Decree 5/2020 (I. 31.), 2020; Government Decree 110/2012. (VI. 4.), 2012; 202/2007. (VII. 31.) government decree, 2007) there is also a change in the emphasis on the emergence of environmental education. Due to the amendment of the Public Education Act in 2003, it became mandatory for schools to include the environmental education program in their pedagogical program, which permeates (can permeates) the everyday life and operation of the institutions (2003: LXI. tv. 2003).

There may be several reasons for this, starting with the methodological approach of environmental education. Nahalka mentions two main groups of environmental educators in his study: On the one hand, those who consider the transfer of knowledge to be primary, and on the other hand, those who want to achieve results by changing environmental attitudes (Nahalka, 1997). In any case, as the research of Ütőné et al. highlighted, the emphasis is still on lexical knowledge in the textbooks and workbooks in use (Revákné et al., 2018). Kéri also draws attention to the fact that, based on surveys conducted among geography teachers, environmental protection is identified as one of the first topics to be expanded (Kéri, 2009). Environmental

education appears predominantly in science subjects, which highlights the unpreparedness for and methodological deficiencies in environmental education of teachers of nonscience subjects (Havas & Varga, 1999). Based on Havas's research, it also appears that interdisciplinary connection between subjects rarely appears in Hungarian schools (Havas, 2001a, 2001b). Another problem is the reduction of the number of lessons in science subjects or the lack of teachers teaching in this field (Homoki, 2021).

1. Literature review

The literature used was classified into two groups. One type, which provided a summary framework for the research, and the other type includes the literature that provided inspiration in the research methodology and the practical part of education (Falus & Ollé, 2008).

The work summarizing the past of environmental education describes in detail the concept of environmental education and its situation in Hungary. As the authors of the book also write: "Environmental education also includes the objectives of nature conservation education" (Chikán et al., 2015, p. 7), and according to them, we should not talk about environmental education, but about fostering, because it is a more comprehensive concept, which also considers the student's personality formation as a goal. In the book of Chikán, the pedagogy of sustainability is explained in several ways, according to which it is an educational method with which we try to make "environmental citizens" out of our students, and we also encourage them to behave responsibly for the sake of the future generation. We examined the main moments related to the historical development of environmental education in an international context, of course from a Hungarian perspective (Havas, 2001b; Láng, 2003; Moser & Pálmai, 1999). We believe that one country cannot solve the Earth's problems alone, a broad (global) cooperation is needed to solve them (Havas, 2001a). An example of this cooperation is the EU, as a system (although this raises several questions), which creates a unit that covers a large area, which makes it global (Havas, 2001a). Through the UN and the European Union, as an organization that goes beyond the country, our country also joined the sustainability program, which is how the Eco-School Program, and the Green Kindergarten Program came into being as Hungarian alternatives for implementing environmental education (Könczey, 2014). Through the forest school, we can introduce a more innovative and practical learning organization into public education, with which we can shape students' attitudes more strongly (Bilku, 2004). Providing a summary framework for all of this, we studied the publication of the National Sustainable Development Strategy published in 2007 (National Agency for Sustainable Development,

2007), in which everything that was already mentioned above appears, including Hungary in the international network and defining our country's own strategies.

We have studied how environmental education should be properly and expediently taught, what are the appropriate goals, principles and recommended methods that can be used to achieve success in this field. How should we apply these at different ages, and what are the requirements of environmental education that we should master (Kulman, 2018; Lükő, 2003; Victor, 1993). We would like to emphasize that environmental education cannot be applied only to the school system, because: "Environmental education therefore begins long before school age, of course it continues at all levels of the school, and what is at least as important: it does not end with the graduation" (Victor, 1993, p. 4). That is why in our survey we covered not only the school environment, but also the students' home environment and upbringing. Not all authors paint a positive picture of attitude formation, so Nahalka (1997) compares the principles of the "opposite" camps and tries to offer a solution by using constructive pedagogy, which can resolve the differences between the two camps and show the way how to teach in a unified way or raising children to be environmentally conscious. In addition to these, we also studied several specialist literatures dealing with pedagogical methodology, which, in addition to theoretical knowledge, also served as a foundation for later research methods (Fábián, 1993; Farsang, 2011; Hollik & Ősz, 2016; Makádi & Farkas, 2015; Teperics et al., 2015).

The works that gave us ideas on how to protect our environment and live an environmentally conscious way of life, while also informing about the problems affecting our environment by giving a global situation report, form a slightly intermediate category (Harriet, 2018; Janine, 2020). We used these works both for their literary foundation and for the compilation of the questionnaires. For the compilation and analysis of the questionnaire and the teaching of sustainability education and environmental education, we obtained useful information from the works of Varga and Havas (Havas, 2001b; Havas & Varga, 1999; Varga, 1999, 2006) .They discuss the competencies and development of the teacher, the possibilities of external collaborations and the interdisciplinary approach, the American model and its transferability to the Hungarian education system. In our surveys, we were curious about the possibilities of interdisciplinarity, especially in the case of the subject of history and citizenship, since this is my other major (Horváth, 2006). We also found concrete examples of which geographical topics it is possible to focus on environmental protection (Havas & Varga, 1999; Kéri, 2009). Lehoczky's volume was a bridge between the theoretical background and the implementation of the research (Lehoczky, 1999). The book School in nature, or the practice of environmental

education, which very expediently presented the principles of environmental education, its possibilities at school and beyond.

