The role of educational institutions in achieving sustainable development

Katarína HULINOVÁ, Soňa CHLEBNIČANOVÁ, Milada ŠVECOVÁ
Matej Bel University in Banská Bystrica, Slovak Republic

Abstract: Participation and cooperation of local governments and institutions are crucial factors in achieving sustainability goals, because many problems have their origin and solutions at the local level. Training and education for sustainable development (ESD) have a key role in this process and should be an integral part of general education throughout the entire school system. Education of children and youth toward sustainability is a long-term process and forms a part of lifelong learning. Crucial in preparing the young generation for sustainable development are teachers and other educators. Using this knowledge, a scientific project was carried out at the Department of Environmental Studies at the Matej Bel University (Slovakia) entitled "Development of multi-level managerial skills of ESD coordinators in the region of Banská Bystrica." Through this project it was tried to contribute to sustainability in central Slovakia and to establish cooperation with many local and national institutions, such as the Regional Office of Education in Banská Bystrica, the Slovak Environmental Agency, the National Forestry Centre and the Forests of the Slovak Republic. This article discusses the main objectives of the research project, its organization and outcomes. It also focuses on the important role of cooperation between institutions in implementing ESD in primary and secondary schools, as well as teachers’ lifelong learning. The paper also presents recommendations for the implementation of ESD in Slovakia, based on the evaluation of a training seminar organized in the framework of the project.

Keywords: education for sustainable development (ESD), educational institutions, teachers’ lifelong learning, ESD coordinators.

1. Introduction

It was in the second half of the 20th century, when education was described by Schumacher (1973:64) as the greatest resource for achieving a just and ecological society. Since then, many international institutions have expressed the importance of education in achieving a
sustainable living. For many years, professionals and researchers from all over the world have been using the term Environmental Education (EE) in debates on education in this context. However, during the last few years they have increasingly started to deal with a new concept called Education for Sustainable Development (ESD). Many educators mistakenly believe EE and ESD to represent the same issue. These two terms, however, certainly do not cover the same topic. If we want to establish a connection between them, we can state that EE represents only one of the many aspects of ESD.

The UNESCO Tbilisi Declaration (1978) defines environmental education as

*a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action.*

EE aims to teach people about the natural world, to change people's perceptions about the value of the natural world and to teach how to change environmental behaviours, such as getting people to recycle or how to build eco-friendly dwellings (Neil, 2006). If we compare these definitions with the concept of ESD, we can agree with Tilbury et al. (2002: vii, 206) who says that ESD

*differs significantly from much of the nature study work carried out under the environmental education banner. Education with the objective of achieving sustainability varies from previous approaches to environmental education in that it focuses sharply on developing closer links among environmental quality, human equality, human rights and peace and their underlying political threads. Issues such as food security, poverty, sustainable tourism, urban quality, women, fair trade, green consumerism, ecological public health and waste management as well as those of climate change, deforestation, land degradation, desertification, depletion of natural resources and loss of biodiversity are primary concerns for both environmental and development education.*

Based on this definition of ESD we can state that Environmental Education is only a part of ESD. It represents the environmental aspect, which is complementary to the economic, social, cultural and technological dimension of sustainable development.
Training and education for sustainable development should form an integral part of general education and training throughout the entire school system. Education of children and youth toward sustainability is a long-term process and is a part of lifelong learning. Crucial in preparing the young generation for sustainable development are the people being responsible for this training - teachers and other educators.

The following sections of this paper present the current situation of the implementation of ESD in the Slovak Republic and focuses on teacher training and preparation for the role of ESD coordinators on the example of a project at Matej Bel University in Banská Bystrica (Central Slovakia).

2. The current situation in ESD in the Slovak Republic

In 2001, the Slovak National Strategy for Sustainable Development was approved, followed by the Sustainable Development Action Plan for years 2005 – 2010. These documents specify the objectives and needs of the Slovak Republic. The Action Plan was followed by the effort to develop strategies of ESD and the establishment of higher departmental advisory body at the Ministry of Education and Ministry of Environment. This in order to perform tasks such as introducing the concept of environmental education at all school levels and create a Slovak system of lifelong learning, to include the philosophy and fundamental principles of sustainable development in the curricula of all schools of the Slovak Republic as well as in the lifelong learning system.

