

ENVIRONMENTAL EDUCATION AT SCHOOLS AND IN TEACHERS' PREPARATION IN CZECH AND SLOVAK REPUBLIC – EXPERIENCE AND RESEARCH

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ABSTRACT

Environmental education and its effective integration into the teaching process of comprehensive subjects in curriculum documents is one of the priority but common educational aims that are embodied in the National Programme of Education Development (NPED) in the Czech Republic. In the same time it represents an integration element of all taught subjects from the curriculum at Grammar as well as Secondary Schools. One of the modules of the project UNDP (United National Development Programme) entitled „The sustainable development – creation of conditions“ that had been solved in the Czech Republic in 1998-2000 dealt with specific problems of environmental education at Secondary Schools and in teachers' preparation. In the frame of the above quoted project there was made a comparative analysis of teachers' study curriculum.

KEYWORDS

Environmental education, basic and secondary schools, teacher's preparation, research

INTRODUCTION

Environmental education and its effective position in curriculum documents is one of priority but common educational aims anchored in the White Book – which represents the programme of education development in the Czech Republic and, at the same time, it is the integrative element pervading curriculum documents of all taught subject at Basic as well as Secondary Schools. Fundamental problem of environmental aspects in the course of instruction is an insufficient scientific preparation of majority of the teachers. Above all it is the lack of environmental education theory. In the State Programme of Environmental Education, Instruction and Culture in the Czech Republic there are stipulated and elaborated aims and tasks for single regions taking in consideration the aimed groups of users. One of these regions is also the preparation of teachers and other pedagogical workers.

METHODOLOGY

A special research was done by means of questionnaires in the years 1994 – 1995. The aim of this was to get to know the real state of environmental education at Secondary Schools . The research summed up data from 125 Grammar Schools and 440 Secondary Professional Schools. As concerns the questions regarding the preparation of teachers for environmental education – they were dealt by one of the modules of the project : United National Development Programme “Sustainable development – creation of conditions”, that was under solution in the Czech Republic in the years 1998 – 2000. In the frame of the above mentioned project it was made a comparative analysis of the curricula of teachers' study programmes to get to know what kind of courses, to what extent, and with what forms of instructions are these being at faculties dealing with teachers' preparation. The research was aimed mainly how to incorporate the courses to the problems regarding the sustainable development and how to interpret this in the sense of theory of instruction. In the frame of this research 6 Colleges in the

Czech Republic were contacted and among them 9 faculties dealing with education of science and humanitarian teachers. In 1994 - 1995, a similar pilot research analyzing the current state of affairs in ecological and environmental education at high schools was also carried out in the Slovak Republic within a framework of a broad research of the current situation. The objective of this research was to analyze opinions of teachers of nature science subjects regarding the current circumstances for implementing environmental education at schools as well as teachers and students' attitudes towards ecology and environmental issues. The basic research tool involved a questionnaire administered to 41 % of four-year high schools and 16 % of eight-year high schools equally throughout all regions of the Slovak Republic. The target area of questions contained in the questionnaire focused on efficiency of environmental education within the individual „environmental subjects“ (ecology, environment) as well as within biology and geography. The other set of questions evaluated development stages of curricular documents in environmental subjects and of teaching strategies which could be employed effectively in students' acquiring environmental skills.

RESULTS

Environmental education at Secondary Schools

From the results of research we can understand that 'ecological subject' at Grammar Schools are implemented into curricula in several ways:

- ecology as a single subject (21 % of Grammar Schools),
- seminar on ecology,
- ecology as a part of other obligatory subjects (the major part, about 96 %).

Especially biology has got an important role in the field of environmental education because from the questionnaires assessment we could understand that 96 % of respondents put environmental problems into the sphere of subject biology. From questionnaire research analysis we got to know that 21 % of comprehensive Secondary Schools have curriculum with independent subjects dealing not only with biology as a science discipline but also with the problems regarding environment and permanently sustainable life.

This results is highly positive from the point of aimed axiological goals that bring their contribute to the formation of children – and – youth' relation towards the environment regardless this is a pupil directed to science or humanitarian education.

A special approach in incorporation of environmental aspects we met at Secondary Professional School /abb.SOŠ/. The pupils of these schools are orientated mainly towards the topics that have to do something with the type of study they decided for, but nevertheless they should have been informed also about the common basic of ecology to be able to apply this knowledge into their study (Svecova, 2000 a,b; 2001 a,b).

The situation at professional schools is more complicated taking in consideration a quite large display of orientations under study and a large diversification in this sphere of educational system. The most numerous group is formed by schools (50 % schools that took part) that insert a subject called 'Fundamentals in Ecology' into their curriculum for the 1st year of study, in the amount of one lesson per week. In other schools the ecological problems are dealt in the frame of special or classical subjects.

Quite special position has the schools that are specialised in environmental problems. Ecology at these schools is even a subject that takes part in Secondary School Leaving Examination.

The analysis of findings related to this set of issues in the Slovak Republic reveals that 97.6 % of approached teachers considers environmental education to form an inseparable part of high school education. Opinions regarding the introduction of environmental studies as an independent subject are comparable, even though slightly higher percentage of teachers (54.8 %) prefers to implement environmental issues within existing subjects. These teachers wish to integrate ecology and

environmental education for the most part into biology (41.7 %), furthermore into geography (35.4 %), into ethics (10.4 %), into chemistry (6.3 %), into esthetics (4.2 %) and into physics (2.0 %), while significantly enhancing extracurricular forms of ecological and environmental training. This opinion corresponds to conclusions drawn in the publication „Sustainable Development - A Challenge to the Slovak Republic“ (Huba, M, et al., 2001), which represents an important strategic development document of the Slovak environmental policy.

Preparation of future teachers for environmental education in the Czech Republic

The research results have shown that the future teachers especially science teachers are being acquainted with knowledge from the sphere of ecology, environmental science but in a less grade as concerns the questions about sustainable life.

The ecological and environmental problems appear at many faculties in the frame of single courses that make part of chosen teaching qualifications but the specially aimed courses are missing very often. In the opposite way a quite interesting thing might be a course entitled ‘Physical culture and environment’ for future teaching qualifications with Charles University, Faculty of Physical Education and Sport. The current problems regarding the relation between a man and biosphere together with ecological aspects of Physical Education and Sport and sport are the contents of this course. For instance it deals with the influence of tourism and sports in nature on the environment and on the healthy life style.

A common feature of curricula of other faculties dealing with teachers’ education either science or humanitarian aimed is the underestimation of theoretical and didactical part of education. This shortage regards at the same time the out – of – school environmental education i.e. Centres of Environmental Education. As concerns this we can consider as literally pioneer’s action the fact that the courses as ‘Didactics of care for environment’, ‘Out – of – school education for environment defence’, ‘Environmental’ education and instruction in the conditions at Basic and Secondary Schools take part at the Science Faculty.

The problems regarding environment defence appear also at some Theological faculties that prepare teachers of ethics and Christianity. Teachers pointed out as the greatest shortcoming current textbooks of ecology as well as the respective sections in biology textbooks, which do not focus sufficiently on prevention and environmental protection issues.

In terms of teaching procedures, a significant step has been made towards using non-traditional teaching methods, forms and means in acquiring environmental skills of high school students, marked by predominating project and problem teaching (Stritzová, Ušáková, 1997). Curricular transformation must be directly linked to innovations in teaching strategies, which should receive significantly more attention within the framework of methodological studies at universities training future teachers.

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