2. Objective and hypotheses

In this study, we would like to present the results of the student survey. The sample number is 187 students.

The point of view of the students has been highlighted because; they are the reason why this teaching and life education process takes place. We wanted to know whether the students were aware of what we mean by sustainable development and environmental education, whether they were interested in various nature conservation problems, and whether they thought about the impact of humans on nature and the possibilities for nature conservation action. During our investigation, we discussed what tools are available to the institutions and how the support within the school is implemented. We assessed the presence of vocation/motivation in relation to the topic, as well as the applied methods and collaborations with other organizations. In addition to all of this, we also attempted to map non-science subjects and cross-subject concentration, as Havas also writes: "In order to educate for sustainability, one must understand the interrelationships and interdependence of man and the environment" (Havas, 2001b, p. 39).

Based on the objectives mentioned above, our hypotheses are the following:

1. We assume that the theoretical background of environmental education is more grounded than the practical implementation.
2. In our opinion, education for sustainability appears predominantly in the framework of natural science subjects, including natural science and geography.
3. The area of extracurricular programs and the application of diverse learning methods and work forms still shows little/ low variety.
4. The students are less or not really interested in the problems that threaten their environment, but at the same time they are afraid of the changing environmental effects.
5. They are not aware of the actual concept of sustainable development.
6. They are not sure how they can protect their environment.
7. Most of the responding students consider themselves and their families to be environmentally conscious.

3. Sample and method

As the method of the survey, we chose an online, written survey using the Google Forms platform, where the filling was done on a voluntary basis. There were 22 questions in the questionnaire, most of them multiple-choice, a few evaluating on a Likert scale, and a few open questions. To conduct a more thorough survey, we used open-ended questions. It was also necessary to unify and code them before performing the analysis. The answers to the questionnaire were evaluated using the Microsoft Excel program.

At the beginning of the questionnaire, the focus was on sociodemographic questions (e.g. place of residence, gender, type of student's school, etc.). After that, we moved on to issues related to environmental education and sustainable development. The questions mainly measure the students' awareness of the subject, as well as its appearance and forms in their everyday life (at home and school). The subjects of the survey were students in the upper grades (grades 5-8) of the elementary school. The aim was to include students studying in different maintained institutions in the sample, so accordingly we searched for partner schools in the counties of Heves and Borsod-Abaúj-Zemplén. The survey took place for about 2 months, with minor or major interruptions. Unfortunately, with several institutions, the process stopped at the initial (acquaintance) stage. There were several reasons for this, starting from tight school schedules, to lack of interest, to increased participation in surveys. The questionnaire was completed by 187 students. Most answers came from public schools (136 people; 72.7%), followed by church schools (36 people; 19.2%), 6 people from junior high schools (3.2%), 5 from alternative primary schools, while 4 answers were received from private/foundation elementary schools (2.1%).

The difference between the gender distribution is not substential, almost 52% of the balance shifted in favor of boys. In the county distribution, we can already speak of much greater dominance. 62.6% of participants from Borsod-Abaúj-Zemplén county, 36% from Heves, 2% came from other counties (3 people). Regarding the status of the students' places of residence, it can be said that the majority of the students (56.7%) live in cities. Expanding this further, it emerged that among those who filled in, the Heves county residents were more likely to live in a village (72%), while in the case of Borsod residents, this shifted to a large proportion towards the city (80%) (Mezőkövesd). Examining the distribution of the sample by class and age group, the majority of respondents were fifth (30.5%) and eighth graders (30.5%), the sixth graders

were in the middle of the field (26.2%) and with the smallest proportion being seventh graders (12.8%).

4. Environmental education and sustainability education from the students' point of view - questionnaire evaluation

In the focus of the survey, we first asked whether the students had ever heard of the concept of sustainable development or environmental education (Table 1). Overall, yes was in the majority, 53% of respondents had heard of sustainable development, while 55% had heard of environmental education.

52.4% of students have heard about sustainable development, while 55% of students have some knowledge of environmental education. What we have to notice is that in the case of 6th graders, we only received meaningfully measurable data in BAZ County, as the number of participating 6th graders in Heves County is very few. There is greater success in conceptual knowledge and understanding of environmental education (Table 1). However, the final summary shows that the proportion of those who know the concept (55%) and those who do not (45%) is almost the same. If the types of educational institutions are also included in the analysis, then the tendency can be seen that in the case of public schools (since most of the respondents came from them, so they are the authorities) they know or do not know the concept of sustainable development in roughly equal proportions. A difference can be seen in the case of 8th grade students in Heves county, where there is a large majority of respondents who answered yes to the question (78%). In the case of environmental education (again only in public schools), there is a bigger difference in the case of 5th graders, according to statistics, they are more aware of this concept (69% answered yes) than their older peers (Table 1).

