THE ROLE OF ENVIRONMENTAL EDUCATION IN SUSTAINABLE CONSUMPTION AND LIFESTYLE

Survey results in Hungarian higher education and high schools

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Abstract

Environmental education is expected to have significant influence on environmental awareness, everyday lifestyle and consumer behavior of the participants. Our paper aims to explore how content, intensity and ways of environmental education reflect in the knowledge, values, attitudes and actual behavior of university students and high school students in Hungary. The questionnaire-based survey was conducted by the Department of Environmental Economics and Technology at Corvinus University of Budapest (CUB), supported by the EEA and the Norwegian Financial Mechanism. The results give space to a wider comparative study both among universities representing different professions and between higher education and secondary education level.

Results show that higher intensity of environmental education gradually increases the environmental knowledge of involved students – at both analyzed education levels. Environmental knowledge at secondary education level was definitely higher than expected; the results at higher education level were not surprising in this sense. Environmental awareness, however, depends rather on commitment reflected in the choice of an environmental specialization at the university level. This phenomenon is more complicated at secondary school level as there is no similar specialization there.

Consumer behavior is even more complex; the impact of environmental education is only one reason behind. However, the focus of environmental education is very important in the attitudes toward reducing consumption. Respondents are classified into clusters according to their consumer behaviour, environmental awareness and attitude to consumption. Interestingly, university students reported to be significantly more conscious about the negative environmental impacts and the necessity of behavioural change than respondents from secondary schools.

Keywords
Environmental education, sustainable consumption, environmental awareness, consumer behavior

1. Introduction

In Hungary, very little research has dealt specifically with the environmental consciousness and consumption habits of students and young people. Two Eurobarometer surveys were conducted (2004, 2008) where this group was included but not examined specifically. Therefore we considered it especially important to interview members of the next generation who will have a decisive influence on the future state of the environment about their thoughts and attitudes related directly or indirectly to environmental issues.

The question is what today's young people of different ages, influenced by different characteristics and circumstances think about the environment, how they see the relationship the state of the environment and consumer lifestyles, and what determines their willingness to change their behaviour in favour of the environment. To answer these questions, two very similar surveys were conducted in autumn 2009 and spring 2010 to elicit and compare the opinions of students in higher and secondary education.

Our basic expectation was that students in higher education would have a higher awareness of the environmental issue, since they would have had more opportunity to hear about this topic both has a result of their age and often their specialised studies. On the other hand, we also expected university students to show more hedonistic consumption patterns, assuming they would have more money to spend. However, our expectations were only partially justified; these results will be described in the following.

2 Sample characteristics

Students in tertiary education were surveyed via an Internet based questionnaire. Students from 23 of the country's 70 higher education institutions participated with the help of the schools' internal infomation systems. The questionnaire was completed by almost 3500 respondents, 2998 of whom could be included in the sample. The students came from across the entire spectrum of study areas, including economics, medicine, law, engineering, the humanities, etc. The representativeness of the sample could not be veriefied as the composition of the total population is unknown; however, the high number of repondents may allow the drawing of some general conclusions.

The secondary school sample included students from three institutions, two from the capital Budapest, and one in a rural part of the country. It was also an important factor when

choosing the institutions surveyed to include different types of secondary schools (high school, trade school, vocational school). These students completed the questionnaire individually during class, supervised by a teacher. We obtained a total of 770 usable questionnaires, which is also a fairly high number.

The research is exploratory in nature, without any specific antecedents. The results allow us to identify the measures which could, through education, and, more specifically, environmental education, have a positive influence on the environmental consciousness of young people, also affecting their consumer behaviour. When comparing the results, it is also important to note the limitations of our research. These are partly due to the fact that the number of respondents in the two samples do not correspond to the proportion of students in secondary and higher education in Hungary (our higher education sample is far larger). Furthermore, neither of the samples can be considered fully representative on its own. The third possibility for bias lies in the fact that the university students were often specialising in environmental issues, while this possibility does not exist in the secondary schools. Finally, some differences in the responses may caused by differences in the questions and the way they were phrased, which was justified by the difference in age and presumed knowlede of the two gropus. The comparisons are naturally focusing on the questions which were the same, in all other cases, we highlight the differences through the course of the analysis.

3 The presence and effects of environmental education in the samples

Hearing about environmental issues at school or in their everyday environment is likely to have an important effect on young people's thinking and actions. Therefore, we examined what possibilities they have to explore the topic at the place of their study. In secondary education, there is no possibility to specialise in environmental issues, which is normal in the current Hungarian education system. The basis of comparison can therefore be the number of subjects mentioned by the students which touched upon environmental issues. If they were able to mention at least three, we consider this comparable to higher education students saying that they had taken specific environment-related courses. If they only mentioned one or two, this was considered equivalent to university students' hearing about the environment in other, not specifically environmental courses. In both cases, what we wanted to find out was how closely the respondents got acquainted with the topic in the course of their studies. Outside the possibility of specialising in environmental issues, it seems that secondary students are more exposed to the topic, with 29% of students in higher education not having heard at all about the enviornment during their current studies, while this is true for only 11% of the secondary students. The proportion of secondary

students naming three or more subjects was about the same as that of university students who have studied specific environment-related courses (35%).

We examined how informed students felt about environmental issues, as well as how this has changed over their recent years of study. There was no difference between secondary and tertiary students regarding the first question, the results for the whole sample can be seen below (see Figure 1).

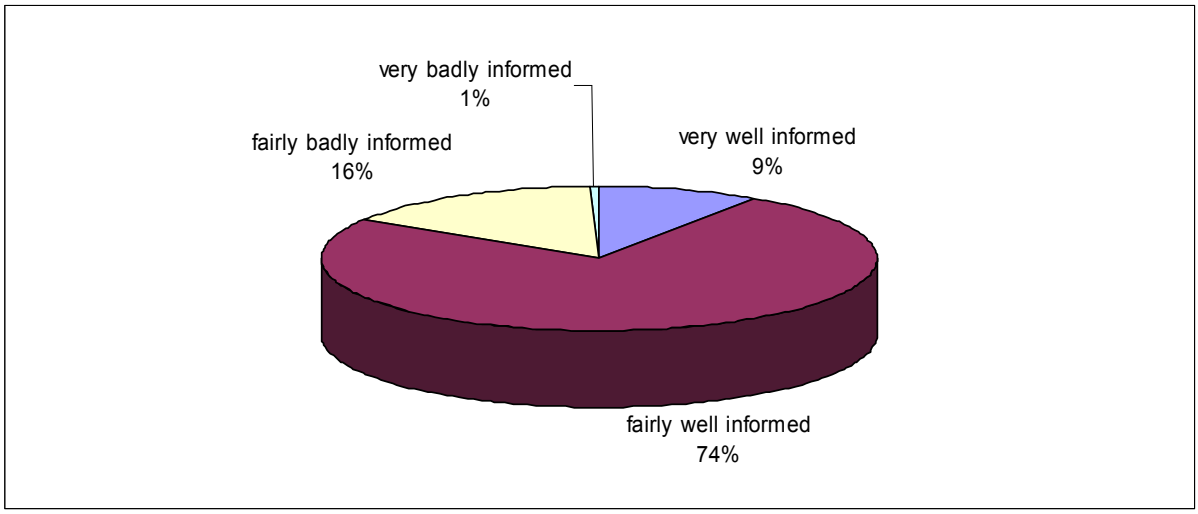

Figure 1: How well informed do you feel about environmental issues?

The change of environmental knowledge was observed in a different way for the two groups: in case of the university students, we did not enquire directly about the change of their knowledge, rather, we asked them how informed they felt about environmental issues before their tertiary studies, and how informed they feel now. Comparing the responses, we registered an increase of percieved knowledge for 31% of respondents (it should be noted that 54% of the sample felt either well or very well informed at both points in time). For the secondary students, we made no such comparison; instead, we simply asked whether they felt any change in their environmental knowledge or interest in the past few years. Two thirds of the sample gave an affirmative answer (where we can only assume that the changes were in the positive direction).

The reasons provided for the change (growth) of environmental knowledge differed widely across the two groups. First, it should be noted that respondents were allowed two choose a maximum of two reasons from a provided list and university students utilised this opportunity much more often. The secondary students generally chose only one reason, which is reflected in the distribution of the answers (Figure 2).

It can be seen that for the tertiary students, the own interest was the leading reason, followed by education and the media. In the secondary school survey, the media was ranked first, then own interest, with education only following after a gap. The importance of the Internet was relatively high in the secondary schools (although a fifth of university students chose this answer, this is still less than the frequency for own interest). For secondary students, parents, siblings, friends, acquaintances and certain teachers also appeared as a source of information, which can be explained by their age (parents and siblings, as well as individual teachers were not on the list of possible reasons in the university survey). Friends and aquaintances were considered the least important for the university students. The results indicate that students in higher education are far more purposeful, their interests and information seeking behaviour shaped more by internal than external factors: environment-related courses will naturally be taken by students already interested in the subject. The picture is more mixed in the secondary schools: the media is an important external influence, but the role of individual interest is also important.

