

NATURE PROTECTION IN EDUCATION AT SLOVAK SCHOOLS

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Abstract

Awareness of nature protection is an important issue in education. Environmental studies should be understood in the Slovak school system as a cross-cutting theme. Due to the fact that the separate subject of environmental education is not taught, it is necessary to introduce the current topic to students in a different way. A new educational program is coming under the auspices of UNESCO. EkoOlympiad is a knowledge game that offers topics related to climate change, nature protection, recreation and the environment. The game is intended for 2nd grade primary school students and all secondary school students. The competition takes place in four environmental themes – water, climate change, waste and biodiversity. More than 6 109 students took part in the EkoOlympiad. In the preparatory phase, students had the opportunity to train one topic separately each week for four weeks. One competition topic was gradually unlocked each week of the month. The preparatory phase contained only a few questions, which were later published in the regular competition rounds.

Key words: environmental education, climate change, waste, water, biodiversity

Introduction

Environmental education has grown significantly in recent years (Številová et al., 2017). Environmental topics are part of general subjects in schools. Despite these facts, a separate subject curriculum has not yet been developed. For this reason, the concept of environmental education based on sustainable development was created. The base output of the environmental activities were three parts: Eco centrum, Ecolab, and educational trail. The recommended form for implementation of cross-cutting themes is the project method. The method can create a space to connect educational process with other activities. The project method allows theoretical facts to more engaging way. Problem lectures or workshops are applied within the project method (Zemko, Jakab, 2015).

In the spring of 2022, the civic association Plant Lover presented the historically first Eco-Olympic festival (Ekoolympiáda) for primary and secondary school students. The Eco-Olympic is a knowledge game, which educates pupils and students in a playful way in the field of environmental and climate protection. It is a new, innovative way of educating in environmental education through the digital form, which is the easiest way for today's young people to acquire knowledge.

Eko-Olympis is a project implemented through the web application hra.ekoolympiada.sk, which is accessible to all students free of charge. Interested students from secondary and secondary school students can register and from that moment on they can train online, ie test their knowledge and answer questions. Each week is devoted to another important topic such as water, biodiversity, waste, climate change.

The Eco-Olympic game works on one training and two competition rounds. The training round lasted four weeks and each week was dedicated to one of four selected topics. Thus, during the four weeks, students had the opportunity to learn and review all the questions available for all topics. The questions in the game were formulated simply and according to the needs of the target groups.

Materials and methods

The pilot project Eko-Olympic was accomplished under the auspices of UNESCO. The main goal was to reach primary and secondary school students, and to raise environmental awareness in this target group. At the beginning, four selected environmental topics were defined – water, climate change, biodiversity and waste, which formed the mainstay of the content of the competition.

In the four selected topics, students had the opportunity to gain a basic overview of environmental and ecological issues, but they could also gain new knowledge and insights. The education was conducted in a modern and welcome form among students through a web application that students could install on their mobile phones. The whole game was in the spirit of test questions. In the four selected areas, students had a list of questions with three or four answers. The answers could all be correct, all incorrect, or only one correct or one incorrect.

During the test round, students could prepare for the first round of the competition, and competition questions were hidden among the training questions. The principle of learning was to repeat the game

as many times as possible. The longer a student played the game, the more correct answers he could get, because the game could be repeated indefinitely.

The questions and answers were formulated through the available literature (Wilson-Powell G., 2020). The first round of questions focused on a basic overview and statistical data taken from the mentioned literature. The second round of questions, to which several winning students from the first round advanced, followed up on the questions from the first round. Students had to think more critically and deduce the correct answers to the selected questions. Statistical processing of data from the Ecolympics is described in the following chapter.

Results

At the beginning, the unit of measure - player - was determined. The player was the student who played at least 50 questions. Of the total number of final registered students 9 078 were 7 145, which represents 78,7%. More than 3 000 schools (primary and secondary) were involved in the game.

Awareness of the Eco-Olympics spread through various information channels, but especially through social networks and through well-known Slovak artists and olympic athletes.

A detailed analysis and statistics of the results are still ongoing, but some results from the Eco-Olympic are currently available. The results can be divided into several categories, because in a project of this scale, various important indicators can be evaluated. The 5 best indicators of the Eco-Olympic are selected from the results.

