

# Implementation of the curriculum of Education for sustainable development in elementary and high schools teachers' work in Montenegro

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**Abstract:** Education for sustainable development (ESD) is a complex concept that encompasses a wide range of interrelated and conditional social, economic, and environmental issues, problems and goals. Education is an indispensable social component and an effective tool for the development of a sustainable society, and the role of the teacher in this process is essential. The curriculum and methodological guidelines of ESD have been implemented as interdisciplinary education in elementary and high schools in Montenegro since 2014. In this study, we investigated the implementation and teachers' attitudes towards ESD, as well as the barriers to its inclusion. An online questionnaire survey was conducted, in which 874 teachers participated. The preliminary results show that 75% of the surveyed teachers do not use ESD in teaching, and 85% are completely or partially unfamiliar with the methodological instructions for the implementation of ESD. The need for quality training, low teachers' salaries and lack of appropriate literature in this field are cited as the main barriers to implementing ESD.

**Keywords:** Education for sustainable development; teachers; implementation; elementary school; high school

## 1. Introduction

Education for sustainable development (ESD) was first explained in Agenda 21 at the Earth Summit in Rio de Janeiro in 1992. It is a complex concept that encompasses a wide range of interrelated and conditional social, economic, and environmental issues, problems and goals. Education is an indispensable social component and an effective tool for the development of a sustainable society, and the role of the teacher in this process is essential.

## 2. Problem definition

Montenegro was declared an ecological country in 1991. However, the reports on the state of the environment show that the environmental awareness of citizens is not satisfactory, and

there are many examples of uncoordinated environmental, economic and social development. To overcome this situation, a Curriculum for ESD has been introduced. According to the reports of the international tests from PISA, where Montenegro is in the last third of the table, it can be concluded that the quality of education in Montenegro is stagnating or even has a tendency to deteriorate, which makes it a problem rather than a solution towards sustainability [1].

Starting from the goal of finding the causes of the problem and proposing solutions, we have formulated two objectives to achieve:

1. to examine teachers' knowledge, experience, and attitudes toward the ESD program and the methodological instructions for its implementation;
2. to examine what teachers perceive as the main obstacles to the implementation of the ESD program.

### **3. Background**

Montenegrin National Council for Education approved the Curriculum of ESD for elementary and high schools in Montenegro in 2014. It contains goals and activities of the following eight cross-curricular areas: Climate changes, Green economy, Environmental protection, Evaluation and planning of space - sustainable cities and settlements, Biodiversity, Health education, Education about human rights, and Entrepreneurial learning [2, 3].

Following the knowledge the Institute for Education of Montenegro in the period from 2010 to 2014 implemented trainings for the schools managers, as well as for 20% of teachers of various professions. The aim of the training was to introduce interdisciplinary program ESD and the methodological instructions for implementation. However, follow-up studies to assess the implication of ESD and its effectiveness are missing. In 2017, state institutions, in cooperation with the NGOs, investigated the implementation of Climate change and Sustainable cities in preschool institutions, primary and high schools, but these were studies with a non-representative sample.

To fill the gap this is the first research that includes the implementation of all eight areas represented in the ESD curriculum.

### **4. Research methodology and our progress**

The instrument used to collect the data is an online questionnaire which was developed and stored in application [www.1ka.si](http://www.1ka.si). Data collecting was done during August 2022, and it will be completed in mid-September 2022. Data collected during August show that 874 teachers have completed the questionnaire. The questionnaire is composed of 8 scales. This sample covers all primary and secondary schools in the territory of Montenegro. Considering the fact that the total number of teachers in elementary and high schools in Montenegro is 7049 [4], the preliminary analysis is considered representative since 12.4% of teachers have participated into this survey.

The preliminary results show that 75% of surveyed teachers do not use ESD in teaching, and 85% are completely or partially unfamiliar with the methodological instructions for the implementation of ESD. They cited the need for quality training, low teachers' salaries and lack of appropriate literature in this field as the main barriers to implementing ESD.

## 5. Future works and conclusion

The online questionnaire survey for teachers will be active until mid-September 2022, when a detailed analysis will be made based on the finally received data. Further research will be related to students' familiarity with the content of ESD. After a detailed analysis and statistical data processing, we will compare the research and present conclusions. The data will be processed by Jamovi statistical software.

The preliminary data presented in this paper show that training of teachers and school managers conducted by the Institute for Education was not effective enough. It is obvious that the training participants did not inform other colleagues about the contents of the curriculum and methodological instructions for the implementation of ESD. Based on the mentioned main obstacles in implementation, it is clear that the situation cannot be expected to improve unless adequate literature and quality training are provided to all teachers. Only a teacher who is confident in his knowledge and skills can pass them on to his students.

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