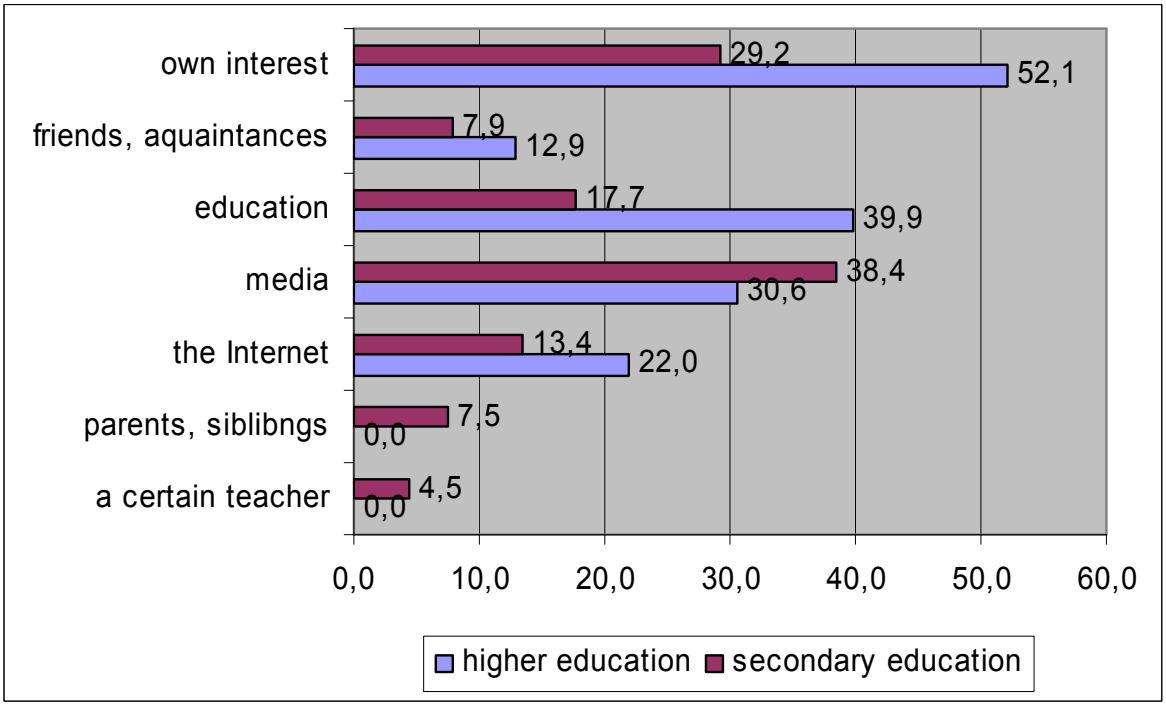

Figure 2: Reasons for a change in environmental knowledge (% choosing the reason – up to two could be chosen)

Further to respondents' self-assessment, actual knowledge about the environment can be judged for example based on how many and what kind of environmental problems the students are able to name on their own. The average number of problems named in

secondary schools was much smaller (2) than in the university survey (3,5). The difference is largely due to the fact that 18.8% of secondary school students were not able to name any problems, while this was true for only 2.3% of the higher education sample.

The order of responses was also slightly different across the two groups when we asked respondents to choose the five most serious environmental problems from a provided list. Figure 3 shows the problems in the order chosen by the university students: water pollution, climate change, air pollution, biodiversity loss, the growing amounts of waste and man-made catastrophies are at the top of the list. Secondary students considered air pollution and the loss of biodiversity to be the most important, followed by water pollution, climate change and man-made catastrophies, than the growing amounts of waste. Both samples agreed that these are the most important problems, but – probably due to the focus of education and the subjects where these issues are discussed, as well as the perception of problems dependant on age, the emphasis is different (for example the presence of biology and other nature-related subjects in secondary schools).

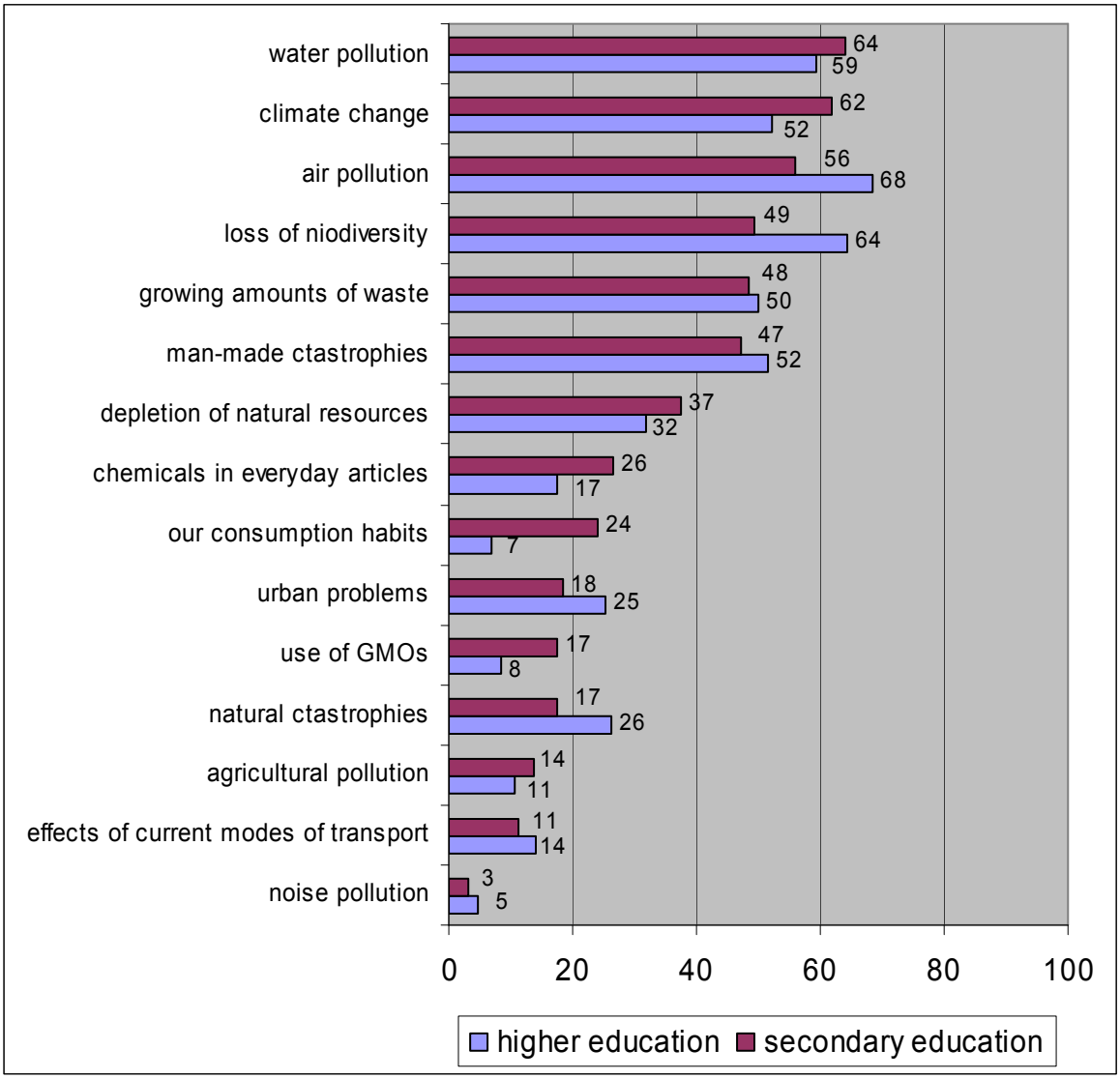

Figure 3: Environmental problems considered the most serious (% choosing the problem; up to 5 could be chosen)

Students in higher education ranked widespread but perhaps less directly percievable problems (water pollution, climate chage) first, while the more noticable effect of air pollution tops the secondary school list. Younger people also appear more sensitive to the destruction of wildlife, as well as catastrophies and urban problems, but they do not connect the environmental effects to consumption patterns. University students – possibly also resulting from environmental education – are much more aware of this link.

This difference is also clearly shown in the answers given to our question about the possible solutions to environmental problems. There is no difference in the opinion of secondary and tertiary students regarding the role of technological development – those seeing it as a

possible solution to current environmental problems are in the slight majority, but the share of those strongly for or against this solution is the same (Figure 4).

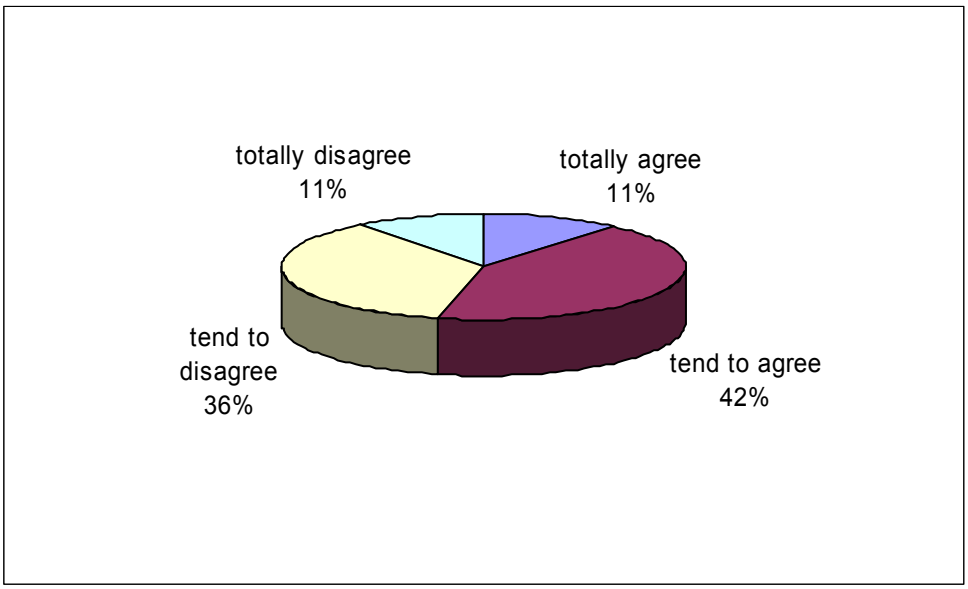

Figure 4: Do you agree with the statement that technological progress will solve environmental problems?