1. The most active school - up to 166 players took part in the sharp game (according to the set unit of measure).

Students could participate in the game independently, during registration the name of the student - the competitor, the name of the teacher who nominated him for the competition and the school in which the teacher and the student attend. The motivation for students but also for teachers was the prize, where the first prize is an excursion to one of the most sustainable buildings, located in Lausanna, Switzerland in cooperation with the Slovak Olympic and Sports Committee. In the training round, students and teachers could use this application to deepen their knowledge, but also as a teaching equipment.

2. The most advancing students from one school to the finals – 6 high school students from High school in Bratislava.
3. The most played questions for the school – 81 853 questions, correct 54 325 of these.
4. The most correct answers – 13 007 correct answers.
5. The most successful topic – climate change with success 73,5%.

Other topics according to the achieved success of the answers:

- biodiversity – 64,8%,
- waste – 68,1%,
- water – 59,6%.

Students could play the training game without a time limit, they could play it several times. The main aim was to get as many correct answers as possible, and thus to gain as much knowledge as possible. The training round was to serve as an educational tool for students for the two competition rounds. It competed in three categories - 5th and 6th grade elementary school students, 7th, 8th and 9th grade elementary school students and high school students. In all categories, the winner with the most correct answers was chosen. If two students had the same number of correct answers, the one who answered the questions correctly in less time won.

Discussion

In the further statistical processing of the results, it will also be possible to point out the correctness of the answers to each individual question. From such an analysis, it is possible to deduce which area caused problems for the students in their answers and which, on the contrary, was the easiest for the students. The game can also be adjusted and modified according to the needs of the company for future years. Topics and topics can be added or changed up to date, the content of individual questions can be supplemented from other recommended literature. Due to the fact that this is a pilot project and thus the first year of this type of educational form, it is appropriate to consider improvements that will bring results to pupils and teachers in the form of increasing awareness, understanding and knowledge. Environmental knowledge are so important in education (Baryalai et al., 2013, Zeleňáková and Zvijáková, 2014).

At the same time, it is planned to implement a function in the next year that will guide students in the correct answers in an interpretative way. Currently, the application works on the principle of answer options. After checking the answer, the student will find out whether his choice is correct or incorrect. The new feature will give students an explanation - why the answer is correct and why the answer is

incorrect. In this way, the students' knowledge of the selected topic will increase, as they will be offered a source and an explanation of the issue. The awareness of environmental education will significantly increase nature protection and tourism as well.

Conclusion

The Eco-Olympics project has the potential for voluntary education in schools. Many teachers used the application as a teaching equipment in their lessons. Pupils learned a lot of new facts and data and in the second round of competition questions they had the opportunity to connect theoretical contexts from several areas into one whole.

The next year of the competition will be extended by new thematic areas. During the questions and answers, students will have a series of data and facts that will provide an explanation for the question. After reading the explanation, students will learn more new facts, but most importantly they will have a better explained subject matter.

The Eco-Olympics is currently only a project based on voluntary participation, because the subject Environmental Studies is missing in the curriculum, as well as teaching materials. However, with such projects it is possible to achieve systemic change and the inclusion of a new subject in schools.

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Souhrn

Pilotní projekt Ekoolympiáda vznikl pod záštitou UNESCO. Ekoolympiáda je projekt moderní formy vzdělávání žáků základních a středních škol prostřednictvím webové aplikace. Žáci mají možnost vyzkoušet si hru ve stylu školní olympiády, kde hledají správné odpovědi na otázky. Otázky se zaměřují na čtyři témata - voda, odpady, biologická rozmanitost a změna klimatu. Otázky jsou metodicky formulovány pro všechny soutěžní ročníky (5., 6. a 7. třída, 8. a 9. třída, žáci středních škol). Soutěže se zúčastnilo více než 9 000 žáků, z toho 7 145 hráčů (podle měrných jednotek). Do soutěže se přihlásilo více než 3 000 škol. Z každé kategorie byl vybrán jeden vítěz, který jako první cenu získal cestu do Švýcarska se svým učitelem.

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