

Moving universities towards education for sustainable development

Citation for published version (APA):

Álvarez-Vanegas, A. (2024). *Moving universities towards education for sustainable development*. [Doctoral Thesis, Maastricht University]. Boekenplan Maastricht. <https://doi.org/10.26481/dis.20240627av>

Document status and date:

Published: 01/01/2024

DOI:

[10.26481/dis.20240627av](https://doi.org/10.26481/dis.20240627av)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

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Impact paragraph

The present research contributes to the academic field of Education for Sustainable Development (ESD) within universities. Its primary objective was to assess how universities can increase their contributions to Sustainable Development via the integration of action-oriented pedagogical approaches such as Service-Learning (SL) and the enhancement of sustainability knowledge and skills in university educators. The results responded to the purpose of the research by providing evidence of key pathways to enhance ESD in university, as explained below.

Key findings from a theoretical exploration of SL and ESD in universities are that SL programmes largely align with global policy frameworks for ESD, but universities are finding it challenging to implement it. Educators play a pivotal role in implementation and unless they are trained and incentivised and this is systematised, ESD may fail to transform learning environments. The three major challenges are insufficient educator capacity, funding, and educator attitudes. The research later delved into empirically assessing the tangible impacts of SL on the development of sustainability competencies among students. The results confirm the theoretical potential of SL and suggest a positive impact in action competence for sustainability and in the cognitive, socio-emotional, and behavioural learning domains of students. In terms of the role of educators, the present work explored their preparedness to address sustainability issues and implement ESD strategies. It was found that some knowledge exists within the teaching community regarding sustainability, but there is room for improvement and a gap between intention and action that should be addressed. With these findings in mind and recognising the increasing potential of digital learning, a Massive Online Open Course (MOOC) was developed for educators. It covered sustainability and ESD concepts, accompanied by practical application exercises. Results revealed that such capacity-building initiatives can effectively promote the advancement of ESD among university educators. These scientific findings have already started to be published.

Indeed, the findings from this doctoral research have been disseminated through the publication of two academic papers in the journal

Frontiers in Education, and the process will continue, as a third paper was accepted in the *International Journal of Sustainability in Higher Education*, and another one is currently under review in *Environmental Education Research*. Additionally, partial results of this study have been showcased in various international events, including the seminar on *Quality Education within the Sustainable Development Goals' Framework* in Ecuador (March 2023), the *DAAD Project Leader Conference: Higher Education Partnerships as a Key to Sustainable Development* in Costa Rica (April 2023), and the *MORSE Conference* in The Netherlands (October 2023).

This study has also had an impact in other realms of society beyond the strictly academic one. For example, the results and reflections emerging from it allowed to influence the dialogue at COP28, via the publication of an article in a special edition of the Global Affairs Media Network *Diplomatic Courier*. This article, titled *A Real-World Approach to Education in Times of Climate Change*, presented a framework for the collaborative advancement of ESD via the engagement of universities, the private sector, the government and NGOs in jointly tackling sustainability challenges such as climate change. Furthermore, a Policy Brief is currently in preparation for publication by UNU-MERIT. This brief contains policy recommendations tailored to the Colombian context, which are poised to offer valuable contributions, particularly given the country's ongoing education reform efforts.

The societal impact of this research extends to direct and tangible outcomes observed among participants in Service-Learning projects and an academic program designed explicitly for educators as part of this study. Through this research, more than one hundred students and more than three hundred educators in Colombia and other Latin American countries were directly influenced. Colombian students were afforded opportunities to engage in active academic experiences that enriched their sustainability competences. Specifically, students involved in the Service-Learning projects gained practical insights into sustainability by applying their knowledge in real-world contexts, thereby enhancing their action competence for sustainability, particularly in terms of their *Willingness to act*. This is considered important given the frustration often found in youth regarding the overwhelming sustainability challenges of the present. Furthermore, the

research had a positive impact on various communities, as the Service-Learning projects helped to solve existing sustainability problems. As for the university educators, the participants of the MOOC were able to learn about sustainability and ESD, not only from a theoretical but also from a practical standpoint. It is hoped that the acquired knowledge will lead to enhancements in their teaching methods, ultimately advancing sustainability efforts.

Further impact regarding the role of educators in advancing ESD has occurred within two international projects. The knowledge generated in this research has also provided valuable contributions to the international cooperation project *Education for Sustainable Development Goals – Capacity Building for Educators* (Grant Number: 57562621) funded by the German Academic Exchange Service (DAAD), impacting three Latin American universities in Colombia and Ecuador. Similarly, it has provided relevant insights for the project *Professionalisation of Academic Teaching to Infuse SDGs in Latin American Universities* (Grant Number: 101128939) funded by the European Commission and impacting ten Latin American Universities in Mexico, Costa Rica, Colombia and Argentina. As the names of these projects indicate, they are oriented towards the goal of enhancing the knowledge, attitudes, and skills of university educators to integrate sustainability in their teaching practices. Consequently, this contributes to the cultivation of sustainability competences in students, who will have to face the most severe consequences of unsustainable development in their personal and professional lives.

In the future, it is anticipated that the research pathways initiated by this thesis will be further explored. Building upon the results outlined in this thesis, it would be particularly interesting to delve deeper into the long-term effects of SL interventions on students' sustainability competences, assessing whether they foster a sustained commitment to sustainable lifestyles. Additionally, it is expected that the capacity-building efforts aimed at educators are evaluated, determining if and how the integration of ESD principles and pedagogical approaches into teaching practices is effectively taking place. Lastly, there is a strong desire to illuminate the collaborative roles of universities, government bodies, the private sector, and NGOs in advancing ESD initiatives.