At the same time, university students attach a far greater importance to changing our consumption habits than respondents from the secondary schools (see Figure 5). 55% totally agree, and 33% tend to agree with the statement that solving environmental problems would also require a reduction of current consumption levels, while in secondary schools these shares are only 11 and 26%, respectively. Here, 55% did not agree with this statement and the share of those unable to answer is also higher. This is consistent with the earlier question where consumption patterns were chosen as an important environmental problem by 24% of the university, but only 7% of the secondary school sample. It seems therefore that secondary school students are not aware of the underlying connections.

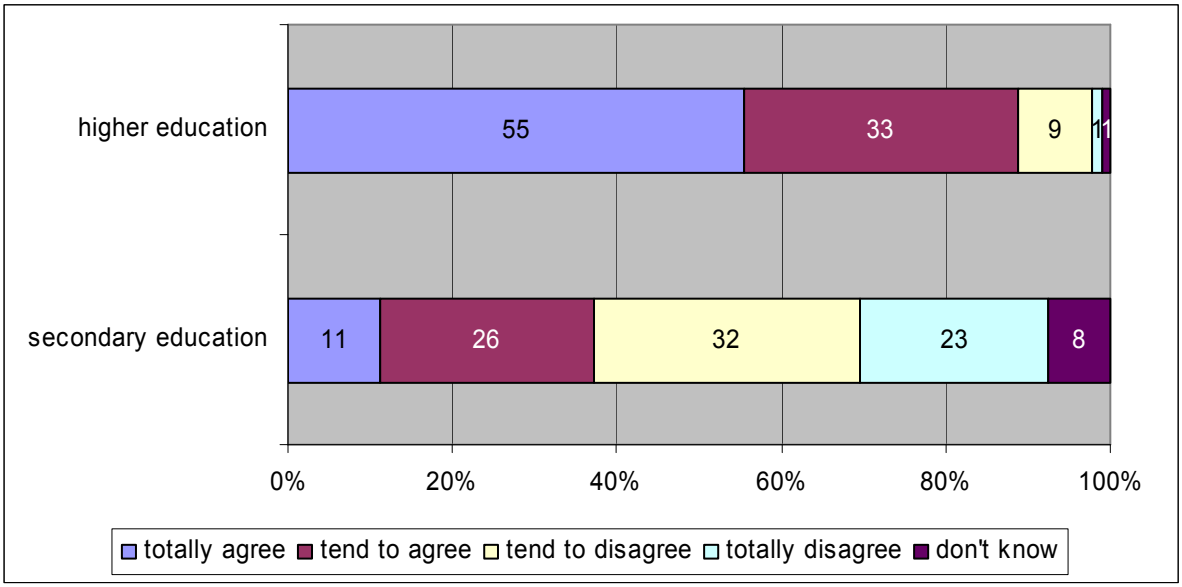

Figure 5: Do you agree with the statement that to solve environmental problems, it would also be necessary to reduce consumption?

These results clearly emphasize the importance of the content of environmental education: university and college students are likely to hear much more about the charateristics and effects of the consumer society than secondary students. We can also assume that younger people are less critical of the marketing activity strongly urging consumption thorugh the media than older groups. This is the reason why young people are a preferred target of advertising campaigns.

After these insights, it is also interesting to examine whether the different attitudes to consumption are also reflected in respondents' shopping habits.

4 Consumer behaviour

Consumer behaviour was examined across several dimensions. We looked at how often the students buy different types of goods and what is characteristic for their shopping habits. It is also important to know whether or not young people shop more in the presence of certain factors, or what prevents tham from consuming at a higher level.

4.1 Shopping habits

Our results clearly show that consumption habits of higher education and secondary students significantly differ, namely in that secondary students – reportedly – buy clothes, cosmetics, electronic devices, sports equipment, and also books and newspapers much more often than the university group. Looking at the average frequencies for the different

types of goods, we found that both university and secondary school students buy books and newspapers the most often, followed by clothes and accessories, cosmetics, then sports equipment, and, finally, electronic devices (Figure 6).

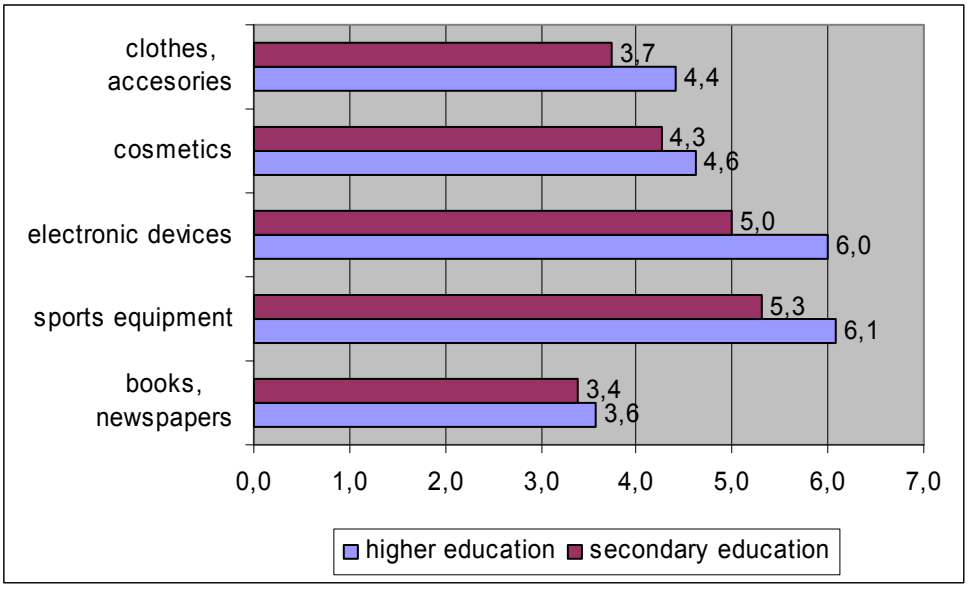

Figure 6: Average frequency of buying consumer goods (on a scale of 1: more than once a week to 7: less than once a year)

We also examined respondents' consumer behaviour across both samples through a series of statements describing their shopping habits, and we also found significant differences in all aspects. The responses are consistent in that secondary students enjoy shopping more, are less able to resist discounts, strive more to keep up with fashion and technological trends, buy unnecessary things more often, and are more likely to go shopping whenever they have some money. In contrast, tertiary students buy more according to their needs and are less ready to spend time and effort on shopping.

If we compare the average scores for the statements, we find that for secondary school students, the most typical characteristic is trying to keep up with fashion and technological trends, and that they usually buy something if they have some money. Some inconsistency can be found in their responses in that it is equally characteristic for them to buy things only if they really need them (average 3.8) and to sometimes buy things that they later do not use (3.5). The replies of the tertiary students are much more consistent in this regard (the averages are 4.4 and 2.6, respectively).

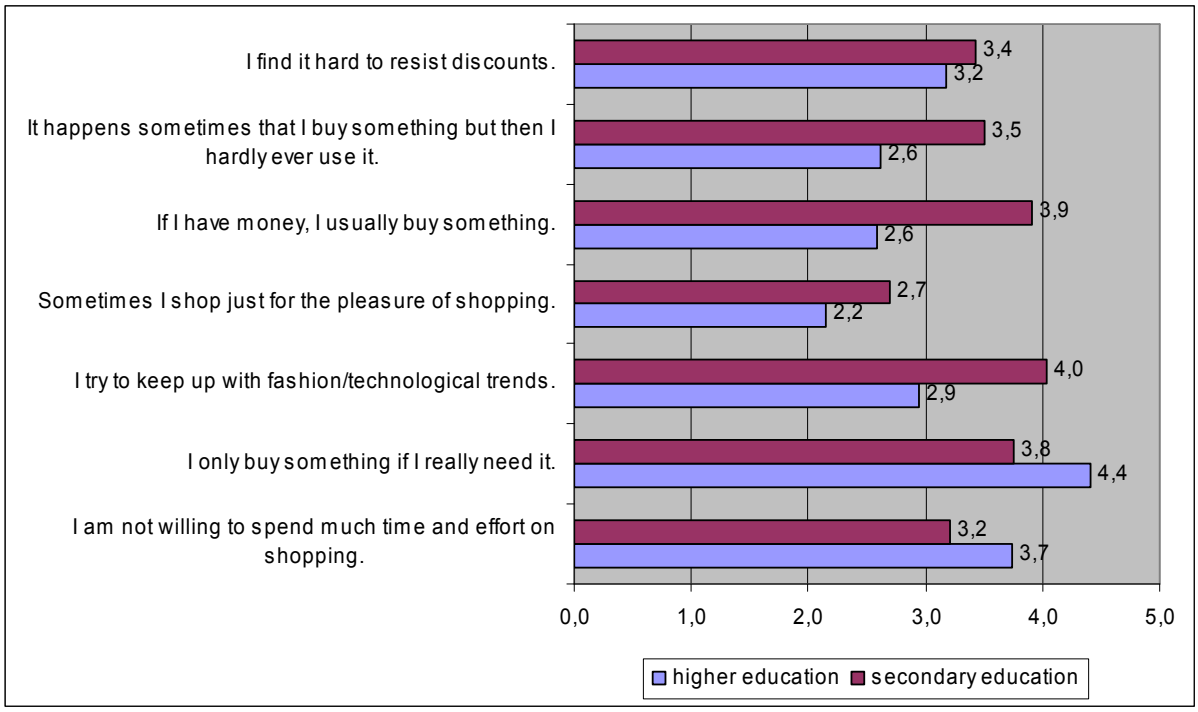

Figure 7: Characteristics of shopping behaviour (on a scale of 1: not at all typical of me to 6: very typical of me)

4.2 Barriers to increased consumption

After the previous results, it was not suprising that the two samples also differed significantly regarding the factors which act as barriers to increased consumption. All barriers were rated stronger by the higher education sample. The lack of money was especially felt, but the lack of time, the sense of having their needs satisfied, the environmental considerations as well as the dislike for shopping (in this order) all appeared more important than to the secondary students. This is understandable considering the fact that the teriary students – reportedly – buy less consumer goods, but it appears that many would like to shop more if they had the necessary time and money.