As stated in the report for the 4th meeting of the Steering Committee for Education and Training for Sustainable Development (from February 2009), the Slovak Republic has adopted these ESD strategies and developed an action plan for their implementation. However, at least in primary and secondary education, the Slovak Republic does not meet the commitments resulting from these documents and strategies. In September 2008, the new Education Act 245/2008 on education and training came into force, where environmental education was included among the cross curricular themes while its interdisciplinary application became mandatory for all types of schools in Slovakia (as a consequence of the State Educational Programme). However, teachers have insufficient knowledge in this field and lack the necessary skills and ability to implement ESD into learning process.
Unlike Slovakia, the Czech Republic began to pay more attention to the problem of further education of teachers and ESD coordinators in 2005 by establishing a specialized training programme for school coordinators of environmental education. The aim of this programme was a long-term learning process based on direct instruction, designed for teachers who already are ESD coordinators in their schools or who are just going to assume this role. In Slovakia, however, there is no such specialized training.

A research team at the Department of Environmental Studies at Matej Bel University in Banská Bystrica, consisting of internal doctoral students under the guidance of Assoc. Prof. Milada Švecová, researched the issues discussed above. An aim was to create appropriate conditions for further training of teachers on ESD and its management, and lay the foundation for the establishment of an accredited specialized training programme in Slovakia as a part of teachers’ lifelong learning.

Since we believe that a crucial factor in achieving sustainability goals in education (and other fields) is the participation of and cooperation with local governments and institutions, we decided to address the representatives of state and local government as well as Nong Governmental Organizations organizations (NGOs) having experience in training teachers. The Slovak Environmental Agency was included as a partner, as it organizes annual workshops on EE methodology for teachers and carries out educational projects for schools regarding environmental education. Another partner was the Regional Education Office, being responsible for establishing and regulating schools in the region of Banská Bystrica and, as a consequence, having direct impact on the implementation of ESD in schools. We also decided to cooperate with National Forestry Centre and Forests of the Slovak Republic, as they organize methodology courses for forest educators and prepare various trainings and courses regarding forest education as a part of EE and ESD for the public. As a NGO representative we chose the organization called Živica, which currently coordinates the international programme Ecoschools. This programme may serve as an inspiration and example for the ESD coordinators for the realization and implementation of ESD in schools.
3. The contribution of Matej Bel university to the implementation of ESD

The research team developed a scientific project named “Development of multi-level managerial skills for ESD coordinators in the region of Banská Bystrica“, financially supported by the University Grant Agency (UGA UMB). The purpose of the project was to increase the range and quality of lifelong training of teachers regarding ESD. The project aimed to strengthen the management of ESD in primary and secondary schools in Slovakia, to expand teachers’ knowledge in the field of ESD and to develop skills for its implementation in teaching practice. The target groups were primary and secondary school teachers, students currently preparing for the teaching profession. Another target group was ESD coordinators in schools being part of the school’s middle management, while neither having obtained managerial skills during their undergraduate study, nor participated in post-graduate education in this field. This group is a completely new category of teaching personnel, which increases in importance due to the changing roles of teachers who also have to be managers.

The undergraduate training of teachers should pay special attention to the application of interdisciplinary and cross-curricular approaches in ESD with regard to teachers’ specialization. It should enable the acquisition of managerial skills and skills for planning and coordination of ESD within the school, prepare teachers for the broad application of ESD principles in school and for cooperation with non-school institutions. Besides these tasks of undergraduate training, special attention should be paid to postgraduate training. Teachers’ lifelong learning should continuously provide new information regarding ESD, particularly highlight the interconnection of its environmental, economic, technical and social aspects; continuously offer new forms and methods of work and teaching practices applicable in ESD; encourage the creativity of teachers in this area and enable them to exchange experiences within their own country as well as with teachers and experts from foreign countries.

