

## EXPLORING ENVIRONMENTAL LITERACY IN ONLINE EDUCATION AT UNIVERSIDADE ABERTA

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The implementation of Environmental Literacy in university curricula, together with the development of an environmental culture, emerges as a necessity given the current challenges faced by society, namely climate change, biodiversity loss, among others. Universities that are committed to implementing and developing sustainability practices include teaching as one of their key areas of action, through the creation of sustainability courses and/or curricular units as part of their academic offerings, among others (Caeiro et al., 2020; Farinha et al., 2019).

Environmental Literacy incorporates the cognitive, attitudinal, and behavioural perspectives, encompassing knowledge, attitudes, and environmentally responsible behaviour, which can be interrelated (Kaya & Elster, 2019; Maurer & Bogner, 2020; Teksoz et al., 2012). Additionally, faculty support also plays a role in Environmental Literacy implementation (Vallée, 2024). Limited research has examined the development of environmental literacy among adult learners or how comprehensively higher education integrate sustainability across academic programs. Thus, this study aims to: (i) characterize the environmental literacy profiles of undergraduate students and faculty members at Universidade Aberta; and (ii) provide a preliminary assessment of the extent to which environmental sustainability is integrated into undergraduate curricula.

This study is part of the APECHE (Assessing and Promoting Environmental Culture in Portuguese Higher Education) project, which involves eight Portuguese universities. This study is contextualized within Universidade Aberta, a public distance-learning university whose primary target audience is adults actively engaged in the workforce. The study adopts a mixed-method approach, incorporating a: (i) quantitative analysis to characterize environmental literacy, applying an online survey to 480 students (1<sup>st</sup> year) and 95 faculty members from the same undergraduate programs in the first data collection phase and 177 students (2<sup>nd</sup> year) in the second phase. The survey covered the three core domains of environmental literacy (knowledge, attitudes, and behaviours); and (ii) qualitative analysis to evaluate the extent to which environmental sustainability is integrated into the curricula. Therefore, a content analysis to the undergraduate programmes was conducted using the Curriculum Assessment System for Sustainability (CASS) model (De Oliveira et al., 2025). The categories of analysis included the course synopsis, keywords, competencies, content, bibliography, teaching methods, and assessment strategies.

The findings reveal that the Environmental Literacy profile of 1<sup>st</sup>- and 2<sup>nd</sup>-year students and faculty members show that most already engage in individual environmental practices and have a solid environmental knowledge and attitude although revealing an attitude-behaviour gap regarding meat consumption and transportation habits. Furthermore, preliminary results from content analysis suggest the scant implementation of environmental topics into the content of the undergraduate programs and related pedagogical strategies.

This study offers a characterization of the environmental literacy levels of adult students at the point of entry into higher education in Portugal and throughout their academic journey, as well as faculty members, supporting reflection on strategies to develop Environmental Literacy. This study fosters the Sustainable Development Goal 4 as it highlights the vital role of higher education institutions in cultivating environmentally responsible citizens.

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