

Education for Sustainable Development in European Universities. ESDEUS Project Report

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Abstract

The ESDEUS project – entitled European Universities as Community Leaders in Education for Sustainable Development – highlights the importance of integrating Education for Sustainable Development (ESD) into university curricula to advance the “third mission” of universities. By examining and comparing data from governments and universities in Poland, Sweden, Portugal, and Italy, the study aims to provide insights that can inform more effective teaching and learning strategies regarding this highly important issue.

The topic of Education for Sustainable Development (ESD) involves integrating key social and environmental issues into university curricula, whether through general or transversal competencies. ESD encompasses critical outcomes such as promoting ethical behavior, combating poverty, advancing gender equality, fostering health, protecting human rights, valuing cultural diversity, supporting peace, encouraging responsible production and consumption, and ensuring equitable access to Information and Communication Technologies (ICT). These elements align closely with the 2030 Agenda and the Sustainable Development Goals (SDGs) (UNESCO, n.d.; United Nations, n.d.).

Keywords

Education for Sustainable Development (ESD), teaching innovation, ESDEUS Project, Higher Education Institutions (HEIs), universities' third mission

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Strengths

The study began with a thorough mapping of national policies to understand university practices and identify content for incorporation into curricula. This approach enabled a systematic analysis of policy frameworks, providing a solid foundation for designing curricula that effectively integrate ESD. By linking national strategies with global sustainability goals, the study highlights how universities can enhance their societal impact while developing critical skills and competencies among students.

In the case of Poland, the country leading the project, the selection carried out is particularly noteworthy. At the national level, it not only analyzes the Strategy for Sustainable Development from 2020 to 2030, but also incorporates two documents on volunteering and cooperation in the spirit of solidarity. These highlight the perspectives to be examined and confirm initiatives that enhance the university's Third Mission (Haj Tajeb, 2024) within local communities. It is striking that, through the national volunteering report, proposals for change are presented to be implemented in the university curriculum, aligning students' and academia's commitments with the SDGs. Likewise, the Development Cooperation Program 2021–2030 supports the commitments of the 2030 Agenda and the SDGs, as well as cooperation across different educational levels, including higher education and adult learning. This is referred to as Global Education. The set of selected documents and their analysis foster a key pillar connecting programs that benefit education and, consequently, society and citizenship. At the local level, the DSW University of Lower Silesia has designed a Development Strategy 2022–2025 and an innovative Gender Equality Plan covering 2023–2026, which are aligned with current challenges and real-world issues.

Sweden demonstrates, at the national level, its commitment to sustainable development through university regulations and their evaluation in 2017, having incorporated sustainable development into its framework since 2006. This positions the country ahead of the United Nations' 2015 proposal for the Sustainable Development Goals (SDGs) and the 2030 Agenda. Notably, the evaluation document includes several recommendations, among which those promoting the development of competencies stand out—an aspect that the Bologna Declaration of 1999 (European Higher Education Area, 1999) reshaped in university curricula across the member states of the European Community. Some authors argue that curricula should empower university students with transversal competencies for sustainability (Lambrechts et al., 2013; Hammer & Lewis, 2023). Local documents, such as

the policies proposed by the university itself, highlight its strong commitment to both sustainability and the community, embracing the university's "third mission" beyond teaching and research. The institution is expected to serve as a model and point of reference, making efforts to minimize its ecological footprint and include the certification of its Environmental Management System.

Portugal also works at the national level to advance the Sustainable Development Goals (SDGs) and the 2030 Agenda. It explicitly acknowledges the disruption caused by the COVID-19 pandemic in 2020 worldwide, particularly in education, which created setbacks for the most disadvantaged groups. A strength emerging from this situation was the effort to ensure inclusive, equitable, and lifelong education (SDG 4). The University of Algarve demonstrates its commitment to each of the goals in a 2021 report, with particular emphasis on the fight for gender equality.

Italy demonstrates its commitment to sustainable development through the alliance of 86 universities, particularly in the Conference of Rectors of Italian Universities. In this regard, there is a parallel with the Spanish university system, where the Conference of Rectors (CRUE, 2019) also advocates for the pursuit of a more sustainable planet. Consequently, it aligns with the ambition of creating new common European cultural values, making the European Higher Education Area (EHEA) an effective tool for engaging in learning and social commitment (Anderson, 2022) in continuous development.