1. Table: Knowledge of the concepts of sustainability and environmental education among primary school years (people)

grade	**concept**	**sustainability**		**environmental education**	
	county	**yes**	**no**	**yes**	**no**
5.	Heves	7 (4%)	9 (5%)	12 (6%)	4 (2%)
	BAZ	19 (10%)	22 (12%)	24 (13%)	17 (9%)
6.	Heves	0 (0%)	5 (3%)	1 (0,5%)	4 (2%)
	BAZ	25 (13%)	19 (10%)	23 (12%)	21 (11%)
7.	Heves	7 (4%)	2 (1%)	5 (3%)	4 (2%)
	BAZ	5 (3%)	10 (5%)	11 (6%)	4 (2%)
8.	Heves	25 (13%)	15 (8%)	20 (11%)	20 (11%)
	BAZ	10 (5%)	7 (4%)	7 (4%)	10 (5%)
total	**Heves**	**39 (21%)**	**31 (16%)**	**38 (20%)**	**32 (17%)**
	BAZ	**59 (32%)**	**58 (31%)**	**65 (35%)**	**52 (28%)**

In the following question, we were interested in the students' opinions. We asked them to describe in one sentence what sustainable development and environmental education mean to them. It is interesting that in the previous question, whether they had ever heard of these concepts, most of them gave positive answer. However, this was not fully reflected in this question, since relatively many people answered with "I don't know" or perhaps did not write anything at all. Most of these types of answers came from students of public schools (11%). We received more complex answers mainly from students of church-run schools (at least 50% were able to explain the essence of the process in a compound way). This testifies that the students, although they have already heard of the concept of sustainable development and environmental education, do not know its meaning.

During the next two questions, we were interested in how closely the students follow the news about our environment and on which platforms they do so. We used a frequency scale (from 1 to 5, where 1 indicates not at all and 5 indicates continuous values). The majority indicated the middle (35.8%) and 4 (27.8%) frequencies, so they follow the news about the problems affecting our Earth with moderate attention. Students from Heves county have the most among those marking 1st, including 5th graders (25%) and 8th graders (12.5%). Among those who marked 5, fifth graders (73%) and sixth graders (68%) from Borsod were in the majority. In connection with this, we also asked them on which platforms or from whom they hear news about the problems affecting our Earth, where they could indicate several options (Figure 1).

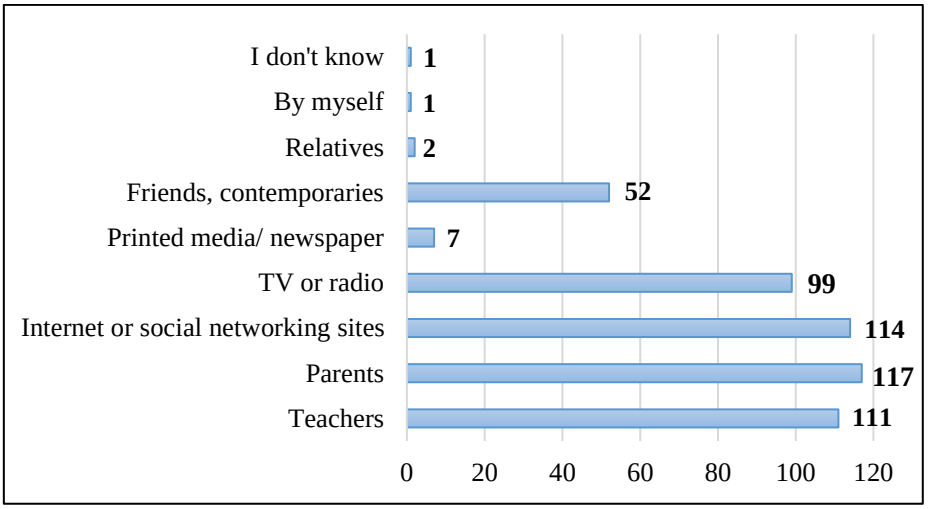

Figure 1: Platforms for monitoring environmental issues (people)

The overwhelming majority of students are informed by their parents about these questions (62.6%). Next comes head-to-head information from teachers and from the Internet or social media (in 59.4%). It is also worth mentioning the information obtained through TV or radio (52.9%), and those who indicate their friends and contemporaries as sources (27.8%). By

assigning the school types to the marked answers, it can be seen that students in the public school use more sources of information. Thus, the answers are scattered, but the majority get information from their parents, teachers and social media platforms (23%). For students in alternative institutions, in addition to those listed above, TV or radio also appears. In the case of students in church-maintained institutions, a parallel can be drawn with the responses of students in state-maintained schools. In the case of junior high school students, guidance from teachers appears to almost everyone. While in the case of students in foundation or private institutions, the parents were indicated by all students who completed the questionnaire.

