

## ENVIRONMENTAL EDUCATION AND SUSTAINABLE DEVELOPMENT – GENERAL ASPECTS

Helena Maria SABO

Faculty of Psychology and Science of Education, UBB  
Cluj-Napoca, Romania  
e-mail: helena-maria.sabo@gmx.net

**Abstract** — Always, from its first beginning, man was formed and developed with nature. Along the road of its development, the man interrelated with the natural environment enjoying his generosity, but also intervened more or less consciously in its balance, the changes that influence and determine the environmental disasters and changing the Earth totally.

Therefore, one of the new components of the education is the environmental education, a new education which is seen as an act of diversion by human society today, a more rational use of the natural resources for a smooth coordination of the scientific data's to establish more lasting bonds between science and education, so that human needs to be adequately satisfied without causing disruptions.

**Keywords:** *interdisciplinary education, respect, involvement*  
**Introduction**

### I. INTRODUCTION

"The nature and education are similar, because the education transform the man and, through this transformation, create nature"(Democrit)

Environmental education goes through various stages of formal and non formal education. It is based on social sciences and humanities, education programs must aimed the learning to conserve the nature and a better use of resources (Petrescu, 2003). It aims to:

- Human awareness of the existence of natural and social environment;
- Empowering its proper understanding of the relation human-nature-community;
- Formatting an environmental conduct.

Achieving these major objectives it can be made only through complementary actions to all educational factors: school, family, society, and the complex extracurricular activities ensure the climate of these interactions with beneficial influence in shaping the personality of students.

### II. MATERIAL AND METHOD

Environmental education is not limited to ecology or to the study of natural sciences. Learning about living organisms, their habitat and how they interact with each other and with the environment in which they live, is an important part of environmental education, but is not all.

Environment – as a subject of environmental education, includes not only the nature but also the society,

culture, economy and policy, environmental education is therefore related to the ecological education.

In carrying out environmental education have to be respected the following principles:

- Addressing the environment in its totality: natural and artificial, technological and social, economic and political, cultural and historical.

- Considering environmental education as a continuous process, beginning at preschool and continuing through all formal and non-formal stages;

- Exploration of the major environmental problems from local perspective, regional, national and international, so that students to know the environmental factors also from other geographical regions;

- Focus on current and potential environmental problems, taking into account their trend in history;

- Promoting values and local needs, national and international to prevent and resolve environmental problems;

- To discover symptoms and real causes of environmental problems;

- Promoting cooperative learning.

Environmental Education puts students in direct contact with nature in order to develop love for all life forms. Presentations and analysis of environmental problems begin, usually, with a discussion of the causes of phenomenons and ends with positive alternatives and possible ways of solution.

Obviously, for people to participate actively, intelligently and beneficial to the process of administration, development and environmental protection must be educated since the school banks to deal with environmental problems to be able to face the environmental problems in the current context.

Harsh reality and the problems of modern society require a redefinition of objectives in education and the education in science and the environment.

The contemporary education in the field of environment should be characterized by several important aspects:

- To focus not only on the classical approach of the environment and its protection, but also on the human being in context of a healthy environment;

- To change people's attitudes about environmental protection, meaning the state exceeded their declarations and training in order to effectively engage in such actions;

- The school programs to be designed to lead to a passive knowledge to active interaction with the environment, to be translated theory into practice.

The changes that should occur to education at all levels of education would mean *restructuring the education content*

(plans, programs, textbooks, teaching-learning-assessment strategies), to *promote teaching strategies* that are based on investigation, testing, decision making, active involvement and to study the *"human and environment"*, environmental quality and quality of life, is very important the human relationship with nature.

All the information that pupils have when come to school about environment are empirical. In school students accumulate large amounts of knowledge, which have to be directed, ordered, and structured in such a manner as to make the student able to understand certain phenomena, changes occurring around it, in the environment and to get them to respond by an adequate behavior.

Therefore in the preparation for the lesson, the teacher must be concerned by the systematic training of concepts, to develop mental schemes of the students and to enrich them.

Environmental education should be started in the family, continued in kindergarten, school, university etc. This is because a real protection of nature will be possible only when the people will change their mentality and will be aware that they live because of nature and not vice versa. We can not live without it; even we invent any "tricks". If we take this into account, the environmental problems will be acknowledged and internalized and the effects will be visible.

