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PERCEPTION OF HEALTH IN THE CONTEXT OF ENVIRONMENTAL ISSUES AMONG STUDENTS OF THE FACULTY OF EDUCATION MASARYK UNIVERSITY

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Abstract: *The current state of the environment is perceived as problematic, as a source of health risks. Active health care is a part of balanced lifestyle, which is a prerequisite of well-being, personal and social self-fulfilment. Responsible lifestyle in pursuit of health reflects attitude towards the environment. Following previous studies devoted to the description of pattern of thinking on environmental issues in teachers and student teachers, we now present results of an investigation focusing on students´ perception of health in the context of environmental issues. Our main assumption is that interest in the environment as the determining agent of optimal health is expressed in personal involvement of every individual. With regard to the significant role of the teacher in school ecological/environmental education we examined attitudes of respondents towards protection of the environment, the form of participation in its protection, ways of decision making and conduct corresponding with active health care in life situation. The results of the investigation will contribute to the development of the system of teacher training which will correspond with the concept of health support and sustainable development.*

Keywords: *health, lifestyle, health care, health education, protection of the environment, attitudes, thriftiness, environmental education, sustainable development.*

In our research focusing on environmental aspects of education for health we have so far defined the basic issues and topic areas in ecological/environmental education in the context of the research project „School and Health for the 21st Century". In this extensive topic we are concentrating mainly on the issues of school curriculum[1] and

[1)] Personal health supporting competences are formulated in the basic education curriculum: recognising health as the key value in life, understanding health as a balanced status of physical, mental and social well-being; recognition of a person as a biological individual dependent on the way of decision-making, level of interpersonal relationships and quality of environment at various stages of life; basic orientation in what is healthy and good for one's health, what harms and jeopardises health; use of adopted preventive measures for

teacher's participation in its formulation and implementation. This is why our goal is to offer a theoretical and empirical document for reforming the pre-graduate and post-graduate teachers training. Following-up on previous studies dedicated to describing the image of environmental thinking in teachers, student teachers and primary school children (e. g. Horká, Bubeliniová, 2004; Horká, Hromádka 2008) this paper offers results of a survey reflecting ways of perceiving health in the context of environmental issues in student teachers. They will become the point of departure for preparing the teachers training standard in this field. In the theoretical points of departure we briefly outline the pedagogical aspects of the relationship between the environment and health, its value dimension and the role of a teacher.

Theoretical Points of Departure

Environment and Health

The present condition of environment is perceived as problematic, as a source of health risks. It is the consequence of the present state of civilisation progress – local ecological crises, pollution of the environment, worsening quality of water and cleanliness of air, etc. The programme of **education for clean and aesthetical environment**[2] as an initial stage of a comprehensive ecological/environmental education (EE) has been present in the school curricula since 1970s. This programme aims at developing public awareness of the **quality of water, air, food, quality (pollution) of the environment.** In the range of reasons for protecting the environment (such as utilitarian economic, aesthetical and ethical) preference is given to **health** reasons for ensuring an **environment that does not jeopardise human health** and the nature as the place for physical and mental recreation. Protection of the environment as the shared home of people is connected with the care for human health and maintenance of ecological balance (cf. Novotná, 1997: 180–181). These trends are reflected in the EE concept.

Values and Care for the Environment

Our deeds, behaviour and emotional experiencing are conditioned by the awareness of values. The scale of values (of what people consider as their legitimate needs, to what they are prepared to commit their interest, money, effort) influences the size of people's demands. It is namely the **need** that stands at the foot of the evaluation process. According to dynamic psychologists values can be perceived in relation to dynamic trends among which we rank for example the need of physical well-being (satiation, warmth, exercise, relaxation, sleep), the need of security and stability, need to investigate, discover, the need of excitement, change, manipulation, company, tenderness, protection, care, the need to resemble others, to be recognized, admired, loved by members of a group, to be successful. The fundamental needs bring to life an entire

influencing health in the daily routine, for strengthening ways of decision-making and acting in line with an active health support in every situation in life; connecting health with healthy interpersonal relationships and fundamental ethical and moral attitudes, with voluntary effort, etc.; active participation in activities supporting health and in health-supporting activities in school and community.

[2)] The concept of organisms as the bio-indicators of environment condition, monitoring and eutrofization were used in teaching programmes.

complex hierarchy of higher needs. The carnal needs in humans are humanized; the whole process of life is thus not only natural but also cultural. Human needs have become part of new contexts, more demanding, finer, spiritual.[3] However, after saturating our needs to a certain level their escalation begins to work in a contradictory way and leads to jeopardising the saturation of fundamental needs (drinking water and breathable air).

If the aim of our interest is to describe the student's perception of health in the context of environmental protection, we can recall the criteria of behaviour and decision-making in the context of sustainability according to the Steads (1998: 141–4). The authors define **supporting, operating, instrumental values**[4]**,** among which they rank: wholeness, posterity, community, appropriate scale, diversity, quality, dialogue, and spiritual fulfilment. Our respondent is orientated at wholeness, if he is able to recognize and realize the impact of his decisions on other parts of the ecosystem. If he realizes that we „did not inherit the earth from our parents. We borrowed it from our children"[5] and this is why it is our obligation to keep clean water, air, rich resources, bio-diversity and natural beauty for next generations, for the posterity, then he respects the value of **„posterity"**.