Following these recommendations, the research team designed a teacher training programme divided into various interlinked modules. The first module had already been organized in the form of a training seminar entitled “Education for sustainable development and its management in primary and secondary schools in Banská Bystrica.” The total number of modules and its content was still open, as it depended on the interest and preferences of teachers. After each module, we planned to conduct a short survey between participants in order to
evaluate the module and to learn what knowledge or skills regarding ESD they would like to develop, in order to adjust the next modules to their needs.

The first module - the above mentioned training seminar - was held at the Department of Environment of the Faculty of Natural Sciences on 30 November, 2010. It was mainly intended for teachers of science and humanities and coordinators of ESD in primary and secondary schools, particularly of the region of Banská Bystrica. However, the seminar also aroused interest beyond the borders of the region and was attended by two teachers from other parts of Slovakia (Košice in the east and Žilina in the north). The total number of participants was 36. This number was composed of 13 teachers and 23 students. As some students attended only selected parts of the seminar, there were only 14 students who participated in the whole seminar and obtained the certificate of attendance. Most students participated in the undergraduate course of Environmental Management at the Department of Environmental Studies. They showed a great interest in acquiring knowledge that they might put in practice as future coordinators / managers of ESD. The rest of the participating students were future teachers of Biology. While 11 teachers worked at primary schools, only two participants were secondary school teachers.

As the training received funds from University Grant Agency (UGA UMB), its attendance was completely free for all participants. The training seminar was fostered by the Dean of Matej Bel University, Prof. Alfonz Gajdoš. As already mentioned, cooperation was established with many local and national institutions. All these institutions provided the participants with useful material on ESD and assured their further cooperation in the realization of other modules of the planned training programme. All participants were provided with a manual on ESD (financed by the UGA), including all the topics presented at the training.

The intention of the seminar was to deepen the understanding of the environmental, social-cultural and economic dimensions of sustainable development. The main focus was on acquiring basic information about ESD necessary to start or broaden its implementation, and on increasing the awareness of the importance of an effective ESD in primary and secondary education. Besides theoretical information, participants could familiarize themselves with methods and processes enabling effective education and improvement of the institutional infrastructure for ESD in schools. Various managerial skills and abilities that teachers can use in the implementation of ESD in their schools were presented, and the training seminar provided opportunities for exchange and collaboration amongst primary and secondary teachers.
The total duration of the training seminar was 8 hours, divided into 3 blocks. In the first part, participants were acquainted with topics such as:

- ESD and its management in schools,
- ESD school plans,
- Implementation of new knowledge in education with regard to ESD,
- Managerial competencies of ESD coordinators,
- School image in the context of ESD.

The second block focused on the following issues:

- Environmental Learning Program as a tool used in ESD,
- Importance of natural protected areas in the implementation of ESD,
- Forest education in Slovakia,
- ESD management through the international Eco-Schools Programme / Participative management.

The third block consisted of:

- Experience and suggestions for practical implementation of ESD in Slovakia and the Czech Republic,
- Presentation of experience of school coordinators,
- Presentations of ESD tutorials of the Slovak Environmental Agency (SEA).

Although the major part of the training was in the form of presentations, a large share of time was devoted to discussions and exchange of participants’ experiences. This facilitated the achievement of the purpose of the training - to provide the participants with a brief overview of issues regarding ESD and its application in schools, and to enable them to link the learning from the training seminar to their local context and school priorities.