In the next group of questions, we examined environmental awareness in the context of students and their school. First of all, we were curious about which subjects they hear about problems affecting our environment. Here, the overwhelming majority of natural science subjects lead the way (74.3%), although several answers could be marked. Then came the teacher's class (34.8%). The proportion of human subjects (21.9%) is also worth mentioning. The "worst" performers were art subjects (10.2%), IT/digital culture (9.6%) and physical education (9.1%). The subjects should be closely related, as sustainability is an ideal organizing principle for promoting integrated thinking (Havas, 2001b). The analysis, on the other hand, indicates that most subjects do not integrate environmental educations. Among the students of state institutions, the opinion regarding the appearance of environmentally conscious topics in human and real subjects is divided, approximately half to half. In the case of junior high school students, those attending alternative, private/foundation and church-maintained schools, the science subjects are absolutely authoritative (more than 50%). After that, we took the question further, and on a three-point scale (never-rarely-most of the time), we evaluated with the respondents how often they hear about topics related to the environment in the case of each subject.

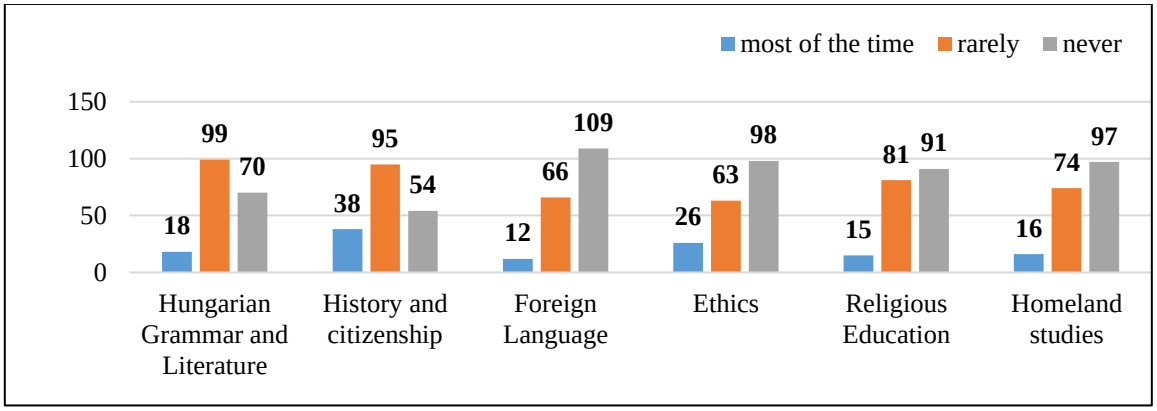

Figure 2: Appearance of environmental and global problems in human subjects (people)

In the human subjects, in the case of Hungarian (53%) and history (51%), "rarely" received the most answers (Figure 2). Even for foreign language (58%), ethics (52%), homeland studies (52%), never was the most common answer. The National Core Curriculum also expects History to incorporate environmental education and thereby connect people with society and nature (Horváth, 2006), however, looking at the answers, we can see that this has not been achieved.

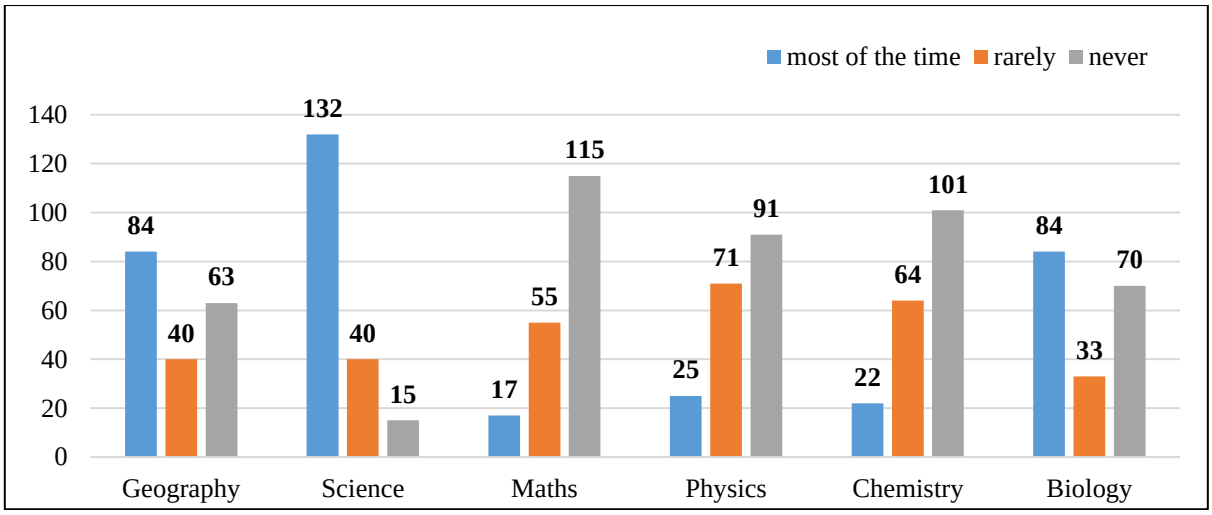

Figure 3: Appearance of environmental and global problems in real subjects (people)

Among the science subjects, students hear about environmental topics most often in natural sciences (70%), geography (45%) and biology (45%) classes (Figure 3), and among these, natural sciences also stands out, where phenomenon-based teaching takes place in an integrated manner. During the reforms of the last period, the subject of geography came out positively from the point of view of environmental education, which shows students the natural and economic phenomena of the Earth in its interactions and connections (Kéri, 2009). The analysis also shows that geography is in a good position in the transfer of environmental content, but at the same time, the other real subjects should also be added, so that the above-mentioned connections can be fully developed. According to the students' opinion, environmental content does not occur in mathematics (61%), physics (49%) and chemistry (54%) lessons, the answer 'never' received the most marks, even though the environmental content hides many opportunities for concentration. If we look back at the diagram (Figure 3), we can see that the assessment of geography is also quite mixed among students. Further surveys are needed not only regarding students' attitudes, but also whether content related to environmental education appears in geography textbooks (Kulman, 2018).