If he understands the change in values from wholeness to **appropriate scale**, he can investigate the basic differences between wanting and needs in the society, for example using less non-renewable resources, looking for ways to save energy, use of renewable resources, reducing material consumption, choosing suitable technology (recycling). In this respect it is appropriate to mention the appeal by E. Kohák (1998: 81) to „demanding selection", to making „high demands for clean water and clean air, to health care and public transport, to maximum energy efficiency and joy of life – not the most expensive gathering of knick-knacks… what is less costly and less demanding, what troubles less the nature and human community, is better".

The value of **„community"** underlines the feeling of self-consciousness of an individual living „on a certain piece of land" (Stead 1998: 151). **Quality of work** is connected with the psychological satisfaction with work well done reducing the desire of a person to achieve contentment through consuming an increasing amount of goods, **quality of life** with the right to physical well-being, permanent happiness, personal fulfilment and hopeful future (Stead, 1998: 155).

Spiritual fulfilment as an instrumental value expresses human goals – happiness, joy, well-being, self-actualisation in a spiritually full life. A development in quality of life and new lifestyle are emphasised.

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[3] S. Kučerová (1994: 19) illustrates this fact on the example of satisfying the need to eat and drink. She demonstrates how many branches, professions and techniques are employed thanks to a single fundamental biological need „to be satiated„. She aptly points to its transformation into a civilisation and cultural need satisfiable through the values of use and comfort that do not exist in the nature without humans. For a human it is not sufficient to satisfy the hunger in any way. They want regular meals independently on the season containing varied, healthy diet without risks to health, tasty food eaten in a quiet and nice place, often without any making any personal effort put into its preparation, without wasting time, in a pleasant company, with music in the background, etc. In a similar way it is possible to demonstrate the change in the fundamental need to protect the body from cold and bad weather with clothing and shelter; how many civilisation values were created through this need, etc.

[4] These values (central and auxiliary) originally meant for the economic area can be transported as key values into the pedagogical area.

[5] Kenyan proverb

The above-mentioned values as part of the cultural aspect of the EE curriculum content are thus becoming an important part of the ecological/environmental standard of teachers training (cf. Environmental Education, Wales 1996, Environmental Education An Active Approach, 1993, Palmer 2003, Horká, 2005). In it one cannot omit the element of active citizenship with an emphasis on attitudes and personal values demonstrated in the care for the environment: interest, accountability, aesthetic sense and need to create and enjoy beauty, tolerance, willingness to change lifestyle, co-operation on addressing problems.

It is well-known today that the dangerous imbalance between the disproportionately developing material aspect of the western civilisation and the spiritual aspect of the culture, the so-called cultural gap (Kluckhohn, Strodtbeck, 1961, Vavroušek, 1994, Nekvasil, 2000), can be filled only if people realize that they do not stand above the nature but are part of it. It is an important precondition for fulfilling values headed toward sustainable development[6]. Together with another new phenomenon, **ecological culture,** it requires a radical change in the current people's attitude to the nature. It touches on the material as well as spiritual spheres of the society and each individual and is always reflected in **education**.

Environment and Education

Education is viewed as a distinct phenomenon that through its function must and can help to overcome the crisis of the contemporary human kind toward implementing new desirable qualities of life. This brings to life the efforts of Komenský (1948: 39) to „amending human affairs" as well as one of his many definitions pointing to the fact that education is above all self-knowledge and self-control.

It should be outlined as a cultural activity in the sense that it is a process of mastering the rules of behaviour that cannot be biologically inherited and yet are to be shared by all people. Thus orientated education cannot be limited to a sum of knowledge about the nature and assuming an attitude to it but it fosters respect for the environment and knowledge that it has to be modified in such way that it does not lose its ability to satisfy the needs of living creatures. An indifferent attitude to the environment proves the inability to perceive problems in a wider context as a result of an insufficient knowledge of the fundamental biological and ecological laws and principles. Another cause is a value orientation lacking identification with the ideas of solidarity, unity, tolerance, altruism, respect for life in all its forms, emphasis on spiritual, intellectual life and tradition. The teacher has an important role in forming and developing the ecological culture in a person.

[6)] Among new values associated with sustainable development are accountability to future generations, quality of life, conscious modesty, denial of redundant things, refusal of consumerism, awareness of negative impacts of human activities, respecting the principle of prudence, development of human rights and freedoms while increasing the awareness of joint responsibility for the development of human society and condition of the nature, self-consciousness of each individual based on the possibility of free decision-making connected with the awareness of solidarity of each person with the human society, solidarity and altruism, tolerance, awareness of unity with the nature, respect for life in all its forms (Vavroušek, 1994, s. 97–99).

Teacher and Environmental Education

The structure of the teacher's professional competencies newly includes the **„environmental competence"** focusing on the „area of maintaining the environment, active effort for protecting the environment". Care for the environment is connected with the care for health and this is why from the EE point of view one must not omit the professional **competence in healthy lifestyle** (Vašutová, 2001: 33–37). In our survey we follow namely the subjective dimension of **ecopedagogical (environmental) competence** encompassing a committed way of thinking about the world, concept of life, values, attitudes and life orientation, empathy, interest, culture of conduct. We believe that the value – eco-social – life-orientated competence is the fundament of all teacher's competencies (Horká, 2005: 98).