After the seminar, a survey was conducted among the participants in order to evaluate the training programme and to learn about their further needs and expectations. All participants were given questionnaires with questions regarding the organization, chosen methods, structure and the most beneficial part of the training as well as which other topics they would like to focus on in the other training modules. The evaluation turned out to be very positive. All participants were very satisfied with the organization of the training, as well as with the selection of themes and
methods. They all expressed interest in participating in training programmes on ESD in the future. Many of them evaluated the first block of the training as the most beneficial, because, as they claimed, it helped them to clarify the differences between the concept of ESD and EE and to understand their position, competencies and responsibilities as ESD coordinators. The majority of participants considered the practical examples of ESD implementation in schools from the third block as the most useful. They all agreed on the need to continue this training programme and they expressed their wishes to deeply focus on topics such as examples of ESD good practice, environmental project management in schools, elaboration of ESD school plans, and familiarization with new teaching and learning techniques and methods used in ESD.

As was mentioned above, the research team plans to continue with organization of other modules of this training programme. Based on participants’ preferences, the second module of the training will be organized in 2011. This module will take the form of a workshop on ESD school plans, using active and innovative teaching and learning methods. Teachers are supposed to learn how to develop an ESD school plan, they will draft their own plan for their school and should develop their creativity and cooperation skills in various group activities and tasks. We would also like to amplify the target group and allow more teachers from other regions to participate in the upcoming training modules.

4. Concluding remarks

The results of the survey among the participants of the training show that there may be considerable potential interest in a training programme on ESD among primary and secondary teachers. We believe that the first participants of this pilot training programme have acquired the basic information and skills needed for a successful implementation and management of ESD in their schools. They will adapt their recent knowledge and experiences to the specific conditions in their schools and so disseminate information of best practice in ESD into other Slovak schools. For ESD management plans and school projects to be more than a paper exercise, the school and relevant regulatory institutions must be prepared to commit substantial funds and time to staff engagement in the process. The aim is to continue the project, contributing to the overall implementation of strategic documents in the area of sustainable development and the level of ESD in the Slovak Republic.
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Literature


Rola instytucji edukacyjnych w dążeniu do zrównoważonego rozwoju

Streszczenie

Partycypacja i współpraca samorządów lokalnych oraz instytucji stanowi decydujący czynnik przy osiąganiu celów zrównoważonego rozwoju, ponieważ wiele problemów ma swoje przyczyny i znajduje rozwiązania na poziomie lokalnym. Szkolenia i edukacja na rzecz zrównoważonego rozwoju (EZR, ang. education for sustainable development – ESD) odgrywają kluczową rolę w tym procesie i powinny być integralną częścią nauczania ogólnego w całym systemie szkolnictwa. Edukacja dzieci i młodzieży na rzecz zrównoważonego rozwoju to proces długoterminowy, stanowiący część kształcenia ustawicznego. Podczas przygotowywania młodych pokoleń do zrównoważonego rozwoju istotne znaczenie mają nauczyciele, wychowawcy i inni dydaktycy. Mając to na uwadze, Wydział Studiów Środowiskowych Uniwersytetu Mateja Beja (Słowacja) opracował projekt naukowy zatytułowany „Rozwój wielokierunkowych umiejętności zarządczych koordynatorów EZR w regionie Bańskiej Bystrzycy”. Poprzez projekt starano się przyczynić do zrównoważonego rozwoju w środkowej Słowacji, a także nawiązać współpracę z wieloma lokalnymi i krajowymi instytucjami, jak np. Regionalne Biuro Edukacji w Bańskiej Bystrzycy, Słowacka Agencja Ochrony Środowiska, Narodowy Ośrodek Nadleśnictwa oraz Nadleśnictwo Republiki Słowackiej. Artykuł omawia główne cele projektu badawczego, kwestie organizacyjne oraz rezultaty. Akcentuje także ważną rolę współpracy pomiędzy instytucjami w procesie wdrażania EZR w szkołach podstawowych i średnich, jak również kształcenie ustawiczne nauczycieli. Artykuł przedstawia też rekomendacje dla procesu implementacji EZR na Słowacji w oparciu o ewaluację seminarium szkoleniowego zorganizowanego w ramach projektu.

Słowa kluczowe: edukacja na rzecz zrównoważonego rozwoju (EZR), instytucje edukacyjne, kształcenie ustawiczne nauczycieli, koordynatorzy EZR