



Zorica P. Veinović¹ 

Sanja R. Blagdanić

University of Belgrade, Faculty of Education, Belgrade, Serbia

Milica V. Marušić Jablanović

Institute for Pedagogical Research, Belgrade, Serbia

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Development of environmental literacy and environmental identity of students – how “green” are the curricula in Serbia, Slovenia, and Finland?²

Extended summary

Given the serious environmental challenges facing humanity, the development of environmental literacy (EL) and environmental identity (EI) is a goal that modern education should strive for. Despite their differences, these concepts include common characteristics the development of which is a prerequisite for dealing with environmental problems, both locally and globally. The basic overlap between EL and EI is reflected in the affective attitude towards the environment, as well as pro-environmental behaviour, which is a component of EL and a correlate of EI. Given the importance of EL and EI, the presence of incentives for their development can be taken as a criterion for assessing the quality of curricula and, consequently, the environmental orientation of the education system of a country.

The aim of the research was to examine, through a comparative analysis of the curricula for younger primary school age in Serbia, Slovenia and Finland, the extent to which they include incentives for the development of EL and EI and whether these incentives are consistent and continuous. The reasons for comparing the curricula in Serbia with the curricula in Slovenia and Finland are multiple: the success of these countries in the TIMSS international achievement test in mathematics and natural sciences (which also includes tasks with environmental

¹ zorica.veinovic@uf.bg.ac.rs

 <https://orcid.org/0000-0002-2604-8331>

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content) is consistently high and corresponds to the status of the environment in them; the decades-long stay of Serbia and Slovenia in the SFRY, namely, in a common educational context. The analysed corpus consisted of the curricula of compulsory subjects in which natural science content is studied in the above-mentioned countries, which are interdisciplinary and relate to a similar school age (6-11 years in Slovenia, 7-11 years in Serbia, and 7-13 years in Finland). The analysis of the curricula was organised in relation to five categories created on the basis of the characteristics and components of EL and EI: Knowledge and understanding of environmental content; Ability to research environmental issues and interpret the collected data; Moral reasoning about the environment; Affective attitude towards nature; Pro-environmental behaviour. Each category contains several indicators. The aim of the research determined the application of the content analysis as a research method. The units of analysis were sentences or phrases from the curricula that included incentives for the development of EL/EI.

Common to all three countries is the highest representation of indicators from the category Knowledge and understanding of environmental content, as well as generalised formulations of a large number of the selected indicators. Indicators of moral reasoning and affective attitude towards nature are more represented in Slovenian and Finnish curricula, compared to the situation in Serbia. The situation is similar with the training of students to research environmental issues and interpret the collected data. Incentives for the development of this ability appear more consistently and continuously in Slovenia and Finland, with a slightly higher representation in Finland, especially when it comes to critical thinking about environmental issues. Incentives for pro-environmental behaviour of students are not represented to the same extent in the analysed curricula, and differences were detected in terms of the indicators of this category on which the focus is and the level of generality of the formulations that cover them. Finnish and Slovenian curricula are more similar and their differences compared to Serbia are also in line with the better achievements of students from these two countries in the TIMSS study, as well as with the better state of the environment. In Finnish curricula, incentives for developing various aspects of EL and EI are most prevalent, and their significant feature is the focus on the concept of sustainability. Another observation relates to the segments of the curriculum that are most saturated with indicators of the analysed categories. In Serbia, the analysed categories are most prevalent in didactic-methodological instructions, and they are represented the least in the subject objectives. In Slovenian curricula, the analysed categories are mostly covered by didactic-methodological instructions, but also to a significant extent by learning outcomes, i.e., educational goals and standards. The specificity of the Finnish curricula is that the analysed categories are most represented in the goal of the subject, curricular content, and the description of transferable competences, whereas they are non-existent in didactic and methodological instructions.

The obtained results indicate that there is room for progress in encouraging the development of EL and EI in all curricula. In the context of Serbia, it would be good if the existing and missing EL/EI categories were continuously and clearly visible in all segments of the curricula and educational standards, and not predominantly in didactic-methodological instructions, as is currently the case. This would ensure consistency in encouraging the development of EL and EI in the teaching process. It is also desirable that the creators of new curricula find

an appropriate balance in terms of the combination of general and specific guidelines. General guidelines are good, because they can be applied in numerous teaching situations, but they may be inapplicable due to their declarative nature and smaller receptiveness for users. On the other hand, contextualized descriptions of situations in which it is possible and recommended to develop aspects of EL and EI are beneficial precisely because of their concreteness, but they require thoughtful and systematic integration into curricula, both vertically and horizontally, so that their application is not limited to certain situations. Changes of the curricula would, consequently, impact not only the quality of teaching, but also textbooks and initial teacher education.

Keywords: environmental literacy, environmental identity, curricula, Serbia, Slovenia, Finland

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