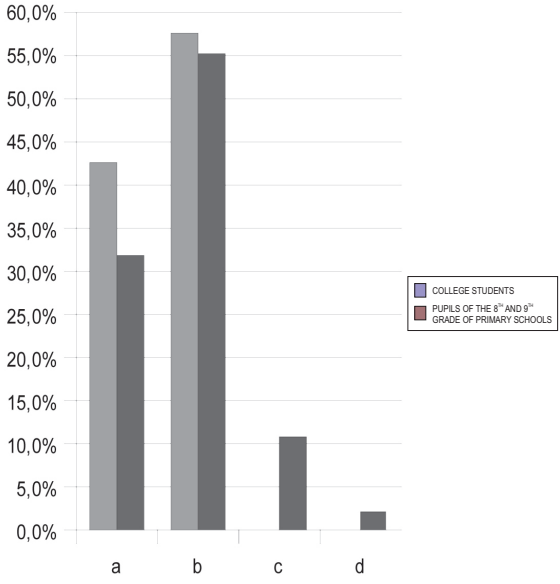
Environmental sensitivity based upon a long-term formative experience and formed by a complex interaction of many life experiences and their interpretations by an individual is the main precondition for learning about the natural environment, perceiving its damage and feeling the need to protect it. Emotional dissatisfaction along with the insufficient protection of the nature („We do so very little"), emotional alliance with the nature and cognitive interest in the nature are the key components in a relationship with the nature (e.g. Kals, Schumacher and Montada, 1999 – In Franěk, 2004). In the light of these findings we try to establish whether our respondents perceive the damage to the environment, feel the need to protect it, show (though verbally) emotional alliance with the nature and emotional dissatisfaction with the insufficient protection of the nature. We understand interest in the environment and personal commitment of each individual as the determinant of optimum health. Education for health (healthy lifestyle) thus becomes and efficient strategy for improving the environment.

It is obvious at the present day that consumerism leads not only to the exploitation of natural resources, to de-naturalisation, but also to the devastation of moral values, to losing the purpose of life and disrespect to life. It is important to review the values of the contemporary people which should lead from mere hominisation to actual humanisation contributing to a more adequate assessment of people's place in the contemporary world and their harmonious inclusion in the system in relation to the nature, culture, humanity. The education strategy should therefore be based on strengthening and supporting accountability in the name of the health connected not only with rejecting the forms of behaviour that harm it but also with creating an environment supporting health and showing a positive attitude to the environment.

Survey

Goal of the survey: describing the perception of health among students at the Faculty of Education, Masaryk University in Brno (FE MU), in the context of issues related to the environment.

Survey Group



163 students of Faculty of Education, Masaryk University in Brno		
1st year	29	17.8%
2nd year	66	40.5%
3rd year	28	17.2%
4th year	40	24.5%
men	4	2.5%
women	159	97.5%

Students[7] were selected from 1st to 4th year student teachers of junior basic school studies on the basis of availability at the Faculty of Education at Masaryk University. As such the selection is not random and this is why the informative value of the sample group (FE MU students) is rather limited.

Survey tool: questionnaire with close-ended and open-ended items[8].

Descriptive Analysis of Survey

In the introductory descriptive section of the survey we will outline the survey assumptions (we do not refer to them as hypotheses, as in this part of the survey we do not test the strength of relationships between variables but describe the group).

Survey Assumptions:
(applicable on our group of FE MU students)

P1: Respondents' attitude toward protecting the environment is rather positive[9].
P2: Most respondents participate in protecting the environment in one way or another.

[7] In the text we refer to them as students or respondents even though both women and men are included in the group. It is not an expression of gender ignorance we merely believe that using genders would make the text confused.
[8] We elected a quantitative survey where the resulting information is reduced to a great extent. We select only some items from the questionnaire.
[9] In case of our survey it is essential that we „cannot monitor the attitude directly as a construct but we derive it from the behaviour and manifested opinions" (Jandourek 2001: 189). The construct *attitude* is explained in the evaluation context. „Relationship with values forms the content of attitudes; attitude to something – anything can be the subject – expresses the evaluation of an object by an subject that exists in a continuum whose poles are formed by the absolutely positive and absolutely negative attitudes, i. e. for example an absolute agreement or disagreement with a certain statement" (Nakonečný, 1998, s. 118.).

P3: Most respondents highly value their own health.
P4: Most respondents try to take good care of their health.
P5: Students perceive some forms of pollution (or damage) as health risks.

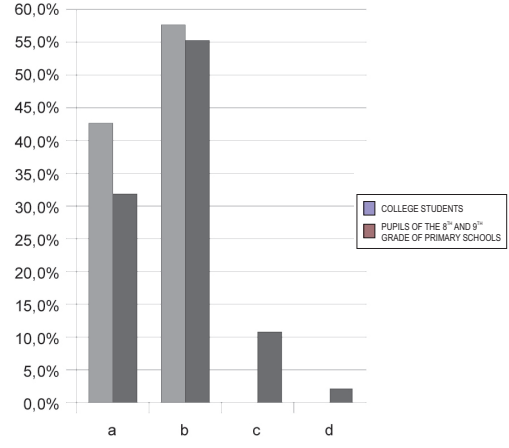
Survey Results

Attitude to environment protection

In the following two selected items we survey the students' attitude to protecting the environment. For comparison we offer results of a survey undertaken with 8th and 9th form pupils at primary schools in Brno last year (cf. Horká, Hromádka, 2008).