Although the force of the witholding factors is different for the two samples, their order of importance is similar (if not exactly the same). It is noteworthy that the lack of money is the strongest barrier for both groups, while environmental considerations are much less important, and a dislike for shopping is also not very common (Figure 8).

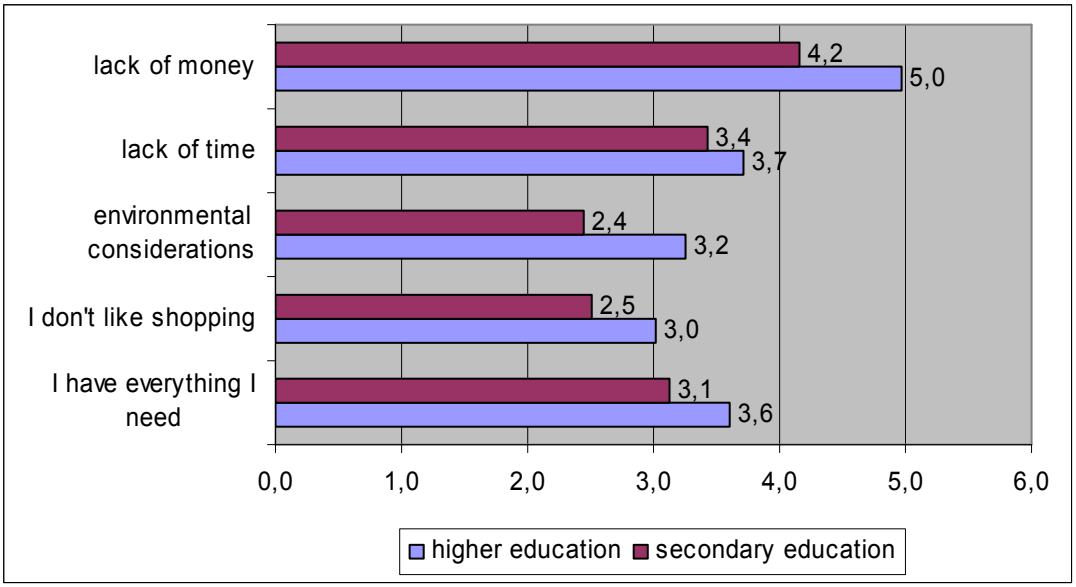

Figure 8: How much do the following factors hold you back from shopping more? (on a scale of 1: does not hold me back at all to 6: holds me back strongly)

4.3 Standard of living

Provided we can trust the self-reported answers, the two samples also differ in their percieved standard of living: while three quarters of the secondary students considered their standard of living to be above the average of their peers, this proportion was 59.5% for the tertiary students (Figure 9).

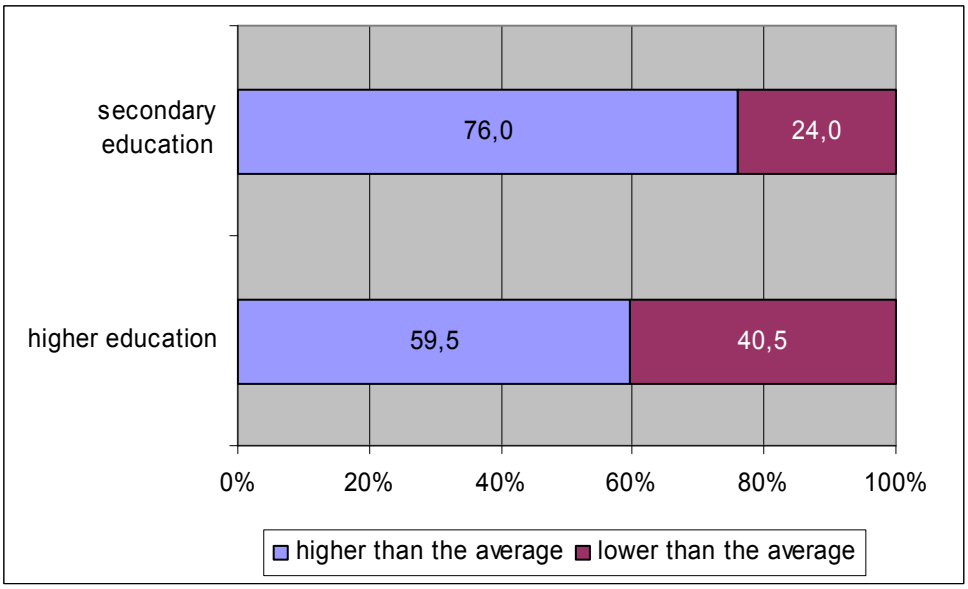

Figure 9: How do you view your standard of living compared to your fellow students?

The above results can be compared with the actual sums reportedly spent by the respondents on various products. The comparison can be slightly distorted by the fact that while in the secondary questionnaire, we asked in detail about spendings on different items, in the tertiary survey we did not. In the following we present the amounts given for consumer goods and leisure activities. For the whole sample, we found that the average monthly spending on products was HUF 8730 and HUF 9550 on leisure activities (1 EUR = approximately 280 HUF). We found significant differences between the two student groups (Figure 10) with secondary students spending on average much more money on consumer goods (HUF 11273 vs. 7740) and also various services that may be characterised as leisure activities (HUF 11500 vs 8912). The results are clear: the secondary students have much more money to spend than the university/college students which can be explained by the phenomenon common in Hungary that, while the latter are often required to (at least partly) earn the money they spend themselves, the former tend to completely rely on their parents in the financial sense. Also, for many tertiary students, leaving the family home and living at the place of their study means that their basic expenses are much higher than during their secondary school years, leaving less money for consumer goods and free time.

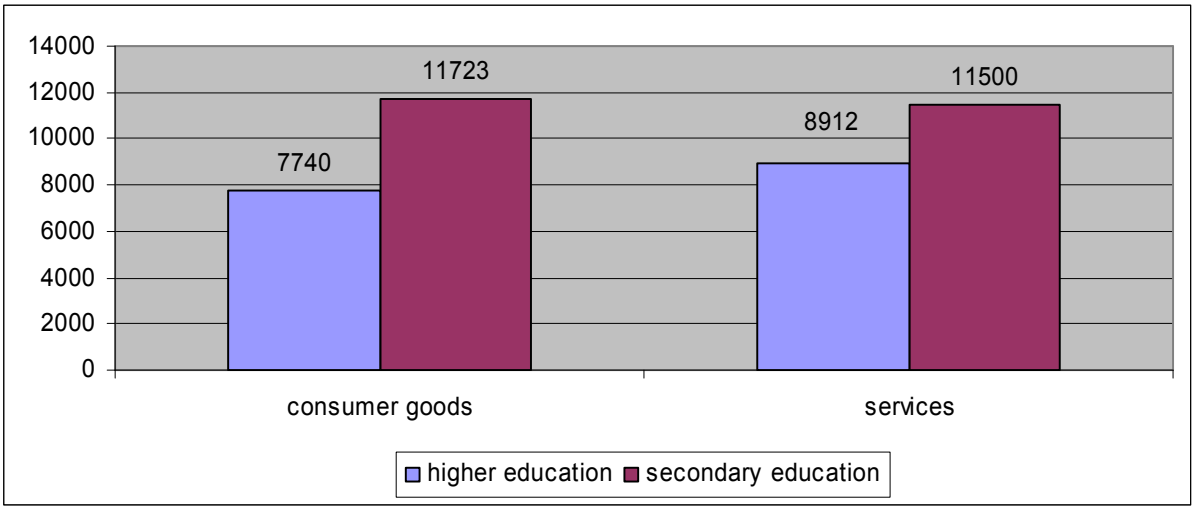

Figure 10: Average monthly spendings (in HUF)

5 Pro-environmental behaviour

Regarding the pro-environmental behaviour of students, we were also able to identify several similarities as well as differences between our samples.

5.1 Transport habits and preferences

Transport habits are partly determined by the distance of the school from the student's place of residence and the modes of transport available. It can be seen on Figure 11 that the secondary students surveyed live on average further from their schools than the university/college students – this characteristic is independent from environmental attitudes but has a great influence on transport habits. It is therefore understandable that the transport habits of the two groups differ considerably.