In the case of art subjects, according to the students, such content never appears (Figure 4). Technology seems to stand out, where the never (43%) and rarely (43%) responses are

balanced. It could be an important bridging subject from the point of view of environmental education (e.g., recycling), and NAT assigns it this role in the lower grades. As Lükő explains in his book, the ecological changes of the past 50 years are largely due to the development of technology. (Szűcs, 2021) In the case of physical education, the rate of never answers (67%) is exceptionally high. The students evaluated that topics related to the environment appear the least in this subject. In the case of class teacher classes and IT classes, the answers rarely and never are not far apart. All in all, this shows that not only are there deficiencies in the subject concentration, but that the environmental content was not properly incorporated at the subject level either.

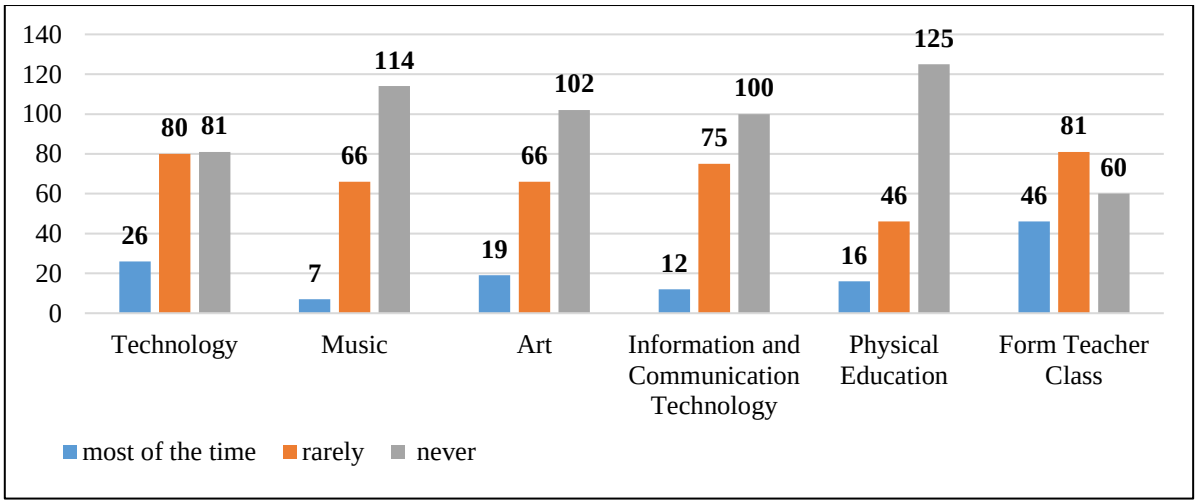

Figure 4: Appearance of environmental and global problems in the case of class teacher classes and skills subjects (people)

We also asked whether, in the opinion of the students, if they deal with environmental and global problems enough. According to the majority (77.5%), yes. Then this means that the appearance of the topic, its concentration on one or two subjects - which we saw in the previous question - satisfies this type of interest of the students. Among those who did not answer, students attending public institutions predominated (23% would like to hear more about the topic), but a more intense interest was also observed among students attending church schools (25%). Overall: girls (24%) were the ones for whom the priority of the topic was not appropriate.

We also asked about program options that deal with our environment outside of school or outside of teaching hours. In this case too, they were able to mark several answers. An outstanding majority of respondents indicated hiking (63.6%) as the most common school program related to the environment. Next, the environmental protection lectures (32.6%), the

sustainability week (30.5%) and the tree planting program (28.3%) are still highly ranked. It is unfortunate that, for example, the collection of paper and caps appeared in a small percentage of the answers (0.5%).

Table 2: Frequency of environmental school programs in different types of elementary schools (people)

Environmental programs	State-run elementary schools	Church schools	Junior high schools	Alternative schools	Private or foundation schools
Hiking	28 (20.5%)	21 (58%)	5 (83%)	3 (60%)	3 (75%)
Environmental protection lectures/exhibitions	14 (10%)	9 (25%)	1 (17%)	1 (20%)	0 (0%)
Sustainability week	19 (14%)	16 (44%)	1 (17%)	1 (20%)	0 (0%)
Tree planting program	18 (13%)	8 (22%)	3 (50%)	1 (20%)	1 (25%)
Forest school	13 (9.5%)	11 (30.5%)	1 (17%)	1 (20%)	1 (25%)
Presentations by national parks	10 (7%)	11 (30.5%)	1 (17%)	0 (0%)	0 (0%)
Others (e.g., garbage collection, selective waste collection)	2 (1.5%)	7 (19%)	0 (0%)	0 (0%)	0 (0%)
I don't know	3 (2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Analyzing the issue further (Table 2), it can be seen that the majority of students in public schools chose hiking (93%), the tree planting program (93%), environmental protection lectures (43%) and sustainability week (34%) as environmental programs. Compared to the public schools, all students of the church schools marked the lectures given by the national parks and the forest school as program options. Junior high school students also indicated a variety of answers, but these do not differ much from the programs of public elementary schools. In the case of students from private or foundation schools, more practical, active programs in the environment appeared, such as: hiking, tree planting or forest school. After the question of programs, we also asked how often the students could participate in these programs (Figure 5).