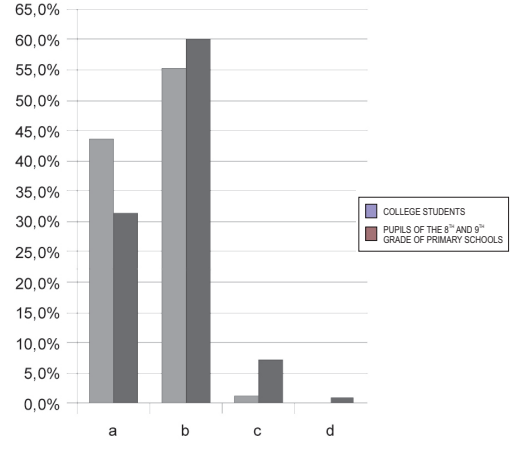
Item no. 5: Do you agree with this statement?
„I want to participate in protecting the nature."

FE MU students; from 160 valid respondents		
a	yes, absolutely	42.5%
b	yes, rather	57.5%
c	rather not	0.0%
d	absolutely not	0.0%
8th and 9th form pupils at primary schools in Brno; from 223 valid respondents		
a	yes, absolutely	31.8%
b	yes, rather	55.2%
c	rather not	10.8%
d	absolutely not	2.2%



Item no. 5: How much do you agree with the following statement:
„I want to live a life that is always considerate to the nature."

FE MU students; from 160 valid respondents		
a	yes, absolutely	43.6%
b	yes, rather	55.2%
c	rather not	1.2%
d	absolutely not	0.0%
8th and 9th form pupils at primary schools in Brno; from 223 valid respondents		
a	yes, absolutely	31.4%
b	yes, rather	60.2%
c	rather not	7.1%
d	absolutely not	1.3%

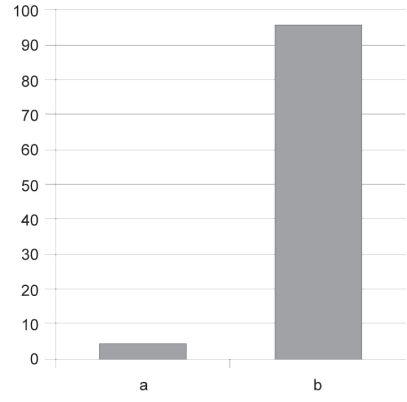


It seems that students in our group have a considerable potential to protect the environment. Their attitude to participating in environmental protection is positive, the more so that it is so much better than in primary school pupils.

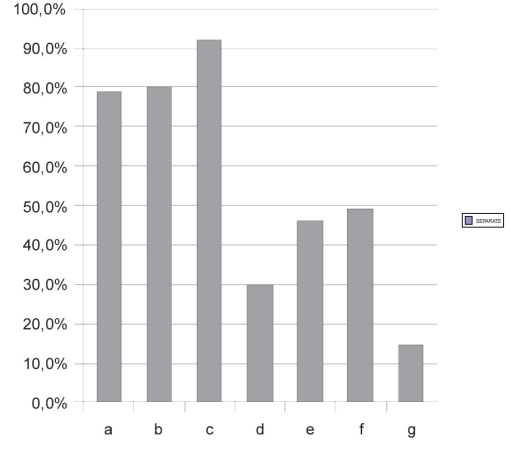
Participation in protecting the environment

Item no. 7 looked into waste separation, that is **whether respondents separate waste and which.**

FE MU students; from 163 valid respondents		
a	do not separate	4.3 %
b	separate	95.7 %



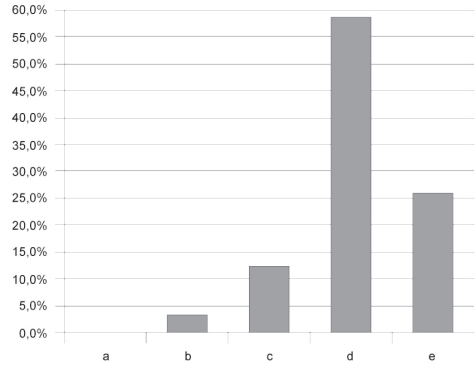
Types of separated waste		
a	glass	79.1 %
b	paper	80.4 %
c	PET bottles	92,0 %
d	other plastics	30.1 %
e	metals	46.0 %
f	hazardous waste	49.1 %
g	other waste	14.7 %



Most students participate in waste separation at least in three main categories: glass, paper and the very popular PET bottles. This corresponds with the general trend in the Czech Republic where the number of people separating waste grows thanks to the increasing general awareness of possibilities and reasons for recycling waste. Waste separation is gradually becoming a social standard. Nowadays it is embarrassing not to separate waste (also thanks to the mass media campaign promoting separation).