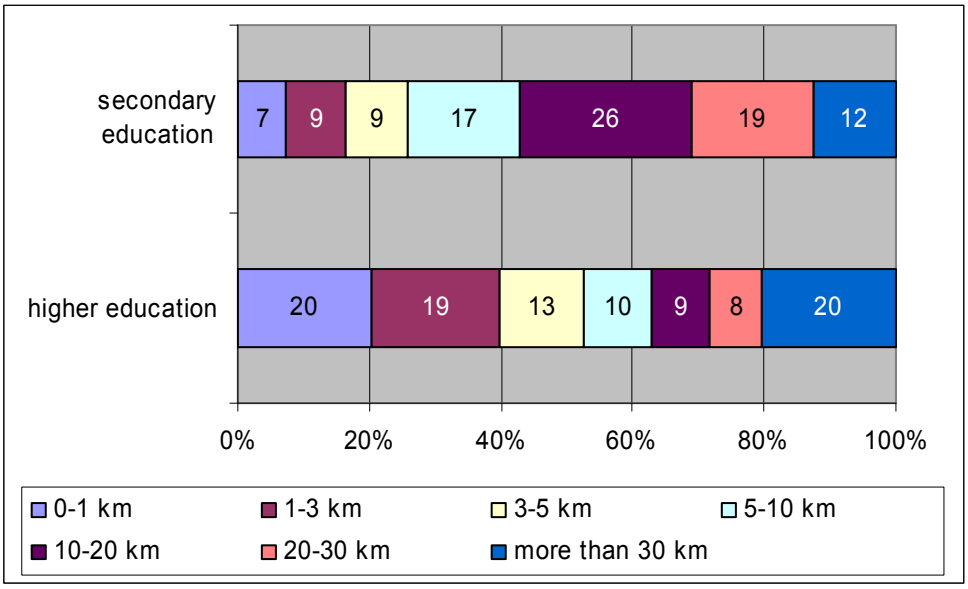

Figure 11: Distance of respondents' place of residence to their place of study

It can be seen on Figure 12 that a far greater share of the university students (32%) walk to their place of study than the secondary students (10%), while the latter use public transport much more often (74 vs. 45%). It is understandibly more common for tertiary students to use their own car, while park and ride solutions are more common for the secondary students (and their parents), probably also due to the greater distances. Biking was also more common for the tertiary sample in this survey. In both groups, about 13-15% of the students use a car every day in some form.

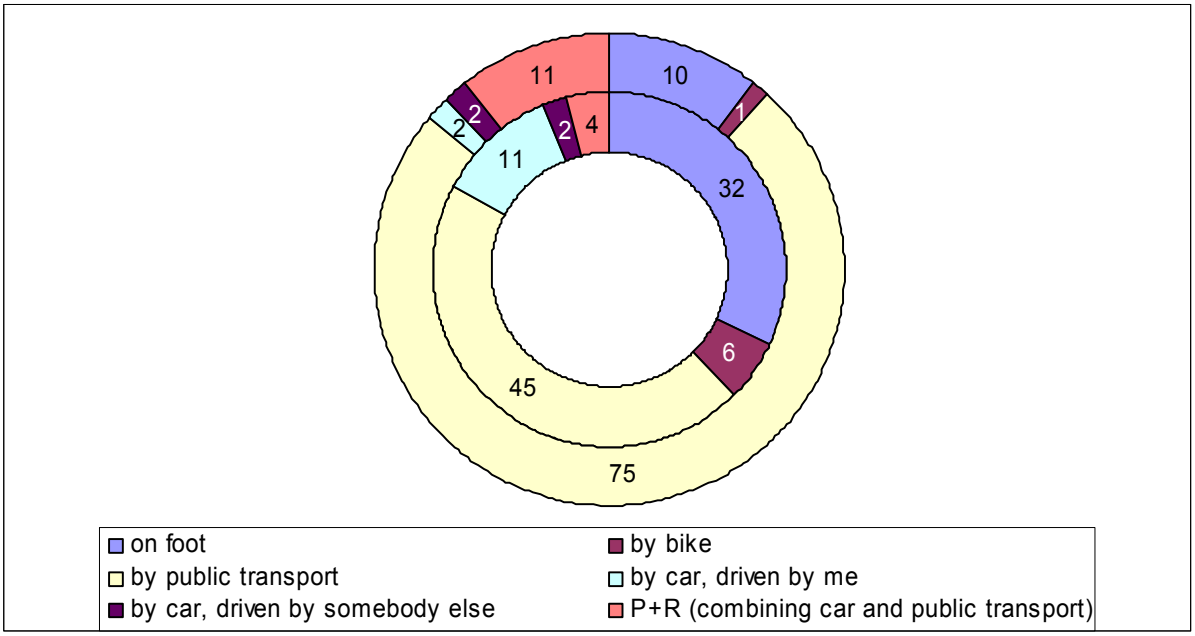

Figure 12: Current transport habits („How do you get to school every day?")

The chosen mode of transport is statistically also shown to depend highly on the distance to be covered: those who live closer to their school walk or bike more often in both samples, while an increase of distance first increases the rate of using public transport, then the car.

We attempted to measure attitudes on transport by asking respondents whether they would use a certain mode more frequently under improved circumstances (such as better storage possibilities for bikes, more frequent public transport, cheaper gasoline for cars, etc.). In this case, bikes would be preferred by significantly more university than secondary students (Figure 13).

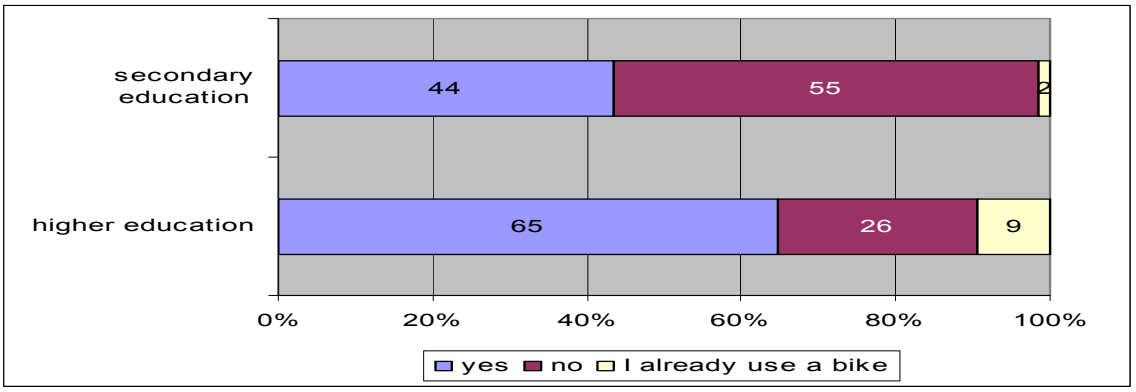

Figure 13: Would you prefer to use a bike for your everyday commuting more often if the circumstances were better?

Figure 14 indicated the opposite: cars would be chosen by secondary students in much higher proportion.

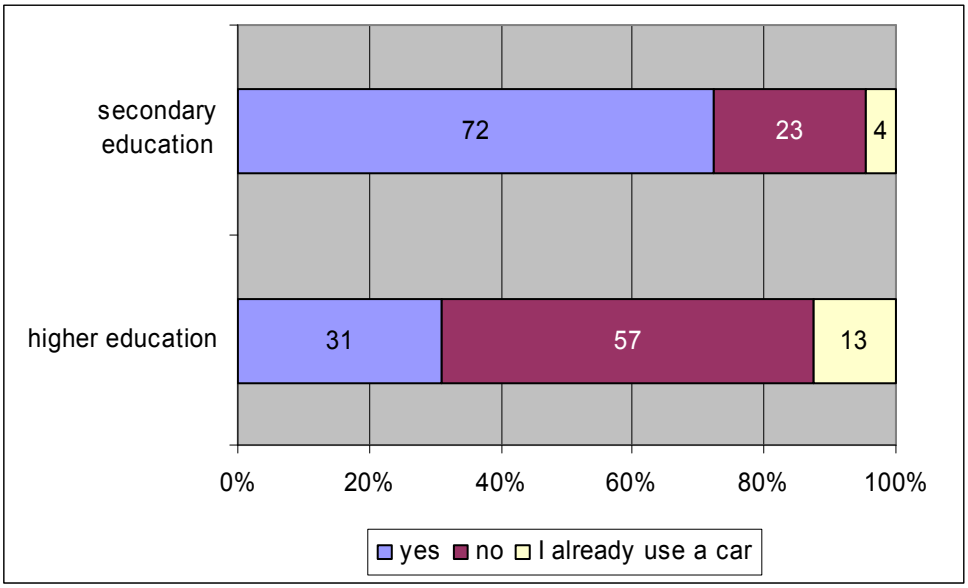

Figure 14: Would you prefer to use a car for your everyday commuting more often if the circumstances were better?

The answers for public transport are greatly distorted by those already using it (Figure 15), but correcting for these answers it is possible to tell that 69% of remaining secondary and 60% of remaining tertiary students would switch to public transport if the conditions improved.

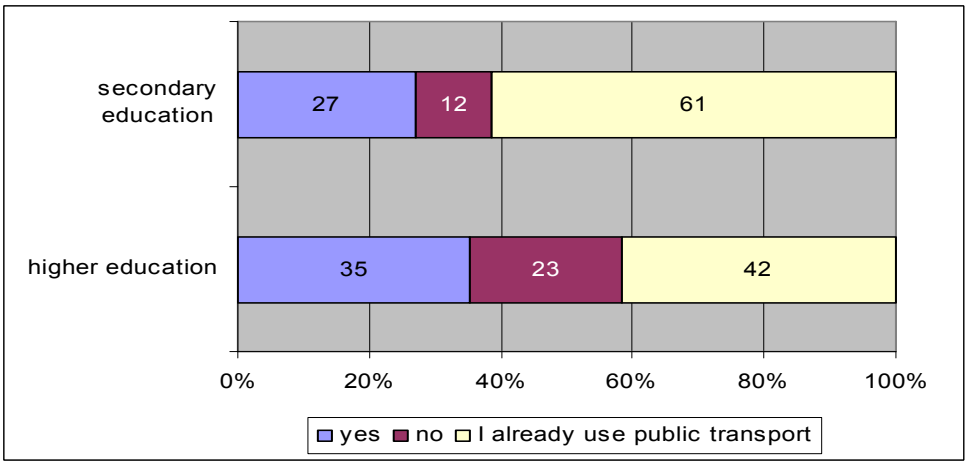

Figure 15: Would you prefer to use public transport for your everyday commuting more often if the circumstances were better?

