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Theses of the PhD dissertation

Environmental Attitude-shaping in lifelong learning

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The excessive use of the environment and its effects over the past decades have proven that human activities exceeded our planet's capacity to sustain such an impact. We exploited and overburdened our environment in a way that the survival of our own species is also at risk at this point. The global problems that we must face can only be solved by a radical change in our approach. These changes must be brought about both at a personal as well as at a societal level. The mission of environmental education and pedagogy of sustainability is to educate people to become citizens who can act thoughtfully and responsibly in their daily lives and be aware and responsive to social issues. The institutional training and education start in kindergarten and end in university; however, it is lifelong learning that encompasses the real mastering of such an outlook. Therefore, the continuous expansion of responsible environmental attitudes and the deepening of related awareness must form part of the learning process. The core question is whether the Hungarian legislative and institutional background and conditions are met and wheather or not they comply with the European standards and legislation.

The main objective of present research analysis is to examine the international and the Hungarian relevant pieces of legislation regulating sustainability and regulations relating to the education of the basic principles of environmental sustainability. Present research examines the extension and coherence of the Hungarian educational legal background with regard to environmental awareness, by comparing, where possible, the pieces of legislation currently in force as well as the legislative acts preceding those. It is important to look into the public institutional background of the relevant legislative instruments and examine the realization of such concepts building on one another at the subsequent levels of education. Are the institutional conditions for teaching the concepts of lifelong environmental learning met? Are monitoring and follow-up made possible? It is also important to find out what results can be achieved in the area of environmental awareness with the findings of backgrounds and mechanisms.

2. The hypotheses of the research

1) The Hungarian legal regulatory framework relating to education and sustainability currently in force, complies with EU regulations. However, this framework is not concrete in many aspects, and in some cases, these pieces of legislation are a step backwards compared to the previous rules.

2) The current education system does not ensure continuous environmental education hence, levels building on one another are missing.
3) The biggest problems arise from the transition from elementary to secondary and from secondary to higher education levels

4) Theoretically, it would be possible to develop and introduce a comprehensive environmental attitude-measurement system.

5) In the sample, those questioned will attribute the causes of the emergence of global problems to human behaviour and the insufficient amount of information.

6) Students who are more interested in humanities attribute the causes of global problems to the weakness of human systems, while those who prefer science believe the problems arise from the underdevelopment of technological systems.

7) Environmental attitudes of experts surveyed in the sample show a significant difference compared with the rest.

8) Experts see the individual options of protection of the environment as more structured and systematic.

9) Environmental attitudes at higher school levels are getting closer to the average of experts.

10) The target sustainability course will result in a significant change in the attitude to environment.

3. Research Methodology

During the research we used qualitative and quantitative methods. Benchmarking techniques, fishbone procedures and error research methods were adapted. The research required in-depth study of the national and international literature and statutory provision. We applied questionnaires and document analyses in the data collection. A secondary analysis of the previous data is done according to new criteria.

- Literature study: a detailed study and processing of national and international literature were needed to map the conceptual background of sustainability and to identify the current opinion of scientists
- Document analysis, benchmarking techniques: Comparative analysis of European Union's Sustainable Development Strategy and the Hungarian National Sustainable Development Framework Strategy have been carried out. In order to examine the presence of sustainability pedagogy in national education we needed to read the following documents: The Fundamental Law of Hungary, education governing documents: Act CXC of 2011the national law on public education, 110/2012. (VI. 4.) Government decree issued by the National Core Curriculum, Act CCIV of 2011 the National Law on Higher Education and the Training and Output Requirements of Higher Education were necessary to be examined.
- Using quality management tools: Brainstorming methods, Ishikawa analysis and Pareto analysis were used to find out how the students perceive the reasons behind global problems including the causes of energy waste.
- Survey: We used questionnaires to analyze the data of samples tested.
- Attitude study: Peer-reviewed, internationally accepted measurement tools were used to examine and compare the environmental attitudes. Our data were analyzed with independent two-sample t-test using SPSS program.

4. Research results

The main objective of the thesis was to examine to what extent scientific results and opinions and European regulators are reflected in the Hungarian national legislation. How are the three areas in time sync with each other in the field of sustainability and its education?

Many conferences, meetings have been organized and as a result of these a number of documents were all made to solve the problems in question. ***It may be stated that European recommendations, the EU Sustainable Development Strategy and the guidelines of UN conferences and the Hungarian legislation, the National Strategy for Sustainable Development Framework and the principles laid down in other examined documents are uniform.*** Unfortunately, however, these have been built around one outdated point of view. This is the viewpoint of the *soft-sustainability*.The soft sustainability attaches equal importance to economy, society and nature in all kinds of decision-making situations and

besides continuous economic boom, it considers the improving environmental conditions to be the way of the future.