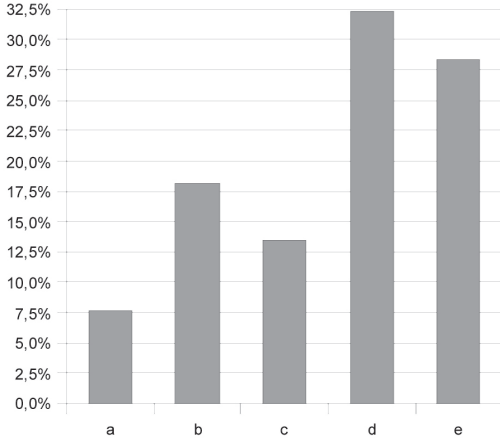
Item no. 15: level of consent with the statement on an interval scale:
„I deliberately buy products with regard to their environmental friendliness."

FE MU students; from 162 valid respondents		
a	always	0.0 %
b	very often	3.1 %
c	often	12.3 %
d	sometimes	58.6 %
e	never	25.9 %



Item no. 16: level of agreement with the statement on an interval scale:
„I deliberately use cosmetic products of which I am absolutely certain that they were not tested on animals."

FE MU students; from 162 valid respondents		
a	always	7.7 %
b	very often	18.1 %
c	often	13.5 %
d	sometimes	32.3 %
e	never	28.4 %



We were interested to know how students behave as consumers. As well as waste separation this category of so-called „undemanding care for the environment"[10] includes the preference and search for products that are not harmful (or less harmful) to the environment. There are a number of alternatives for such behaviour. It may be preference to organic product certified goods (environmentally friendly products, BIO – organic farming products, FSC – responsible forest management product, Blaue Engel, Organic A+ A++, Energystar, products made with recycled paper, etc.). Another criterion could

[10] G. Pfligersdorffer (1993) differentiates the area of behaviour in favour of the environment associated with shopping and waste recycling („undemanding area") from behaviour associated with transport („demanding area").

be the recyclability of packaging, choosing among paper, glass, TetraPack and plastics (environmentally friendly plastics – PP, PET, PE and other – PS and PVC).

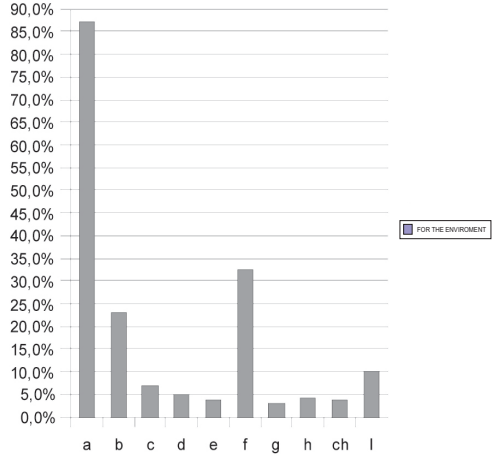
A product's impact on the environment is closely connected with the amount of energy consumed to transport the product to the consumer, product's chemical composition, ecological rucksack (impact of product manufacture measured in kilograms of generated waste), etc.

We left this item in a general format. We were rather more interested in the subjective views of students with which they evaluate their participation in environmental protection in a certain area. It transpired that in case of preference to environmentally friendly products students are doing remarkably worse than in waste separation.

The preference of products that were not tested on animals falls within the sphere of ethics rather than environmental protection; nevertheless it is associated with the „respect for life" value which is an important component in the theory of ecological ethics (cf. Kohák 1998). Even though in this respect the students are rather „half-hearted", there were 7.5% of those who *always* knowingly use cosmetic products that were not tested on animals and 18.5% of those who say they do it *very often*. In relation to the *respect for life* ethics we were interested to know how many vegans or vegetarians were in the group and it turned out that there were none.

Open-ended item no. 30 **„What do you do yourself for the environment?"**

FE MU students; from 161 valid respondents		
a	waste separation	87.0%
b	environmentally friendly transport	23.0%
c	saving energy	6.8%
d	saving water	5.0%
e	active work for the nature	3.7%
f	not making mess[11]	32.3%
g	preference to organic or environmentally friendly food products	3.1%
h	preference to environmentally friendly products	4.3%
ch	saving plastic bags	3.7%
i	other answers	9.9%



The important thing in the item above is that it is **open-ended**. The subsequently formed categories reflect the respondents' answers. It is not surprising that students

[11] This category includes various ways of "not making mess", for example "I do not dispose of litter outside", "I drop litter in the bins only", "I do not drop papers on the ground", "I do not wash my car outside", etc.

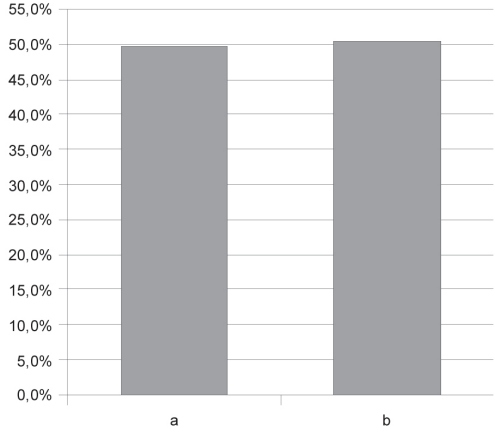
profess mostly to the popular waste separation. The passive „not making mess" came second in the relative frequency. Surprisingly, „environmentally friendly transport" occupied the third place. In this respect respondents mention their intentional self-restriction in car traffic. Such activity falls in the „demanding area" of behaviour in favour of the environment.

