

Chapter 4

Towards Transformative Environmental Education: Effective Activities for Primary Education

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ABSTRACT

The solution to the current ecosocial crisis involves changing the paradigm of environmental education. It should promote a realistic teaching approach that demands constant reflection and critical thinking. Therefore, this chapter presents a strategy for designing transformative activities aimed at early educational levels,

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along with a case as an example. To transform scientific knowledge into teachable knowledge, the process of didactic transposition is followed, including among its design principles the use of the case method for designing activities. The case proposed as an example aims to promote students' understanding of the health role of predators in wetlands (One Health approach) through the development of scientific practices. Through this, it is intended that they acquire a systemic vision of this environmental issue connected with global health. The results could assist teachers in making decisions during the design of transformative activities and in redefining initial teacher training while focusing on the professional dimension of their environmental competence.

INTRODUCTION

Environmental education (EE) and sustainability have become two controversial concepts in recent decades, perhaps due to the complex and broad nature of the contexts they address (Hofman-Bergholm, 2018). Thus, one of the main debates that has arisen has to do with the dimensions associated with environmental problems, because although the holistic approach of EE has been recognised since its origins (Tbilisi Intergovernmental Conference on Environmental Education, 1977), it has not traditionally been worked in this way in the field of education (Guevara-Herrero et al., 2023). This is why, after the last United Nations Conference on Sustainable Development (Rio+20), the guidelines of the 2030 Agenda were adopted, reiterating the need to promote an integrated vision of environmental and social issues from different perspectives (economic, cultural, health, political, ethical, and so on).

This definition at the theoretical level has been accompanied by the identification of measures to improve educational practices in EE. Among these, the need for adequate teacher training that contributes to the formation of informed, aware citizens capable of contributing to sustainability has been repeatedly mentioned (Činčera et al., 2020). To this end, it is essential to understand, explain and interpret complex and dynamic problems in a holistic way, which is known as systems thinking (Bielik et al., 2023; Momsen et al., 2022). However, there is still room for improvement in the implementation of these policies, as studies continue to demonstrate teachers' difficulties in integrating different perspectives on environmental issues (García-González et al., 2020; Uitto & Saloranta, 2017). Given that teachers' conceptions determine pedagogical practices (Anyolo et al., 2018), EE continues to be presented predominantly from an ecological approach (Guevara-Herrero et al., 2023, 2024). This results in a continued lack of impact on citizenship, as we all know how we should act, but we do not always do so (Hofman-Bergholm, 2018). It is therefore essential to develop a strategy so that the necessary multidimensional approach as-

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