It was interesting to observe that for secondary students, the desire to swicth to a car was independent from the distance they had to travel, and this was also true for public transport. Only in case of bycicles did we find the expected inversely proportionate relationship to distance. For the higher education respondents, the share of those declining to use a car under any circumstances was also inversely proportionate to distance.

The desired mode of transport is also related to the current mode: those who walk or travel by public transport now would be willing to switch to a bike more often than others in both samples. Public transport would be most preferred by those who now combine it with driving, probably because they are currently obliged to use P+R solutions by the inadequacy of public transport. In case of the university group, many who travel daily in their parents' car would also be ready to swicth to public transport. Among the secondary students, the bikers are the only group who would not choose to travel by car if they could.

5.2 Environmental protection in everyday life

One purpose of our survey was to find out how the environmental attitudes of young people are reflected in their daily lives, as well as what they think about their own environmental consciousness.

It can be seen on Figure 16 that the vast majority of university students consider themselves to be more environmentally conscious than their peers, while this proportion is „only" 2/3 among the secondary students. Reported consumption habits certainly justify a certain difference in favour of the university group, but the bias is still clear. In the following, we look at the lifestyle of the two groups, to see how far their self-perceptions prove accurate.

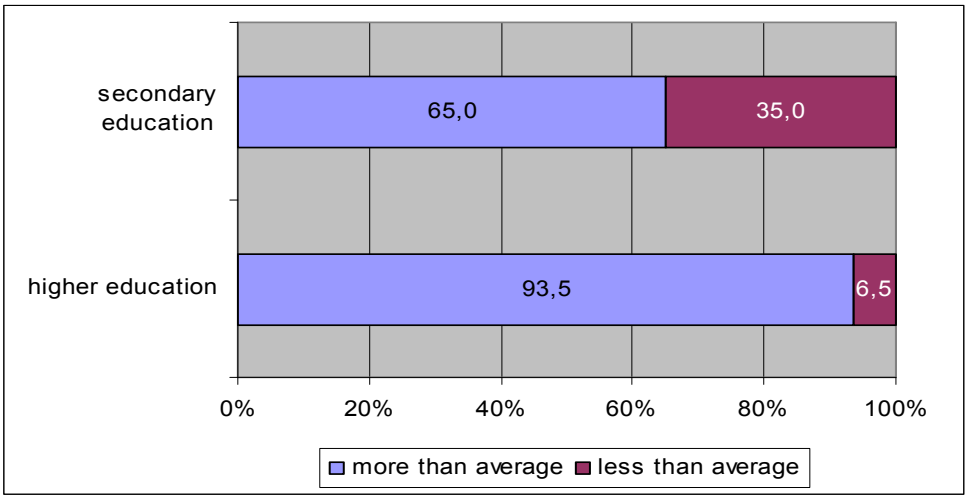

Figure 16: How much attention do you pay to preotecting the environment in your everyday life, compared to your fellow students?

The lifestyle questions enquired about the practice of specific environmentally friendly forms of behaviour, in a slightly different form for the two samples. In the higher education survey, we asked respondents how often (if at all) they engaged in these activities, while in the secondary school sample, the questions was who (if anyone) engaged in the activities from the family. In the following, we first present the raw results, then make comparisons based on whether or not the behaviour in question is practiced by the respondents or not.

Interestingly, the tertiary students engaged in almost all forms of behaviour covered in the questionnaire at least occasionally. The most surprising is perhaps that 21% never collect their waste selectively. Worse results were only found for three activities: considering the producers's reputation when buying something, never done by 39%; buying products with an environmental label, not practised at all by 34%; and using less chemicals when cleaning the house, something 26% never pay attention to. Looking at the positive side, the three most common activities are compressing plastic bottles before discarding them (regularly done by 81%); collecting hazardous waste separately (68%) and choosing environmentally friendly modes of transport (67%) (see Figure 17 for the details).

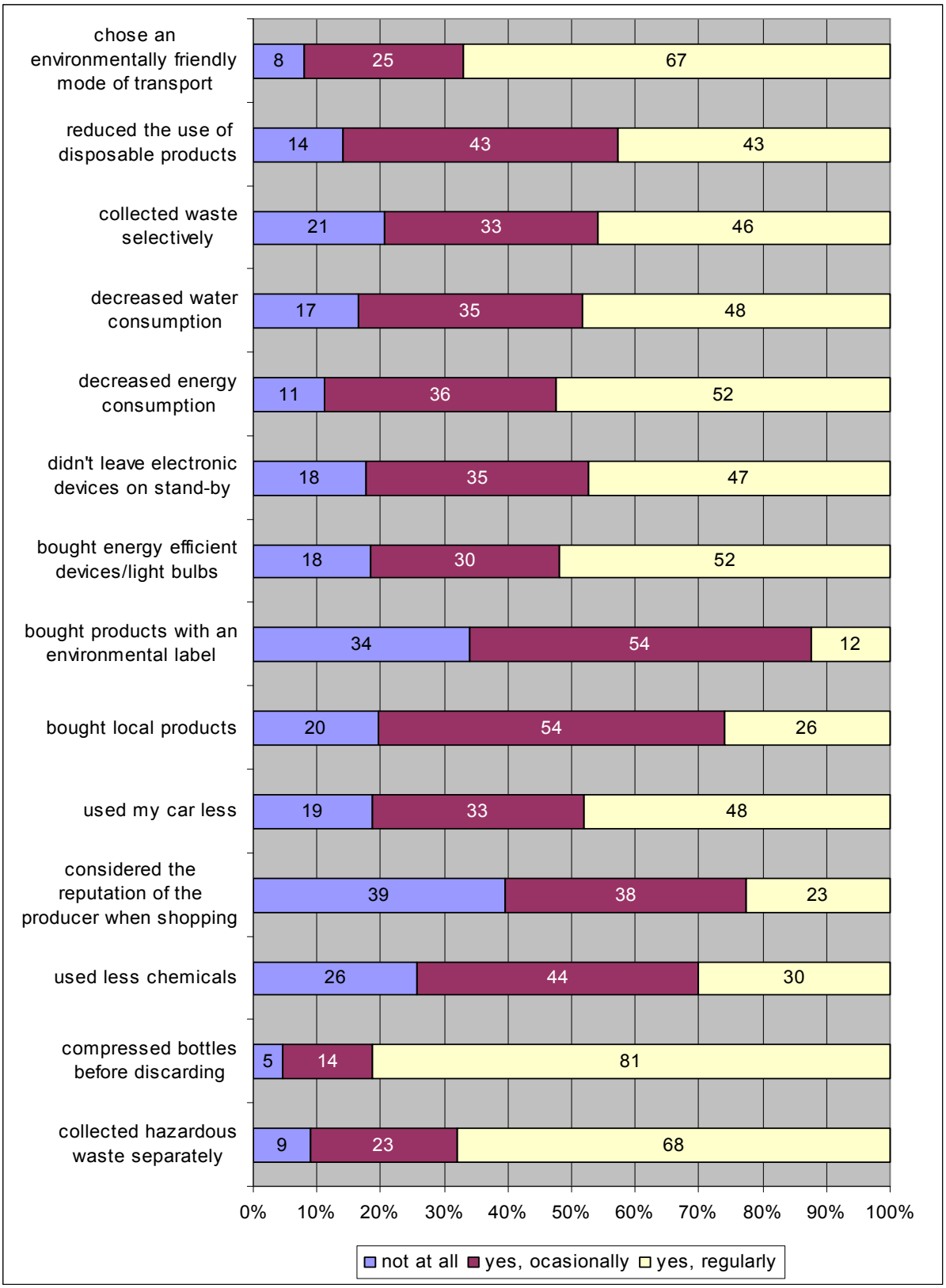

Figure 17: During the past month, have you done any of the following for environmental reasons? (higher education sample)

The results from the secondary sample show that 14-18 year olds also express their concern for the environment through concrete actions (see Figure 18): they travel in an environmentally firendly way (the whole family in 38% of the cases and a further 40% of the students themselves) and collect hazardous waste separately (53 and 5% respectively). Just as in the higher education sample, the least common activity is buying products with an environmental label – in 74% of the cases, none of the family does so. The rate of non-practice is also quite high for avoiding the use of disposable items (51%) and for choosing local products (51%). These answers correspond to previous quesitions and support our finding that secondary school students fail to draw a connection between shopping habits and the state of the environment.