Value of One's Own Health

Item no. 17 tries to establish how important the value[12] of their own health is for the respondents. The respondents were asked to chose five most important values and rank them by importance (offered values: *wealth, money, good results at school, good friends, good relationship, own health, clean environment, plenty of leisure time, no stress, good relationships in the family, sense of security, good results at sports, settled housing, career, satisfactory political situation, mental balance, own appearance).*

We wanted to find out how often respondents will put their own health in the first place among the other offered values.

FE MU students; from 151 valid respondents		
a	own health in the first place	49.7 %
b	another value in the first place	50.3 %



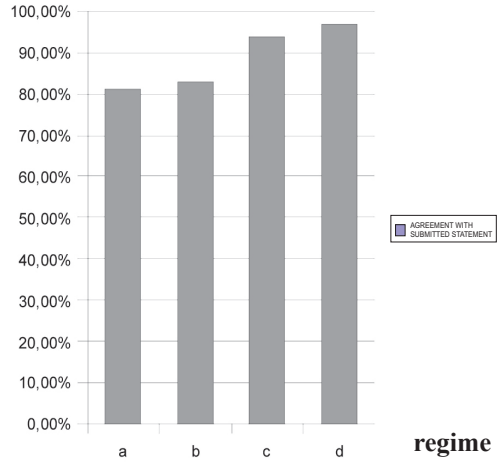
It appears that students highly value their health. Almost one half of them put the value of their health in the first place among other values.

Care for One's Own Health

The following items look into individual possibilities of caring for one's health. The following tables (and diagrams) offer the relative frequency of agreement (disagreement) with submitted statements (for better orientation the originally ordinal variables were transformed into dichotomic ones).

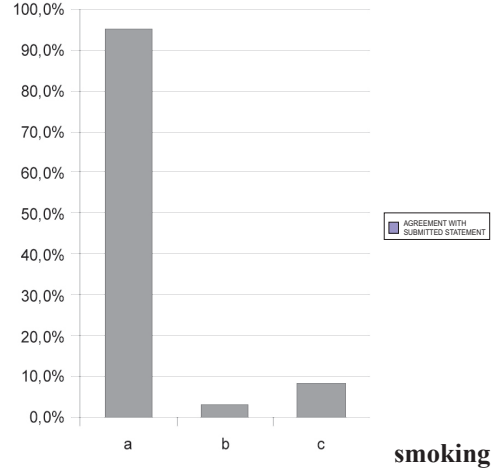
[12] „We consider as a value the positive importance of the object for an individual" (Nakončený 1998, p. 118)

FE MU students; from 160 valid respondents		
a	v: I try to eat a healthy diet	81.2%
b	v: I try to keep a drinking regime	82.8%
c	v: exercise is important for me[13]	93.7%
d	v: good sleep is important for me	96.8%



regime

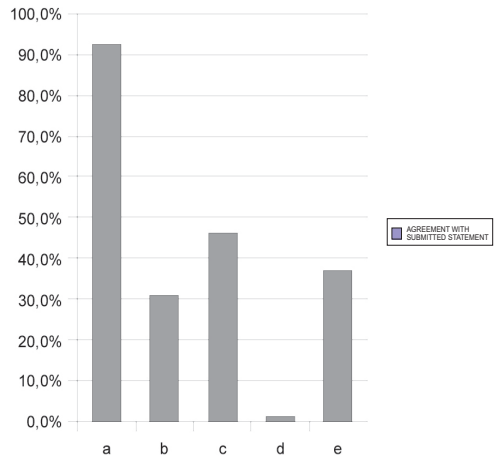
FE MU students; from 135 valid respondents		
a	v: smoking is dangerous	95.1 %
b	v: smoking cigarettes is all right	3.1 %
c	v: smokers are better company than non-smokers	8.1 %



smoking

[13] Full wording of the item: „Exercise (e.g. gymnastic exercises, long walks, riding a bicycle, active sport, etc.) is very important for me".

FE MU students; from 153 valid respondents		
a	v: occasional consumption of alcohol is all right	92.6 %
b	v: frequent consumption of alcohol is all right	30.8 %
c	v: using soft drugs is all right	43.1 %
d	v: using hard drugs is all right	1.2 %
e	v: smoking marihuana is quite common today	37.2 %

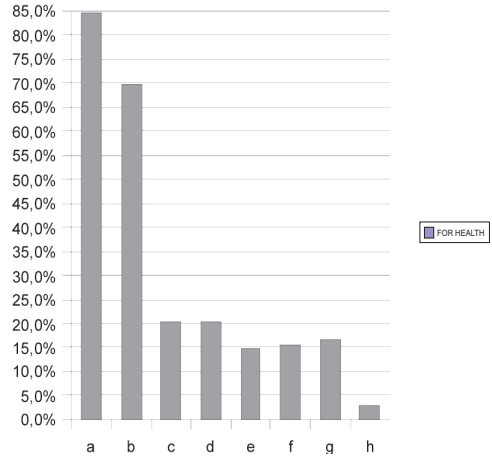


other addictive substances

We are aware that the selected indicators of care for one's health are far from exhaustive. This is why we offered an open-ended item for the respondents to specify their ideas of care for their health.