Currently, the European and Hungarian documentation is still written in that spirit and emphasizes courses of action in this direction. However, the experts dealing with this issue deem this is impossible and firmly believe the survival is ensured by the so-called *hard-sustainability*. This latter view seek human happiness and well-being in spiritual development and not in the economic growth. All this set in an environmental framework in which the wants are almost covered by the needs, thus sheltering the planet's resources and ensuring the welfare of future generations.

In this context, the needs and economic interests have a lower priority, while the natural and the social values are emphasized.

However, it can be said that despite all the international and national action plans and programs that consider sustainability a high priority, the results of the efforts still fall short or end without evaluation. In our opinion there is a step backwards in national level: the National Strategy for Sustainable Development Framework left out sustainability principles which can be found in the previous versions like as a "principle of holistic approach" or the "polluter pays principle".

During the examination of legislation documents it has become clear that the national legal framework regarding environmental education and sustainability pedagogy is extensive. It figures in the main legal regulator, the Fundamental Law of Hungary, and appears in the national law on public education. However, the changes of latter version are evaluated like a step backwards. The following passage, which was in the Act LXXIX of 1993 on Public Education has been removed: In Hungary in every school in their educational program had to prepare a work plan for environmental education. The Act on Public Education currently in force neglects the parts concerning Eco-Schools, Green Kindergartens and Forest Schools, these appear only at the level of a regulation.

The National Core Curriculum handled the issue of sustainability living up to the expectations. The same cannot be said however, regarding the Training and Output Requirements of Higher Education in which it would be expected to have sustainability elements for all programmes and majors. Unfortunately, this is not implemented. Thus, in its current form, it hinders the development and continuity of environmental awareness. This is also problematic because, (as supported by present study as well), it is human approach and

outlook, as well as behaviour that determine environmental problems and their solutions. It is hard to imagine however, that people graduating from higher education without an in-depth knowledge of these issues would be able to make environmental friendly and good choices, both in their individual and social life.

Based on the questionnaire survey answers it can be said that in public education today in Hungary does not provide for a continuous environmental education that which could make a bridge across various educational levels and institutions. A quarter of those surveyed admitted they have not been in contact with the environment, nature conservation, sustainability, environmental education-related courses during their previous studies. So the continuity is lost, in many cases it never even starts .***During our causal study, it has been confirmed that the root cause of the environmental problems is man itself, as well as the human thought and the ignorance of the uninformed.*** With Pareto analysis we found out that kindergarten teachers (those who are more inclined in humanities) think the causes of global problems stem from the weakness of human systems, while the environmental science students (those who like sciences) think the problems are the weakness of human and technical systems.

Based on the results of attitude studies we found that lifelong learning indeed greatly enhances positive attitude to the environment. However, we could not find an authoritative published life-long follow-up environmental attitude-assesing method in the literature research. ***Referring to our follow-up examinations the attitude survey tool which we adapted may be suitable for such use.***

Analysing the open-ended questions of the questionnaire we find that the experts perceive their individual options of protection of the environment in a more structured and systematic way. These are organically integrated into their everyday decisions while the students use only ad hoc solutions and in some cases they can't see what the use of their environmental actions may be.

Our hypothesis stating that according to the targeted sustainability courses will result in significant environmental attitude change could not verified. In the sample those environmental attitudes changed in positive whose courses integrated sustainability elements**.**

5. Theses

1. National and international sustainability documents are standardized but their underlying principles but lag behind the leading ideas of science. The biggest difference is in

interpretation of sustainability.While the policy of international documents state that nature, society and the economics are equally important, the academic view the primacy of nature.

2. Based on documentary analysis of the Hungarian legislation, we came to the conclusion that the previous versions of the Public Education Act put more emphasis on the promotion of the education of sustainability.

3. The Hungarian legal regulations of public and higher education and institutional frameworks would need a sustainability-focused review. For example, the Output Requirements of Higher Education in many times did not even include an expected level of sustainability knowledge.

4. The National Core Curriculum includes the concept of sustainability in an exemplary way.

5. In the study of environmental awareness the quality management methods can be used perfectly and the results are consistent with previous results of other researchers.

6.The results of survey suggest the circumstances are not ensured for life-long environmental education are not met today in Hungary. Ad hoc solutions exist, such as, for example, the Green Kindergarten, Eco-School, Forest School, CSR, but they are not linked to a single, interdependent system.

7. Theoretically, it would be possible and necessary to set up and operate a personal life-long environmental attitude measurement system. The idea to build such a system appears in the Hungarian National Sustainable Development Framework Strategy.

6. Proposals

- Review and correction of the national legal documentation regarding sustainability with the strong sustainability aspects in mind.
- Restore the environmental education work plan preparation for the public educational institutions.
- Wider support for the Green Kindergarten, Eco-School and Forest School Programs.

- Supplement the Output Requirements of Higher Education according to sustainability considerations in all programme.
- Adapting environmental attitude survey questions into the census questionnaire.

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