In general, while a passerby on the street threw down a package with the pretext that "there are still others who threw garbage, what I threw is not seen, we will not have a clean environment. Everyone must have a position on this issue in question and to appreciate our common goods. In this way, the experts' advice is to organize various activities with environmental goals for a deeper knowledge of the environment, field trips in nature, seminars, workshops with a big number of participants (not only for specialists and specialized teachers), because to protect the nature means to protect the very own lives and everyone health.

In formal contexts, environmental education can be achieved through any type of activity: at school - during the biology hours by introducing elements of nature protection (knowledge of the main rare plants and animal species, endemic species, protected trees, species of living fossils etc.), extra-school, scientific, literary, artistic, arts, sports etc...

The achievement ways are various: observations, experiments, science stories, drawings, practical activities, walks, hikes, excursions (pupils learn to know the ecosystem, relationships between organisms and the environment), viewing slides, motion games, interest guidelines, collections, exhibitions, entertainment, watching TV, expeditions, camps, ecological plays, contests.

The achievement in formal education for environment and sustainable development is possible in different ways, which involves interdisciplinary approaches. These ways range from the simple introduction of environmental concepts in traditional disciplines to complete their integration around a draft environmental action, passing through convergence of disciplines that have some affinity for structure and methodology. The biggest part of the current educational programs is missing, but often they do

not recognize the modern educational concepts based on participation, research and testing (Al. Ionescu et al., 1989).

The current era brings notes of real drama in people's lives and in everything what is about life and nature. Ecologists from the entire world agree that the number one problem of mankind is not the intensification of natural resources, but the protection of nature. Examining the human-nature relations is concluded that the man is currently the biggest enemy of nature that nourishes and protects it. This is done by:

Irrational exploitation of natural resources, very often excessive, and this because of the empiricism, ignoring the laws of organization and function of ecosystems;

The use and introduction into the circuit of toxic or of hard recyclable materials or non-recyclable wastes in natural ways;

Creation of artificial ecosystems by obtaining the necessary quantities of different products and this without knowing the optimal or maximum limits of this development.

Restoring the normal balance man-environment is possible through the use of resources of environment and protection of nature, so in fact protecting nature, locally, regionally or globally. Both paths require knowledge of environmental laws, organizational scientific based measures, and environmental education of the whole population to develop environmental awareness. Therefore, protection of nature appears as a feature of human society, as a practical matter of utmost importance.

For the maintenance and protection of environment we should consider several major objectives:

A rational planning, a proper choice and quality management of resources provided by the surrounding nature;

Protection and preservation of all that is endangered in collections, plantings, reservations, to knowledge the productive capacity of ecosystems and of the species and to take measures to prevent such use which does exceed capacity.

Of course, in achieving these objectives numerous difficulties appear. One of this links to the wrong mentality. It should be outlined that to preserve the nature as a whole does not mean non-use, but it means a rational use of resources.

Another difficulty is the lack of basic information regarding the state of resources, capacity of regeneration. This difficulty could be overcome only by developing research that can reveal two main aspects, namely: to determine exactly the carrying capacity of ecosystems and their productive potential. Only way we can know what and how an ecosystem can produce, what and how we can draw from it without damaging reserves or how to manage it as better possible to produce more.

If a man wishes to survive on Earth and not in a foreign life's aspirations, he must understand that he needs not only ample food and industry products, but also a healthy environment, breathable air, drinking water, stable soil, charming landscapes and the diversity of plants and animals of which is linked his evolution.

In the developed countries the glass, paper, plastic is successfully recycled, they use the washing machine without

detergent, bicycle trips are more popular than which are made with the car, are paid huge fines for illegal fishing or hunting and others, but unfortunately these things are far from reality in our country. One of the reasons is that our school program includes a few hours of ecology. As I noted above, the environmental education should start at school, even earlier - from kindergarten and take place throughout life, supported by the values of society. Small children should learn to protect nature. Unfortunately, the focus today is on sciences and technologies information and, often, ecology is neglected.