Item no. 29 **„What do you do for your health?"**

FE MU students; of 161 valid respondents		
a	exercise	84.5%
b	healthy food	69.6%
c	not using drugs	20.5%
d	drinking regime	20.5%
e	mental well-being	14.9%
f	sufficient sleep	15.5%
g	going outside	16.5%
h	nothing for health	3.1%



It appears that the main part of care for the students' health takes place in the area of **healthy diet** and **exercise**. We were surprised at their resistent attitude toward smoking cigarettes. Without regard to how many smokers there are in the group, their attitude is clearly at the negative end of the continuum between rejecting and accepting this phenomenon.

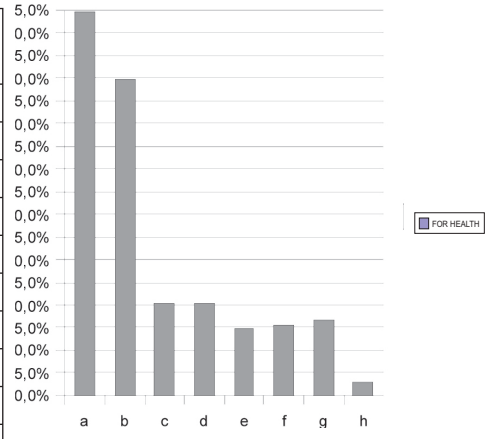
„Intersection" of Care for Health and Environment

The area of **nutrition** represents an interesting conceptual structure on the intersection of „care for health" and „care for the environment". Putting other ethical dimensions aside, the most environmentally friendly (least energy demanding) nutrition is that of vegans (or vegetarian, flexitarian). As mentioned above, in the group there was no-one falling in any of these categories.

In terms of the global environmental impact, especially problematic are namely the supra-national chains producing fastfood (wasting food, material, energy, insufficient supervision of production and distribution impact on the environment) (cf. Keller 1995). The survey group was submitted various alternatives of places where they would like to eat, should they have the opportunity. The „McDonald's (or KFC)" alternative was chosen by a mere 0.6% (while in the group of 8th and 9th form pupils it was 25.3%). The alternative „At home" became modal (71.6%). Fastfood products even pose a „health risk" for 10% of our respondents in their answers to the **open-ended** item no. 27:

Write what you consider as a health risk in the city life

FE MU students; from 158 valid respondents		
a	car traffic	53.8%
b	smog – polluted air	68.4%
c	crime – violence	11.4%
d	infections	5.1%
e	stress – hurry	33.5%
f	obesity	1.3%
g	waste – pollution	17.7%
h	lack of exercise	8.2%
ch	drugs – addictive substances	9.5%
i	industry	7.0%
j	lack of green areas	13.9%
k	noise	20.9%
l	in this category we included various manifestations of xenophobia (mainly racism)	3.2%
m	fastfood	10.1%



Using the above-mentioned responses to the open-ended item no. 27 (*Write what you consider as a health risk in the city life – offer at least three examples*) with common features we formed the following categories: *car traffic, smog – polluted air, crime – violence, infection, stress – hurry, obesity, waste – pollution, lack of exercise, drugs – addictive substances, industry, lack of green areas, noise, xenophobic statements, fastfood.*

This may be the focal point of our survey. In several variants the students associated their health concerns with environmental issues (*car traffic, smog – polluted air, waste – pollution, industry, lack of green areas, noise*). In terms of relative frequency, *smog – polluted air* is the most significant category (68.4%) and *car traffic* (*53.8%)*[14]. It is transpiring that students, when staying in the city, feel threatened with what is specific absolutely natural for urban areas nowadays, i. e. car traffic and associated air pollution. It is not surprising that emissions from traffic (especially microscopic dust particles contaminated with exhausts) pose a truly serious threat to human health (satisfying the natural human need for breathing fresh air is becoming very difficult in cities).

It is remarkable that this type of violence against human health is so generously tolerated in the society, even though its malignant character is no secret. Some sociologists (cf. Keller. 1998) maintain that it is the higher socio-economic status enjoyed by the car owner and the irrational illusion of personal freedom associated with the idea of higher mobility that is behind the generally positive attitude to the problematic individual car traffic, even though paradoxically this freedom means a voluntary subordination to the police regime of car traffic regulations and the idea of unlimited mobility for cars in cities is largely overestimated. The very political situation (basically in all parts of the world) is being strongly deformed by the powerful transport and oil lobby and building contractors lobby making money on public contracts for road and motorway construction to facilitate a further economic growth and welfare in the form of increasing mobility in a landscape cut with concrete borderlines.

Relational Analysis of the Questionnaire Survey

Hypotheses:
(the following hypotheses relate to our group of FE MU students)

H1: There is a correlation between the attitude to one's own health and environmental protection.
H2: Respondents who highly value their own health wish to participate in protecting the environment.
H3: Respondents who consider car traffic as a health threat intentionally chose more environmentally friendly means of transport.
H4: There is a correlation between the attitude to environmental protection and actual behaviour in favour of the environment.
    h1[15]: There is a correlation between the attitude to environmental protection and „variety of separated waste"[16]
    h2: There is a correlation between the attitude to environmental protection and preference to environmentally friendly transport.