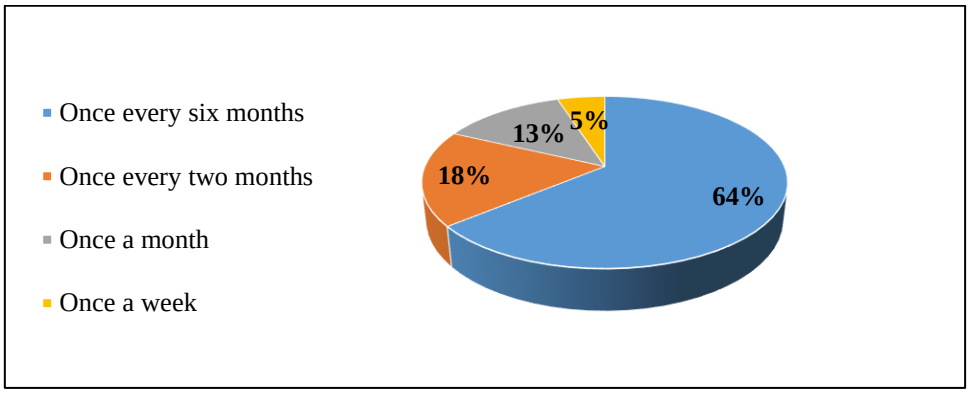

Figure 5: Frequency of programs related to environmental protection.

Unfortunately, the vast majority (64.2%) indicated one occasion per semester. This was followed by once every two months (17.6%), then once a month (12.8%), and finally once a week (5.3%). Examining the programs, school types and frequency together, it can be seen that the majority of students of public school participate in programs related to our environment once per semester (68%), although this also depends on the type of program, because, for example, the possibility of hiking is more frequent. Those attending alternative and private/foundation schools tend to have one (56%) program per semester. The responses of students from church schools are very mixed, but it can already be seen that several types of programs are implemented more often. In the case of junior high school students, in addition to the fact that the selection in the programs is quite colorful, their frequency can also be said to be the best compared to other types of schools. Overall, one program appeared more often every two months (33%), but weekly programs (33%) also appeared several times (these can also be organized in specialist study circles).

In the last question concerning schools, we asked whether the children would change anything about the established system. The answer "I don't know" was written by 7%, which can perhaps be said to be a general reaction even at such a young age. In many cases, the students answered that more plants should be planted (10%), but what we would like to highlight is that there were students who emphasized the importance of energy awareness, e.g., in the form of installing solar panels (1%) or establishing more bicycle storage (0.5%) facilities. Overall, it seems that the students mainly want programs that provide a close-up experience of nature, e.g.: studying outside in nature sometimes.

In the last group of questions, we were interested in what the students bring from the home environment in terms of environmental awareness. First, we asked how often students talk about the environment at home with their parents and family members (Figure 6).

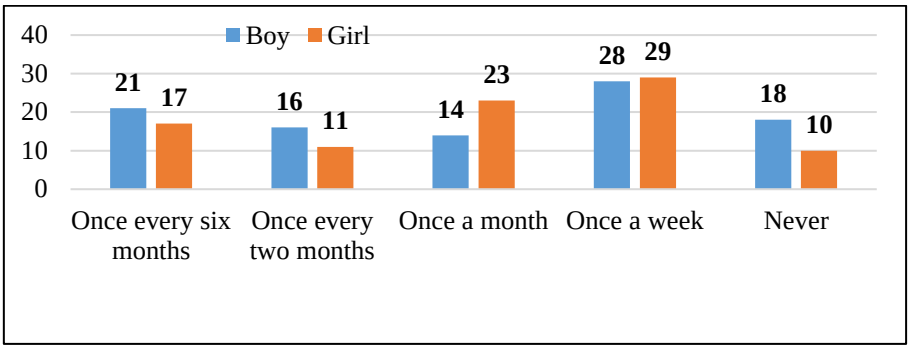

Figure 6: Frequency of family conversations about the environment (people)

Most of them talk about the actual topics at least once a week (30.5%). Interestingly, the second highest rate (20.3%) was given one occasion every six months, which means that the answers are extreme (Figure 6). The never answer is high 15%. The family background is also very decisive for environmental education. If an institution uses constructive pedagogy, it is already assumed that the child already has a certain knowledge that he brings from home, and this will direct his knowledge of school knowledge (Nahalka, 1997). Students of public schools talk most about weekly (29%) on environmental issues among their families. At the same time, they are in the highest proportion in their case, who have never (18%) or only once every six months (18%). Even students at church schools should be highlighted. This test group often talks about the environment, most of them at least once a week (31%) at the family table.

