

Time to Act through Sustainable Experiences for Higher Education Students: A project to Promote Sustainability

Susana Leal^{1,2}[0000-0002-8796-8289], Sandra Oliveira^{1,3}, Carla Vivas¹, João Nascimento¹, Cláudio Barradas¹ and Ana Loureiro^{1,4}

¹ Instituto Politécnico de Santarém, Portugal

² Life Quality Research Centre, Portugal

³ Centro de Estudos e Investigação em Saúde da UC, Portugal

⁴ LE@D, Portugal

susana.leal@esg.ipsantarem.pt

Abstract. In this work, we propose to present the project "Time to Act through Sustainable Experiences for Higher Education Students", also known as TIME2ACT@SD. TIME2ACT@SD aims to contribute to the development of knowledge, skills, and attitudes, as well as changing behaviours among European HE (Higher Education) students in the field of sustainable development (SD) and SD Goals (SDG), through the development of interactive content, digital tools, and innovative teaching methodologies, based on the use of the gamification, for HE teachers' use in formal and non-formal education.

TIME2ACT@SD seeks to produce a set of open educational resources that can be used by higher education teachers in the teaching and learning processes. Through innovative practices of training (e.g., MOOC and gamification strategies) and through active methodologies (workshops and bootcamps, as activities of experimental nature), the project aims to promote literacy in the target group in the field of SD/SDG, as well as behavioural changes regarding individual preferences, awareness of SD, consumption habits and lifestyles.

In this article, it is presented the methodology for the development of the project, which comprises four phases. The 1st one is the needs analysis - the needs that we want to address is the lack of knowledge, skills, and actions towards SD among young people attending HE, as well as innovative educational tools to bridge this gap in students' education. The 2nd one is the partnership arrangements - the project involves a total of seven partners from six countries (Politécnico de Santarém; UCLan Cyprus; Thomas More Mechelen -Antwerpen; Learnmera Oy; Galileo IT; Rosto Solidário; Gazi University). The 3rd one is the project design and implementation - the project comprises five work packages (WP): WP 1 Project Management, WP2 Transnational studies with HE students and teachers, WP3 Development of interactive content and digital/innovative tools, WP4 SD/SDG training Workshops and Bootcamps, and WP5 Strengthening the cooperation partnership & dissemination and exploitation of the project's results). The 4th one is about the project impact - to assess if the project goals have been achieved, different monitoring levels must be considered, either in the short or long term, and in every stage of the project.

TIME2ACT@SD will be developed through (a) Transnational studies with HE students and teachers to identify skills gaps on the SD/SDG topic; (b) Development of interactive content and digital/innovative tools, namely using immersive and gamification approaches; (c) SD/SDG training workshop and bootcamps to promote HE students' attitudes and behaviours changing through learning by doing;

(d) Strengthening the cooperation partnership and exploitation of the project's results to other HEI stakeholders.

The TIME2ACT@SD results will be transnational studies with HE students and teachers about SD topics (scientific papers), MOOC and webinars aiming to promote the HE students' literacy on environmental, social and economic sustainability, web/mobile-based and immersive games on SD, a virtual workshop on educational games, sustainability bootcamps, an online platform, focus groups with HEI stakeholders, an international conference.

The work presented is a project proposal, financing is expected to be in place by the end of 2022, then the main limitation is that it has not yet been implemented.

This project will contribute to education for sustainable development with innovative tools (e.g., using gamification and virtual/augmented reality) and educational technology that will be made available to higher education teachers for greater effectiveness in the educational process.

Keywords: sustainability, higher education, innovative teaching methodologies, Erasmus project

References

1. Aleixo, A. M., Leal, S., & Azeiteiro, U. M. (2021). Higher education students' perceptions of sustainable development in Portugal. *Journal of Cleaner Production*, 327. <https://doi.org/https://doi.org/10.1016/j.jclepro.2021.129429>
2. Busquets, P., Segalas, J., Gomera, A., Antúnez, M., Ruiz-Morales, J., AlbaredaTiana, S., & Miñano, R. (2021). Sustainability Education in the Spanish Higher Education System: Faculty Practice, Concerns and Needs. *Sustainability*, 13(15), 8389. <https://www.mdpi.com/2071-1050/13/15/8389>
3. Cebrián, G., Pascual, D., & Moraleda, Á. (2019). Perception of sustainability competencies amongst Spanish pre-service secondary school teachers. *International Journal of Sustainability in Higher Education*, 20(7), 1171-1190. <https://doi.org/10.1108/IJSHE-10-2018-0168>
4. Dagiliūtė, R., Liobikienė, G., & Minelgaitė, A. (2018, 2018/04/20). Sustainability at universities: Students' perceptions from Green and Non-Green universities. *Journal of Cleaner Production*, 181, 473-482. <https://doi.org/https://doi.org/10.1016/j.jclepro.2018.01.213>
5. García-González, E., Jiménez-Fontana, R., & Azcárate, P. (2020). Education for Sustainability and the Sustainable Development Goals: Pre-Service Teachers' Perceptions and Knowledge. *Sustainability*, 12(18), 7741. <https://www.mdpi.com/2071-1050/12/18/7741>
6. Lambrechts, W., Ghijsen, P. W. T., Jacques, A., Walravens, H., Van Liedekerke, L., & Van Petegem, P. (2018). Sustainability segmentation of business students: Toward self-regulated development of critical and interpretational competences in a post-truth era. *Journal of Cleaner Production*, 202, 561-570. <https://doi.org/https://doi.org/10.1016/j.jclepro.2018.07.303>
7. Noteboom, C., Ofori, M., Sustrave, K., & El-Gayar, O. (2021). Agile Project Management: A Systematic Literature Review of Adoption Drivers and Critical Success Factors. *Proceedings of the 54th Hawaii International Conference on System Sciences*. <https://doi.org/https://doi.org/10.24251/HICSS.2021.813>
8. United Nations. (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development (Resolution A/RES/70/1 adopted by the General Assembly on 25 September 2015)*. <https://undocs.org/A/RES/70/1>

9. United Nations. (2019). Framework for the Implementation of Education for Sustainable Development (ESD) Beyond 2019.
<https://unesdoc.unesco.org/ark:/48223/pf0000370215.locale=en>.