In general, based on the analysis of the selected documentation, it can be stated that Education for Sustainable Development (ESD) is addressed from an environmental and socio-environmental perspective, while also considering the economy, entrepreneurship, and technological advances as new paradigms of social change. It is important to align the proposed cross-cutting approach with different perspectives—such as the social, economic, and environmental pillars, commonly referred to as the Triple Bottom Line (TBL)—which are related to corporate social responsibility and good-practice criteria in investor decision-making (Honeyman & Jana, 2019; Badía et al., 2022). In the Polish context, this triad is conceptualized as social, economic, and spatial dimensions, where 'spatial' likely encompasses environmental planning, urban-rural development, and the management of physical resources, thereby aligning closely with the 'environmental' pillar of the TBL model. Moreover, the university's Third Mission (Haj Tajeb, 2024) represents a crucial objective, alongside Sustainable Development Goal (SDG) 4 on Quality Education and SDG 5 on Gender Equality. Universities demonstrate their commitment to sustainability by

incorporating several goals suggested by the SDGs as transversal competencies into teaching (Lechuga-Jiménez et al., 2024), in line with European recommendations for higher education curricula (European Higher Education Area, 1999).

Weaknesses and Opportunities

A key weakness identified is the inconsistent and often implicit adoption of the specific term 'Education for Sustainable Development' (ESD) within national and institutional frameworks. For instance, while 'Sustainability' is a top priority in Sweden, the precise term 'ESD' is absent from the consulted documents. Similarly, in Poland, Portugal, and Italy, ESD is not explicitly emphasized in the analyzed strategic documents. This terminological ambiguity may hinder the systematic integration of ESD pedagogy as distinct from broader sustainability policy. Consequently, the goal is to implement these educational approaches into the strategic plans of European HEIs, ensuring that future teacher training in schools will highlight the relevance of Socio-Scientific Issues (SSI), which are considered problems involving the deliberate use of scientific topics that require students to engage in dialogue, discussion, and debate (Macalalag et al., 2024), usually enhanced with social dimensions (Sadler, 2009).

Controversially, according to Polish analysis, schools are more sensitized to ESD. It is noted that a lack of research and debate in universities seems evident, indicating the need to foster a new culture of critical thinking and coherent actions, as well as to enhance university teaching for future generations of citizens and teachers. This reflection is shared by Poland, Portugal, Italy, and Sweden, highlighting the need to establish definitions of SD and Agenda 2030 to implement ESD at HEIs. This analysis suggests a potential disconnect, not necessarily between generations, but between the ESD sensitization occurring in schools and the slower curricular integration within Higher Education Institutions (HEIs). This indicates that university curricula have not yet fully embraced ESD as a core, transformative educational approach.

Threats and Opportunities

The second part of the study exhaustively analyzes study programs related to sustainability at each university. Additionally, it includes the proposals of each institution for short credential courses, whether national or international, offered at the same institution or in other locations. The descriptions are clear and seemingly effective. Moreover, it integrates teaching strategies and feedback, taking into account students' learning and voices.

The learning approach suggested by ESDEUS achieves the goal of ‘innovating in teaching strategies’, which was previously identified as a threat, a requisite that is uncovered in higher education institutions. Thus, ESD would ultimately establish its own “initiatives” in defining its composition, implementing research and results in these courses, and obviously in teaching. Although most of the courses analyzed in this section relate to what is traditionally considered sciences (environmental sciences, biology, climate change studies), the aim of integrating pedagogy and a social sciences approach is commendable. However, a significant threat remains: the potential confinement of ESD to traditionally ‘green’ disciplines. A truly transformative ESD approach requires its integration across all faculties to achieve a solid, transversal/cross-sectional approach—including humanities, law, business, and the arts—to equip every graduate with the competencies to contribute to a sustainable future, regardless of their field.

Conclusion

Addressing concepts such as Education for Sustainable Development (ESD) presents a preliminary challenge, as different countries adopt varied approaches to sustainability, lifelong learning, and community education. Moreover, within universities, different faculties may implement these concepts and related approaches in diverse ways. Rather than viewing this diversity as a threat, it should be seen as an opportunity to develop a contemporary system that introduces new commitments and solutions.

The suggestion to establish a definition of the concept of ESD is essential, as one of the threats lies in its frequent confusion with the SDGs or the broader term sustainability. These are, in fact, different matters: how to approach teaching sustainable development; how to foster active learning and student engagement and participation in the community; and the knowledge and skills specifically related to sustainability. For example, the concept of *degrowth* should be explicitly linked to the planet’s natural resource limits and human action.