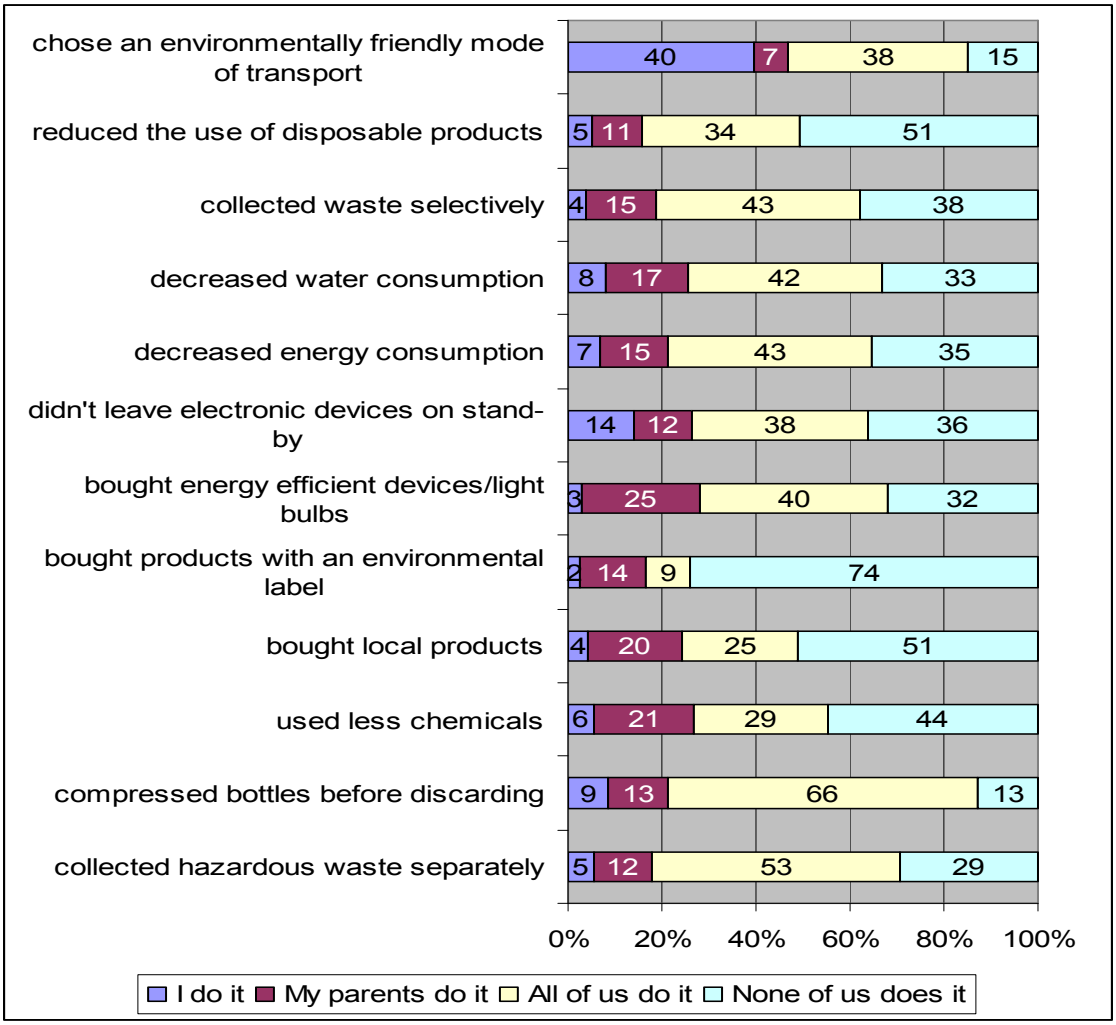

Figure 18: Have you or any of your family done any of the following during the past month for environmental reasons? Who usually does this? (secondary sample)

The two samples can only be compared by looking at whether or not the respondents themselves perform a certain type of activity. Figure 19 shows the share of positive answers. For every activity, the difference between the two samples is significant: the surveyed university/college students perform environmentally conscious forms of behaviour in a much higher proportion.

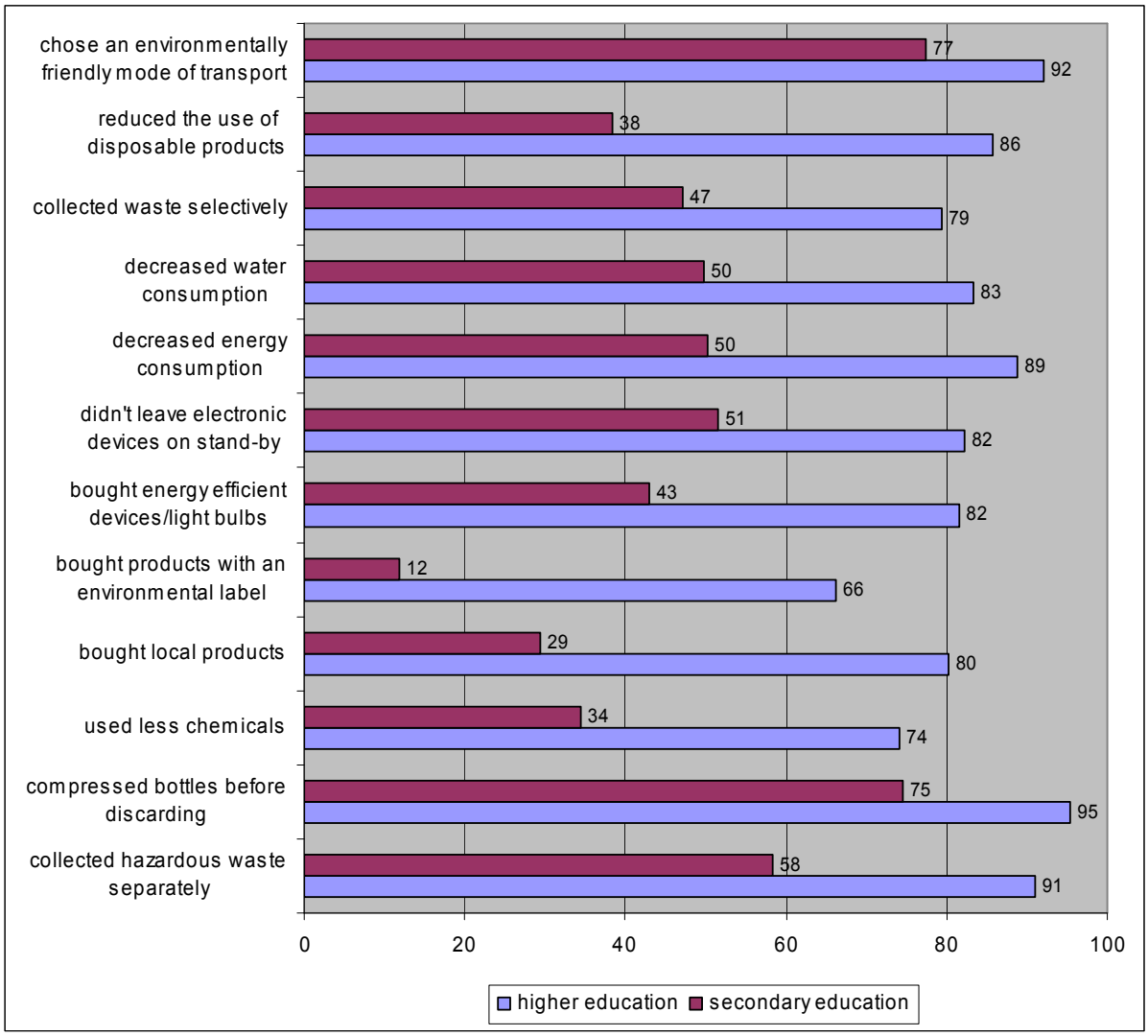

Figure 19: Pro-environmental behaviour in the two samples (% of respondents performing the activity)

It is clear that the form of the question has influenced the answers in a positive direction for the tertiary sample (allowing for the possibility that someone might perform a certain activity only on an occasional basis and counting this as a positive answer). However, the differences are very large for almost every item, with the exception of transport and compressing bottles, where it is smaller but still significant. It can be considered positive that around half of the secondary students nevertheless do engage in several types of pro-environmental behaviour such as the choice of environmentally

friendly modes of transport, the selective collection of waste and hazardous waste, the reduction of energy and water consumption, the compression of bottles and the complete switching off of electronic devices. This is clearly a good sign, showing that the beginnings of environmentally conscious behaviour are already present in most secondary school students, something that can be strengthened and further developed through higher education curricula.

5.3 Barriers to an environmentally conscious lifestyle

Figure 20 illustrates the perceived barriers to environmentally conscious lifestyle in the two samples.