### III. ENVIRONMENTAL PROJECTS WITH AN INTERNATIONAL DIMENSION

The main objectives of environmental education are:

- a) The cultivation of love for the Earth and all elements which are used in them: water, plants, animals, etc.;
- b) To increase the desire to protect, respect and protect nature by involving children in character and demonstration activities;
- c) Develop skills of research, exploration, environmental investigation;
- d) Knowledge of organism's and phenomenon's from environment and their characteristics;
- e) Enrichment of active vocabulary with words from the environment area;
- f) Acquisition of some conduct rules to ensure the balance between human health, society and the environment;
- g) Knowledge of plants and animals protected by law;
- h) Research remediation methods of environmental state using students in activities of waste recycling, the sanitation of towns, etc.;
- i) Awareness of the need to save water, electricity, wood, etc... (Natural resources);
- j) Take negative attitudes on those who violate environmental rules and laws.

Taking into account this finalities, at international level have been designed and implemented a series of environmental projects, such as:

- *World Eco-school program* – “Eco-school College” Project, program supported by M.Ed.C., Ministry of Environment and Water and the National Authority for Tourism, World Foundation for Environment Education and coordinated by the Carpathian -Danubian Geoecology Center.

- *The World LeAF Program* "Learning about forest" coordinated by the Carpatho-Danubian Geoecology Center. International Program of education on Forests, LeAF is addressed to teachers and students who wish to have something to say regarding the future of environment.

- The "*Young reporters for the environment*" programe - YRE - initiated by the World Foundation for Environmental

Education (FEE), coordinated by the Carpatho-Danubian Geoecology Center.

### IV. CONCLUSIONS

Environmental education should be started in the family, and then continued in kindergarten, school, university etc. This is because a real protection of nature will be possible only when the people will change their mentality and are aware that they live in nature and not vice versa. We can not miss it, any "tricks" we invent. If we take this into account, environmental problems will be acknowledged and internalized, the effects will be visible.

In general, while a passerby on the street threw down a package on the pretext that "there are still others who threw garbage, I threw I do not see, we will not have a clean environment. Everyone must have a position on the issue in question and to appreciate our common goods. In this respect, the experts' advice is to organize various activities with environmental goals for a deeper knowledge of the environment, output in nature, excursions, seminars, workshops with wide participation (not only for specialists and specialized teachers), whereas *to protect the nature means to protect the very lives and health of everyone.*

### V. COPYRIGHT FORMS AND REPRINT ORDERS

IEEE Electronic Copyright Form (ECF)

### REFERENCES

- [1] Jean Piaget, *Epistémologie des sciences de l'homme*, (Paris: Gallimard, 1972), 369.
- [2] Battarbe, R. și colab. (2002), *Schimbările majore ale mediului*, Editura All, București
- [3] Bocoș, M. (2007), *Teoria și practica cercetării pedagogice*, Editura Casa Cărții de Știință, Cluj-Napoca.
- [4] Dinu, V. (1979), *Mediul înconjurător în viața omenirii contemporane*, Editura Ceres București
- [5] Ionașcu, C. (2003), *Morbiditate, mortalitate și calitatea mediului*, Editura Universitaria, Cluj Napoca
- [6] Ionescu, Al. și colab. (1989), *Protecția mediului înconjurător și educația ecologică*, Editura Ceres, București
- [7] Răuță, C.; Cârstea, S. (1979), *Poluarea și protecția mediului înconjurător*, Editura Științifică și Enciclopedică, București
- [8] Sabo H. (2008), *Umwelterziehung- Educația environmentală în Școli*, Cluj-Napoca, Editura Casa Cărții de Știință.
- [9] Sabo H, Mac I. (2008), *Umwelterziehung - Educația environmentală în Universitățile de Științe Aplicate*, Nürnberg/Germania, Editura Druck Zentrum.
- [10] Sabo H. (2009), *Umwelterziehung-Educația environmentală și Religia*, Nürnberg/ Germania, Editura Druck Zentrum.
- [11] American Chemical Society. (2002), „Chemistry in the Community: ChemCom”, New York: W.H. Freeman and Company
- [12] BSCS (1992). *Biological Science: An Ecological Approach*. Dubuque, Iowa