
THE PROPOSAL OF THE WASTE ISSUES IMPLEMENTATION ON THE DIFFERENT STAGES OF EDUCATION IN THE CONTEXT OF RURAL DEVELOPMENT

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ABSTRACT

The paper deals with the waste problems which are the part of environmental education. It describes realistic proposals approved at selected schools in Slovakia. The target consisted in a creation of proposals for implementation of the waste problem in various stages of education in the context of rural and sustainable development. The research surveyed present situation of solved problem by an electronic questionnaire, such as separation system in schools; teaching of environmental education as an interdisciplinary theme; a work of environmental coordinators and information about themes, objects and units in which teachers use environmental education. Such kind of education is focused on waste in teaching with description of objects, activities or projects that are being used. The proposals were processed subsequently and have been implementing in schools. On an example of one rural school we describe chosen proposal and its realisation using exterior of the school. The constitution and verification of the proposals were based on methodics by Maňák, Švec (2003). The aim of our paper was to point at the necessity of an active implementation of environmental education into teaching due to frequent problems with waste and mainly describes the recency of the problem being solved. In various levels of education, it is possible for teachers to guide their pupils and students towards protection of natural environment and create their positive attitude towards nature. The results of research could tell us, that there is sufficient literature to support the creation of conditions for implementation and actual participation of students and teachers in maintaining sustainable development goals, to which the issue relates.

Key words: waste, environmental education, sustainable development, rural development

INTRODUCTION

We processed a project for the sorting of waste at the local level at the Hotel and Business Academy in Brezno 2006. A year later, with help of a grant, we were able to engage in waste separation all the primary and secondary schools and colleges in the town of Brezno. This work was awarded at the regional and national level in vocational activities. In 2010 "Model of waste separation in schools of Brezno" was elaborated and awarded in Student and Scientific Professional Activities and published in *Enviromagazine*. The last part of the research includes elaboration of real proposals for implementation of the issues with waste into individual stages of education verified in practise. The thesis also shows, how for the methodological and content page is needed use the environment and location of the school for the realisation of proposals and how to benefit rural potential of school in rural development at the field of environmental protection in the waste problems.

MATERIAL AND METHODS

For the correct compilation of work was necessary to use some methods of research. The basic literature was the Act.No. 223/2001 Coll. on the Waste. Before the processing of questionnaire, we had to study literature, methodologies, databases and websites of organisations occupying by waste problems. The questionnaire was divided by levels of education. It consisted of two open and 8 closed questions, which investigated the location of the school, the use of environmental education as a cross-cutting themes, waste separation, system of waste separation, activity of environmental coordinator and realistic description of the activities to the issue of waste in environmental education. The items of questionnaires were prepared according to standardized questionnaires and methodology of Gavora(1997). For the publications and quickly completed the questionnaire was used a form of website <http://docs.google.com>, which permits the production of questionnaire respondents online and then records the answers in electronic form in a text editor and spreadsheet. This form investigates the current situation of solved problems. We contacted all the schools, that had given e-mail contact in the Statistical Yearbook of the Institute of Information and Prognoses of Education in the period from October 2012 to January 2013. The negative point was the failure to e-mail or wrong address. Starting answers came in the form of a questionnaire completed by 271 preschools, 442 primary and secondary schools and 21 colleges and universities. Upon completion of data collection, we used statistical and mathematical methods for processing tables and graphs. When processing the proposals we have created a template with a description of the activities, objectives, devices, procedures and environment. The final research proposal is the brief description of long-term projects carried out in Brezno focusing on creating the conditions for the separation of waste at primary and secondary schools. The field research we visited and verified realistic proposals in urban and rural primary and secondary schools. We have worked with six schools, where 2 of them were rural and 4 were urban schools. During our activities, we used the methods of teaching by Maňák, Švec (2003) adapted into the climate of the school and class, in which these activities were carried out. We used verbal methods - narration, explanation, lecture, work with the texts, interviews, work with the images; activating methods - discussions; as well as a comprehensive teaching method - frontal teaching and cooperative group work, brainstorming, individual students' work and computer-assisted instruction. Organizational forms of teaching were selected to meet a specific goal and design activities. Classical lessons in the classrooms were used as well as walks in the surrounding area of the school with the use of natural potential in the vicinity of the campus. The aids were used according to the type of activities. The evaluation and recommendations for teachers were worked by comparison on the basis of the resources available options of activities for students.

RESULT AND DISCUSSION

The current state of the solving problem

By the questionnaire we obtained results of the current state of solving problem. The graph (Chart 1) shows the respondents by Slovak regions and types of schools involved in the questionnaires.