After family conversations, we wanted to know more about the programs. Children were able to add non -mentioned programs into the survey. With the overwhelming majority, hiking (71%) were marked by the most popular family program. The next in the line, however, "we don't organize such programs" was the answer (25.1%), so the field was quite split. Summarizing the answers, Borsodians were mainly characterized by hiking and watching the surroundings and documentaries, but organic gardening or balcony gardens are also a good number. The residents of Heves County voted for watching lectures and documentaries dealing with our environment. Based on the status of the residence, hiking appears for almost everyone in the village. But perhaps relatively few respondents mentioned gardening (23%) despite environmental conditions. In the case of the county seat and cities, manly hiking, participation in exhibitions and documentaries were designated. Interestingly, the cultivation of organic gardening (15%) is also a large number of city dwellers.

In advance, we thought that selective waste collection is perhaps one of the most common activities in Hungary. In contrast, 14.4% of respondents admit that they do not select the waste selectively at all. By grouping waste types, most of the plastic are selectively collected (69%),

followed by paper (58.3%) and then green waste (compost) (34.8%). Colored and white glass and metal has been selectively collected by 20 and 26% of the responders.

Based on the questions and answers so far, we were curious how students appreciate themselves and their families as environmentally conscious. This could be evaluated on a scale of 1-5, where 1 was not at all, 5- the entirely environmentally conscious individual. Most respondents appreciated themselves (3) and their family (43.3%). But many appreciated themselves to 4 (31%), which marked the almost entirely environmentally conscious lifestyle. The lowest answers were 1 and 2, which means that the vast majority of respondents are unsure about their environmental awareness. In gender distribution, more boys marked (23%) of the environmental consciousness of 5 (8%). According to age group, 5th grade students considered themselves and their families mostly environmentally conscious (37%). While in the comparison of school types, children attending church schools were the highest proportion (28%). It was interesting to see that students who have never talked about environmental issues with their families have evaluated 5, but the reverse is also true because many have considered the environmental awareness of themselves and their families to be low, but they often speak at home at home environmental issues.

In the last part, we also examined what students do in practice to protect their environment. Most of them marked selective waste collection (77%), followed by plants' care and planting (58.8%), and the use of public transport or walking (46.55%) was still popular with respondents.

Drawing others' attention to environmental protection (34.2%) and using recycled or recyclable things (33.7%) appeared in a higher proportion. We were curious about those who previously gave themselves 5 for environmental awareness: What do they do for the environment in practice? As well as what the same means in the case of environmental awareness previously rated as 1. In the practical routine of persons and families rated 5, selective waste collection and the use of public transport or walking, as well as the use of recycled items appeared mainly. On the other hand, these routines also appear in the case of 1 or not at all environmentally conscious, except for recycled objects. So, there is no significant difference between those who are completely environmentally conscious and those who are not environmentally conscious at all. Of course, it is questionable how far the students were able to judge themselves objectively on the subject. Moreover, looking at the answers, there is no age difference. A 5th grader who rated himself /herself 5 for environmental awareness does no less than an 8th grader who may already have more knowledge in the subject area. It is interesting that solutions such as

showering instead of bathing or using your own linene bag did not appear among the own answers, which has also been measured by Kollarics et al and even though many forums draw attention to this nowadays (Kollarics et al., 2021). But the children did not mention energy-saving solutions, such as the use of renewable energy sources or the use of different energy-efficient boilers in the household.

After that, we asked one of the basic questions of environmental awareness, which means of transportation do students use to get to school on a daily basis (Figure 7), since transportation is one of the biggest energy consumers.

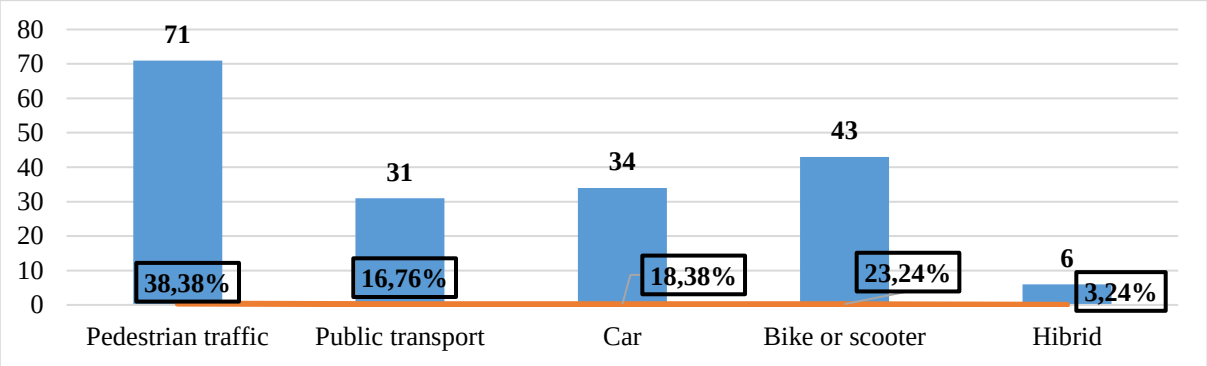

Figure 7: Means of transport used by students to get to school and home (people)