[14)] For comparison we are offering results of the survey that was carried out with 8th and 9th form pupils in Brno primary schools: 53,3 % (of 246 valid) considered smog – polluted environment as a health risk; 43,3 % (of 246) considered cars (car traffic) as a health risk.
[15)] Based on recommendations (Pelikán 2004) we formally divided the hypotheses to main (such as H1) and auxiliary (such as h1).
[16)] Separing waste is a kind of social standard for young people nowadays – this is supported by the result of a descriptive survey within the questionnaire item no. 7 („Do you separate waste?"). 95,7 % respondents answered they did. There are differences within the group as to how many types and which types of weste are being separated.

h3: There is a correlation between the attitude to environmental protection and preference to environmentally friendly products.

h4: There is a correlation between the attitude to environmental protection and preference to cosmetic products that were not tested on animals.

H5: There is a correlation between preference to cosmetic products that were not tested on animals and preference to environmentally friendly products.

In order to establish the strength of correlation between variables, in testing the hypotheses we elected suitable summarisation statistics (association and correlation coefficients) by the type of variable (ordinal, nominal) and by the number of variations.

In hypotheses H1, H2, H3, and auxiliary hypotheses h1, h2 to hypothesis H4 we were not able to prove the existence of a correlation between the variables.

There is a slight correlation (T_c[17] = 0.31) in case of *the correlation between the attitude to environmental protection*[18] *and preference to environmentally friendly products* (auxiliary hypothesis h3 to hypothesis H4). And there is also a slight correlation (T_c = 0.22) in case of the correlation between the *attitude to environmental protection and preference to cosmetic products that were not tested on animals* (auxiliary hypothesis h4 to hypothesis H4). An almost half correlation (T_b = 0.47) appeared in the correlation between variables *preference to cosmetic products that were not tested on animals* and in *preference to environmentally friendly products* (hypothesis H5).

In the relational section of our survey we were not able to prove a correlation between the attitude to one's own health and attitude to environmental protection. There appeared to be a slight link between the attitude to environmental protection and some forms of behaviour in the context of protecting the environment.

Conclusion

When the Business Leaders Forum awards its prize for health and environment, it puts an emphasis on the synergy between economic development and efficient protection of the environment and human health. It is noted every year that the support of health and sustainable development is based on the premises that it is not only necessary but also possible to harmonise both. In the teachers training system it is also necessary to harmonise the health support concept with sustainable development. It is clear that ecological and environmental education must be multi-disciplinary and comprehensive, i. e. that the knowledge must be understood and applied in the overall context, in the holistic sense, systematically, to support the knowledge of continuity and deeper spiritual anchoring.

The presented survey results will be used for the preparation of the teachers training system. It is possible to rely on the fact that students perceive the damage to the environment, feel the need to protect it and to participate in the care for it. Their interest in the environment and personal commitment are considered as the determinants of

[17] We use this symbol for the correlation coefficient of Kendall`s tau-c used to measure the strength of correlation between the ordinal variables for the rectangular table (Kendall`s tau-b for square table).

[18] This ordinal variable is represented by the close-ended item that establishes the level of agreement with the statement „I want to participate in protecting the nature".

optimum health. The respondents' health concerns can be motivating for changing the behaviour in favour of the environment.

EE is an indispensable instrument in environmental protection. Since it is part of the curriculum as a cross-section topic, it touches the teachers' work in all subjects. It is crucial to make their professional training, be it pre-graduate or post-graduate, more efficient. It is equally crucial to overcome the isolated informative, non-appealing concepts detached from the recipients and their local or regional possibilities and needs. We cannot do without a proper preparation of teachers capable of teaching people to learn efficiently.

VNÍMÁNÍ ZDRAVÍ V KONTEXTU PROBLEMATIKY ŽIVOTNÍHO PROSTŘEDÍ MEZI STUDENTY PEDAGOGICKÉ FAKULTY MASARYKOVY UNIVERZITY

Abstrakt: Současný stav životního prostředí je vnímán jako problémový, jako zdroj zdravotních rizik. Aktivní péče o zdraví se realizuje ve vyváženém životním stylu, který je předpokladem životní pohody, osobní a společenské seberealizace. V zodpovědném jednání ve jménu zdraví se promítá postoj k životnímu prostředí. V návaznosti na předchozí studie věnované deskripci obrazu myšlení o environmentálních tématech u učitelů a studentů učitelství, uvádíme nyní výsledky výzkumného šetření sledujícího, jak studenti oboru učitelství vnímají zdraví v kontextu problematiky životního prostředí. Vycházíme z toho, že zájem o životní prostředí jako určující činitel optimálního zdraví se projevuje v osobní angažovanosti každého jedince. S ohledem na významnou roli učitele ve školní ekologické/environmentální výchově nás zajímají postoje respondentů k ochraně životního prostředí, forma participace na jeho ochraně, způsoby rozhodování a jednání v souladu s aktivní podporou zdraví v životní situaci. Výsledky šetření přispějí k vytváření systému učitelské přípravy, který bude odpovídat konceptu podpory zdraví a udržitelného rozvoje.

Klíčová slova: zdraví, životní styl, péče o zdraví, výchova ke zdraví, ochrana životního prostředí, péče o životní prostředí, postoje, šetrnost, ekologická/environmentální výchova, udržitelný rozvoj.