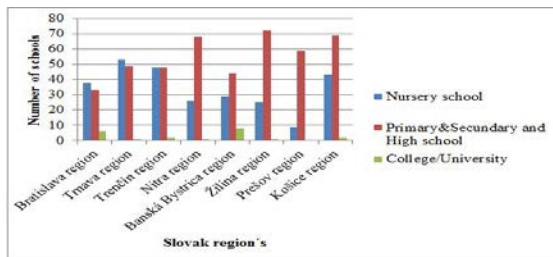


Chart 1 Respondents according to Slovak regions and types of schools - Varga, 2013

Among the interesting results is the inclusion of environmental education as a cross-cutting theme in preschools, elementary and secondary schools. The environmental education included in the curriculum as a cross-cutting theme 98.88 % of respondents, as not 1.12%. Separate subject or ecology, environmental education, however, created in primary and secondary schools, only 20.36 % of schools, did not include 79.64 %. Schools with its own coordinator have 66.58 % respondents, but 33.42 % of respondents don't have its own coordinators. Waste as the main theme of solved problems in teaching classified 94.53 % of schools surveyed, 5.47 % of them indicated the subject as not included. Information on the current status of waste separation in schools highlighted the finding, that 77.35 % of respondent's preschools, elementary, middle and high schools separates waste, 22.65 % does not. When we asked about the separation system, separation on the corridors of schools, this dominating approximately by 44.61 %, where the classes mere containers, where don't by 19.24 %. With baskets for separation is equipped 18.69 % of schools and 17.46 % of schools uses other separation system. We examined also in which thematic units and subjects the theme of waste is used. We found different objects as Slovak language and literature, foreign languages, mathematics, physics, chemistry, biology, geography, history, civics, informatics and others. There were other activities for supporting the environment as a Green school project, Earth Day, Water Day etc. Universities and colleges were more active only in the event that they were established faculties or departments of Ecology and Environmental Sciences.

The Proposal of implementation possibilities of the waste issues on the different stages of education in the context of rural development

Name: The waste on meadow in nature

Use, age, duration of activities: preschools, basic schools (first grade); 3-9 years, 45 minutes

Environment: surrounding of the school, meadow, field

Topics: Nature, People, I Am, Culture

Educational field (basic): Nature and Society, Man and Values, Man and the World of Work, Health and Movement

Objective: To teach children and students distinguish waste from materials and explain their separation system. Point out on the negative and non-cultured behaviour of man in nature and in the

individual ecosystems. Initiate them into their activities and to develop a positive relationship to the nature. The teacher must ensure the safety of students with haunting.

Tools: Preview wastes (PET bottles, glass, paper, cans, textiles, bio-waste, etc...) or mock waste separation cart

Realized: Preschool and Elementary School Beša (District Levice), September 2012

Procedure:

1. The teacher prepares a walk in the neighbourhood school (fig. 1). He deploys the waste and containers for sorting at the meadow or the school yard in the grass.
2. Children are looking waste after arriving at the meadow (fig. 2), classified according to their materials into containers (fig. 3). Activity may also be in the form of competition (who has accumulated the most wins).
3. Students and teacher simultaneously explain the negative impact of waste in various ecosystems, the importance of recycling etc.
4. Conclusion: The teacher emphasises the negative side waste in nature, which is harmful. He helps students to form their value orientation, encourages them to sort waste, basically sorting in the context of rural development - pure landscape around them to their school.



Fig. 1 – 3: Children in searching the waste; sorting of waste in the nature - Varga, 2012

Rating: the proposal was implemented in outdoors of rural school; it is the necessity in the environmental education. Real outlining the problems with waste in nature, their searching and sorting directly in the natural environment near the school, has helped us to achieve the aim. Children and students understand the negative impact of waste on the environment. The next aim was in emphasizing the negatives and illegal dumps, or in lacking of separation benefits of composting. Important was the implementation of child safety activities, for learning outside the classroom.

Other proposals: to use of waste materials from nature - workshops, discussions about waste, to use of worksheets, creating presentations and posters, monitoring and locating illegal dumps, their removal, writing essays and reflections waste, fairy tales for children about waste.

Whole-school project: Separation of waste - involving the whole school with separation and cleaning around the school.

CONCLUSIONS

Research has confirmed and agreed with literature that addresses the issue of waste management and environmental education. Miňová et al. (2005) suggest, that education and self-education in the field of nature conservation and the environment is conceived as a continuous lifelong process. With purposeful education should begin in preschool children. Gallayova (2007) describes and

demonstrates that environmental education is not to educate themselves naturalists, ecologists and environmentalists. It is necessary to deal with special children, whose are nature and environmental issues more interested in. Therefore we have created a diagram (Fig. 4), which clearly describes how necessary is to build in children, pupils and students environmental sensibilities and thus helps to make a cross-point with the objectives of sustainable development.



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Fig.4Diagram of following waste separation from the ground (system of schools) to practical life -

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