In advance, we expected that the largest number of people would travel by car or public transport. However, to our surprise, the majority (36.6%) of the respondents were pedestrians. On the second step of the podium (23.1%) are cyclists and scooter riders, followed only by those who go to school by car (18.3%), and in last place are those who travel by public transport (15.6%). We were curious to know that among those who consider themselves to be the most environmentally conscious, does environmentally conscious transport present in their lives? Among those who are completely environmentally conscious, only one respondent uses a car to get to school. At the same time, in the group of the least environmentally conscious people, the car does not appear at all as a means of everyday transport.

According to the status of the place of residence, it should be mentioned that the car (32%) appeared in most cases as a means of transport for city dwellers. At the same time, walking was also popular among them (39%).

In the last question, we asked our question with a little vision of our days and the future. We wanted to find out how much primary school-aged children (10-14 years old) are afraid of changing environmental effects and global warming. The results of our measurement show that the majority of respondents are moderately afraid (value 3 on a 5-point scale) of these processes

(41.7%), but then 4 (18.2%) and 5 (18, 2%) values follow. Our research also shows the feeling of uncertainty about our future, just as other scientific articles also point to this new phenomenon of climate anxiety. If we look by gender, boys and girls answered in the same proportion, only among those who answered one (so they are not worried at all) there are substantially more boy (15%) than girl (8%) respondents. Among those who considered themselves to be fully environmentally conscious in the previous question, the majority are moderately concerned about changing environmental effects or global warming. For those who rated their environmental awareness at the lowest level, this attitude is also reflected in the question about the future. This group only marked 1 or 2, so they are not at all or only slightly concerned about the effects of environmental changes.

5. Summary

If we return to the hypotheses set up at the beginning of the article and analyze the obtained results based on them, we can say the following. Among the hypotheses related to the school was that its theoretical background was more grounded in environmental education than practical. This turned out to be partially true, since quite a few environmental programs are implemented in schools, and they are rare. In the absence of these, it is quite difficult to educate students properly and comprehensively on environmental protection. However, we think it is only partially true, because these contents do not even appear in the majority of classes/subjects. This is also shown by the fact that most of the students could not even formulate the meaning of the requested concepts (approx. 44%), so not only the practical background, but also the theoretical background is incomplete. The next assumption was that there will be a predominance of natural science subjects, including natural science (71%) and geography (45%), in which sustainability education appears. This turned out to be completely true, even adding the subject of biology (45%). The humanities subjects were quite mixed, while the subjects of art, classroom management and physical education were far behind.

Regarding extracurricular activities, we thought in advance that those programs would still show a low variety. We would slightly modify this statement that extracurricular programs are flat and limited. Mainly a couple of environmental programs (e.g.: sustainability project week/theme week), which are present and repeated in different types of schools, even though the application of diverse methods can bring better results (Simonyi & Homoki, 2020). There is a lack of broad and creative solutions (they can be implemented at an external location, but also everyday routines), and there is a problem with the appropriate proportion of programs.

And finally, but most importantly, the hypothesis set up regarding the students. That is, we thought that they were less or not really interested in the problems that threaten their environment. This statement was proven wrong, as the students proved to be interested, 38% constantly follow this kind of news, and moreover, they are informed by several sources of information. The problem appears more in the lack of theoretical and practical foundation, which can limit the fulfillment of students. We also assumed that they are afraid of the changing environmental effects, in this case we got quite a mixed picture, perhaps also thanks to their young age. The majority (64%) are not or only moderately afraid of changing environmental effects, and only 36% are really afraid (rating 4, 5) of changing environmental effects and global warming.

We also assumed that they are not aware of the actual concept of sustainable development and are not sure how they can do to protect their environment. The first part of the hypothesis was proven when many people could not define what sustainable development or environmental education means (44%). The second part of the statement shows a more moderate picture. Students already use many different methods to protect their environment, but there is still room for improvement in this area. The majority of students consider themselves and their families to be environmentally conscious (47%). Most of the respondents indicated better values in relation to this question (ratings of 4, 5), but at the same time, there is some dissonance, as some contradictions are visible in the other questions that open the topic.

Analyzing the answers, we got quite a mixed picture of the environmental behavior, perception and lifestyle of today's youth and the future generation. Many of them already have an open mind and try to live their everyday life consciously despite their young age, while the other half of their contemporaries may not have reached the maturity level where these questions determine their everyday life. In many cases, we received very striking and diverse answers, opinions that there is still room for improvement for the programs related to the school and home environment. Neither the parents nor the institutions have yet reached the limits of their creativity, but at the same time, a solid foundation is already visible from both sides, and this, with appropriate developments, could add a lot to the more environmentally conscious society of the future. Here, it is perhaps important to highlight that, in addition to the tasks of the school, much more emphasis should be placed on the attitude formation of the parents in order to achieve a stronger attitude formation of the students.

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