This study is limited to a specific number of teaching staff. Therefore, conducting a larger-scale study that involves different faculties and disciplines, as well as examines curricula and teaching practices, would be highly interesting. In this regard, utilizing the opportunities provided by the Bologna Process for curriculum Europeanization to focus on transversal competencies—aimed at acquiring knowledge and applying it to problem-solving—may be a promising avenue for the future.

Continuous professional development for academic staff is essential, as each discipline has its own specificities.

Additionally, exploring students' knowledge and proposals is essential, as the perspectives of young people shape the future of ESD. What are their demands? What are their perceptions and expectations regarding the issue? Programs such as those presented by Poland are particularly valuable, as they place students at the center of learning and action through various approaches, including artistic activities and debate. The suggestion to create awards for undergraduate dissertations, master's theses, and doctoral theses is an effective resource for shaping ESD, as it facilitates research with younger generations, produces tangible outcomes, and plants the seed for future development. Additionally, integrating community-related topics enhances engaged learning, fostering a sense of responsibility within social environments and communities.

Finally, it is important to emphasize the relevance of the European Higher Education Area (EHEA) and competency-based learning for future research and knowledge-transfer initiatives—not only in formal education, but also in non-formal and lifelong learning contexts.

Research Ethics Statement

Non applicable

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Conflicts of Interest

The author declares no conflict of interest

References

- Anderson, L. (Ed.). (2022). *Communities and Students Together (CaST). Piloting new approaches to Engaged learning in Europe*. Maklu-Publishers. <https://www.cast-euproject.eu/download/io3-piloting-new-approaches-to-engaged-learning-in-europe/22/>
- Badia, G., Gómez-Bezares, F., & Ferruz, L. (2022). Are investments in material corporate social responsibility issues a key driver of financial performance? *Accounting & Finance*, 62(3), 3987–4011. <https://doi.org/10.1111/acfi.12912>

- CRUE. (2019, December 4). *Manifiesto de Crue Universidades Españolas por un planeta más sostenible*. Retrieved December 6, 2025, from <https://www.crue.org/2019/12/manifiesto-de-crue-universidades-espanolas-por-un-planeta-mas-sostenible-diciembre-2019/>
- European Higher Education Area. (1999). *The Bologna Declaration of 19 June 1999*. https://ehea.info/Upload/document/ministerial_declarations/1999_Bologna_Declaration_English_553028.pdf
- Haj Tajeb, S. (2024). Measuring the third mission of European Universities: A systematic literature review. *Society and Economy*, 46(2), 147-167. <https://doi.org/10.1556/204.2023.00030>
- Hammer, T. & Lewis, A. L. (2023). Which competencies should be fostered in education for sustainable development at higher education institutions? Findings from the evaluation of the study programs at the University of Bern, Switzerland. *Discover Sustainability*, 4, 19. <https://doi.org/10.1007/s43621-023-00134-w>
- Honeyman, R. & Jana, T. (2019). *B corp handbook: How you can use business as a force for good* (2nd ed.). Berrett-Koehler Publishers.
- Lambrechts, W., Mulà, I., Ceulemans, K., Molderez, I., & Gaeremynck, V. (2013). The integration of competences for sustainable development in higher education: An analysis of bachelor programs in management. *Journal of Cleaner Production*, 48, 65-73. <https://doi.org/10.1016/j.jclepro.2011.12.034>
- Lechuga-Jimenez, C., Barroso, M. B., Alastor, E., & Töjar-Hurtado, J. C. (2024). Promoting social and blue entrepreneurship and sustainability skills in higher education by transversal competencies. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2309412>
- Macalalag, A. Z., Kaufmann, A., Van Meter, B., Ricketts, A., Liao, E., & Lalacci, G. (2024). Socioscientific issues: promoting science teachers' pedagogy on social justice. *Disciplinary and Interdisciplinary Science Education Research*, 6, 28. <https://doi.org/10.1186/s43031-024-00118-4>
- Sadler, T. D. (2009). Situated learning in science education: Socio-scientific issues as contexts for practice. *Studies in Science Education*, 45(1), 1-42. <https://doi.org/10.1080/03057260802681839>
- UNESCO. (n.d.). UNESCO and Sustainable Development Goals. <https://www.unesco.org/en/sdgs>
- United Nations. (n.d.). Sustainable Development Goals. <https://www.un.org/sustainabledevelopment/>