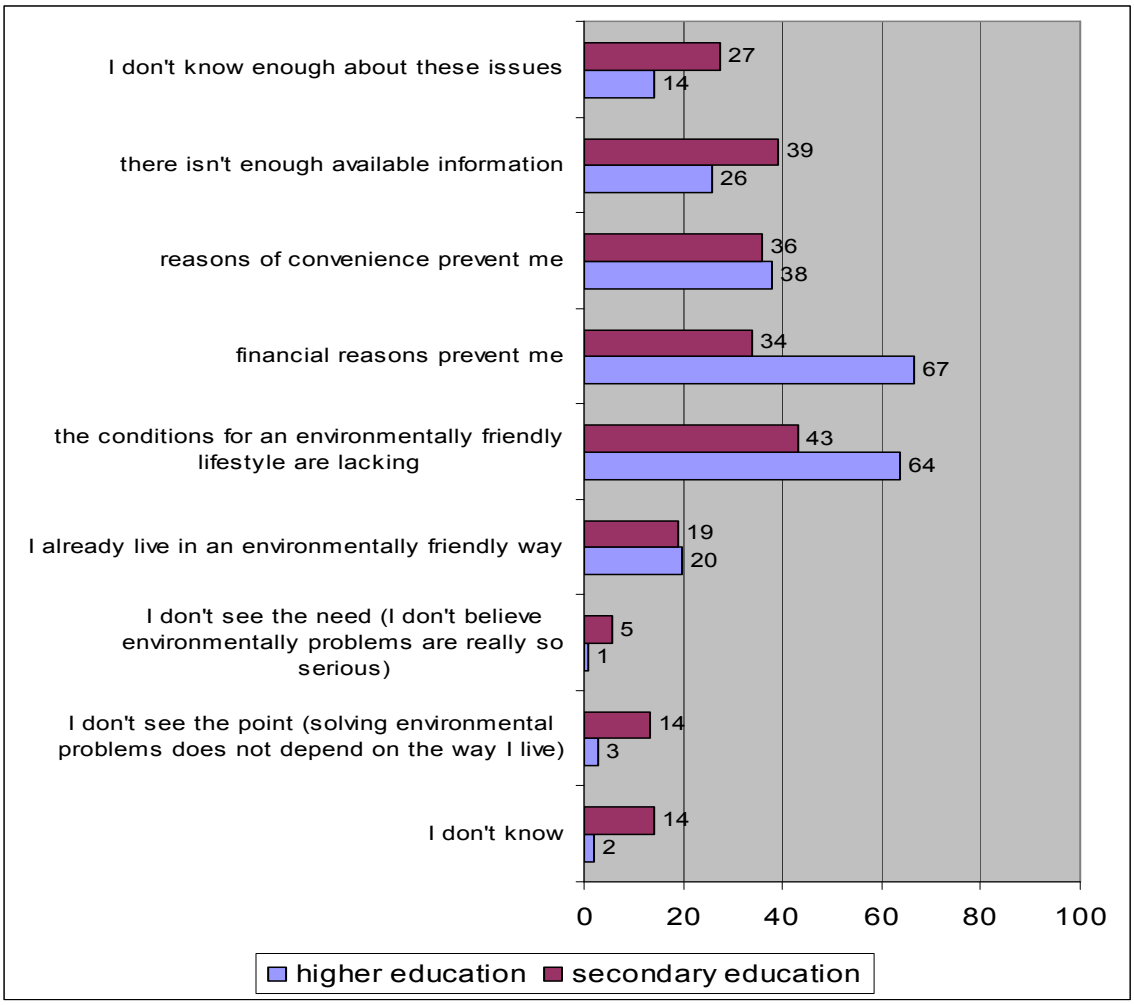

Figure 20: What are the main factors preventing you from living in a more environmentally conscious way? (up to three answers could be chosen)

University students are very clear on two points: financial reasons (67%) and the lack of the necesarry conditions to live in an evironmentally friendly way (64%) were chosen by many

respondents, significantly more than in the secondary sample (34 and 43% respectively). For the secondary sample, lack of information (39%) and the shortcomings of their own knowledge (27%) on environmental issues also appear to be a problem. Interestingly, the share of respondents admitting to convenience reasons was similarly high in both groups (38% in the tertiary and 36% in the secondary sample) – a problem that can and should be improved through environmental education. About a fifth of the sample considers that they already live in an environmentally friendly way; we found no significant difference between the two groups in this regard. The share of those doubting the seriousness of environmental problems or believing that one person's actions do not make a difference in this regard are very low in the higher edication sample (1 and 3% respectively), but slightly higher in the younger group (5 and 14%). These results clearly show that an increase of knowledge and the creation of better conditions can have a positive effect on the behaviour of today's young people.

6 Results of the Cluster analysis

Based on a cluster analysis, carried out with Ward-method, the respondents of the total sample could be sorted into three groups. 7 variables were used for the cluster analysis; Figure 21 includes the means and the scles to those seven questions.

	Frequency of buying					Environmental awareness compared to the average	Reduction in consumption is necessary for solution
	clothes	cosmetics	electronics	Sport equipment	Books, journals		
Scale	1= more times a week, 2= weekly, 3= more times a month, 4= monthly, 5= more times a year, 6= yearly, 7= less than yearly					1= higher, 2= lower	1= fully agree, 4=fully disagree
Cluster 1	3,60	3,82	5,03	5,03	2,69	1,19	2,14
Cluster 2	4,58	4,64	6,13	6,34	5,05	1,10	1,71
Cluster 3	4,65	5,16	6,27	6,45	3,17	1,08	1,70

Figure 21: Means of responses in the clusters

According to the ANOVA test, every included variable is significant in the cluster analysis. Obviously, Cluster 1 differs very much from the other two clusters. Cluster 2 and 3 differ only in some features from each other. We called the clusters due to their features (related to the others): Hedonist group, Average group, and Modest group.

Cluster 1: Hedonist group

The behaviour of the 1279 cluster members is significantly more hedonistic than the consumption habits of respondents in Clusters 2 and 3. They buy clothes and cosmetics, as well as books and journals quite regularly. Their reported living standard is high enough for this behavior and their actual spendings on products and services are also higher. Lack of money does not prevent them from more shopping as they can afford that lifestyle. In comparison, they reported to be the least aware from environmental point of view and they do not really think that reduction in consumption would be necessary to solve environmental problems. This lower environmental awareness reflects in their environmental activity as well. They consider the lack of available information as very important barrier to environmentally more conscious lifestyle, and they mentioned 'I don't see the need' and 'I don't see the point' significantly more often than members of Clusters 2 and 3. Based on the above results, it is not surprising that respondents attending high school are well over-represented in this cluster, related to the expected value (see Figure 22).

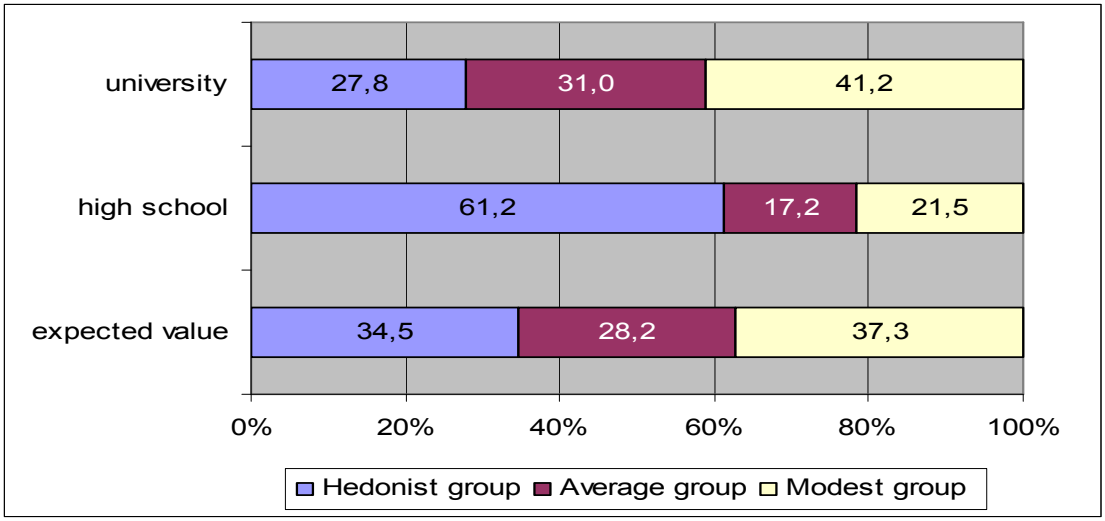

Figure 22: Cluster membership based on education level

Cluster 2: Average group

The 1045 cluster members are significantly less hedonistic in their consumer behaviour. Their major characteristic is that they very rarely buy books, journals and magazines, as opposed to the two other clusters. Their environmental awareness is reported to be higher than in Cluster 1, and there are definitely more respondents in this group who agree with the necessity of reducing consumption. As reflected in Figure 22, university students are

somewhat overrepresented in this group, while high school fellows are rather underrepresented.

Cluster 3: Modest group

The consumer behaviour of the 1380 cluster members is quite similar to the average group, but they appear to be even more modest (especially in the frequency of buying cosmetics). On the contrary, they relatively often buy books and journals, magazines. Their self-reported environmental awareness and their opinion about the importance of restricting consumption is practically the same as in Cluster 2.

Interestingly, the opinion of cluster members is very similar about the role of technical development in solving environmental problems (see Figure 4 above).

As opposed to Cluster 1, members of Clusters 2 and 3 make financial reasons and the lack of necessary conditions responsible for not living a more friendly life in a significantly higher proportion. The reasons of convienience as barrier are similarly considered in every cluster.

The obvious difference in the attitudes towards less consumption is well reflected in their attitudes towards supporting restrictive measures in order that the society consumes less: Cluster members of 2 and 3 are much more open to those measures than those in Cluster 1.

The cluster membership is not gender-specific.

7 Conclusions

The paper focused on two quationnaire-based empirical surveys, carried out at secondary and higher education levels. The aim of the research was to explore the similarities and differences of environmental knowledge, awareness, pro-environmental behavior and consumer behavior of tertiary and secondary students.

The results pointed at some issues of high importance in environmental education and attitude shaping. The content of environmental education obviously influences the awareness of environmental problems. Although respondents of both sample specified almost the same environmental problems as most important, the emphasis was different (at tertiary level: pollution, at secondary level: biodiversity). Regarding consumption, higher education is supposed to give much broader information about the impacts of consumer society on the environment, so terciary students perceive the importance of changing consumer behavior more intensively. Students in higher education are far more purposeful,

their interests and information seeking behaviour is shaped more by internal than external factors, as opposed to secondary students.

The difference in attitudes reflected in consumer behaviour of the respondents as well. Secondary students reported to be significantly more hedonistic in their shopping habits than tertiary students did. The environmental awareness appeared to be definitely higher in the university and college sample, not only in self-reporting, but also related to everyday lifestyle and the practice of pro-environmental activities. Results of the cluster analysis supported the main findings and give an overall view of environmental attitudes and consumer behavior of secondary and terciary students. The key arear of environmental education are obvious: the interest of students in environmental issues and protection should be raised and motivated at all levels of education, as well as the effects of consumption and the opportunities of lifestyle change should be made more aware – especially at secondary level in our case.

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