

Copyright: The author/s
This work is licensed under a CC-BY 4.0 license
(*) Corresponding author
Original research article
DOI: 10.20544/AISC.1.1.25.P10



INTERDISCIPLINARITY SUSTAINABLE DEVELOPMENT EDUCATION FOR BUSINESS STUDENTS: THE CASE OF ALBANIA

Oliana Sula*

Aleksandër Mosiu University of Durrës, Albania

ORCID: <https://orcid.org/0000-0002-9370-9582>

e-mail: olianasula@uamd.edu.al

Abstract

Achieving sustainable development goals (SDGs) is among top national priorities for Western Balkan countries even if the efforts and awareness remain low especially in Albania. Sustainable development education has been integrated to different levels of the curricula of pre-university education and it is part of the curricula of higher education institutions (HEIs) in Albania. Sustainable development education is considered catalyst in raising awareness on SDGs especially among young people. In business related university degrees sustainable development education has been traditionally linked to corporate social responsibility (CSR), business ethics courses or circular economy (CE) courses. The number of dedicated courses and degrees focused in sustainable development has increased over the years. The teaching and learning approach remain traditional. Sustainable development is interdisciplinary. Courses related to sustainable development lack of interdisciplinary approach. The aim of this paper is to explore the integration of interdisciplinarity in sustainable development in Albanian HEIs. The approach of this study is qualitative, case study method is used. The study focuses in business ethics course offered by the Department of Management at the Faculty of Business, Aleksandër University of Durrës. The findings suggest that interdisciplinary in this course is needed in order to build transversal competence in terms of sustainable consumption, sustainable production, gender discrimination, sustainable spaces and digital and AI competence.

Keywords: interdisciplinarity; sustainable education; business studies; transversal competence

1. INTRODUCTION

Chapter 36 of Agenda 21 considers that education is an essential element for the promotion sustainable development (SD) through improving access in quality education, reorienting education towards education that addresses sustainability, increasing the public awareness on sustainability and providing training across all the sectors of the economy. The World Summit on Sustainable Development in 2002 issues the Johannesburg Declaration on Sustainable Development (UN,2002) where the decade of 2005-2014 was proposed as the United Nations Decade of Education on Sustainable Development (UNDESD). UNDESD considers education and learning as main activities for fostering actions and bringing solutions in the areas of sustainability.

Education for Sustainable Development (ESD) is defined as an education that empowers learners with competencies about informed decision and responsible actions about environmental, social and economic development (UNESCO, 2015). ESD is a holistic and transformational education that includes the concept of lifelong learning. ESD is a crucial part of all the 16 SDGs (sustainable development goals) and it is part specifically of the target 4.7 of the SDG on education. Education for Sustainable Development: Towards achieving the SDGs (ESD 2030) provides a global framework for the implementation of the ESD on the period from 2020-2030 and it is based on the Global Action Programme 2015-2019 (UNESCO, 2020). The priority areas of ESD 2030 are advancing policy, transforming learning environments, building capacities for educators, empowering and mobilizing youth and accelerating local level actions. Environmental Education (EE) is linked with ESD. EE was established as a priority especially after the Tbilisi declaration in 1997. EE is defined as the learning process that increases knowledge and awareness about environment (UNESCO, 1978). EE represents the traditional roots of ESD. ESD is only EE because it includes also the social and economic dimension of SD. ESD is a crucial element of citizenship education as it can influence citizens' sustainable behavior (Lambrechts, 2020). Understanding sustainable development principles is supposed to make citizens more aware about the ecosystem and their place on the ecosystem (Dahl, 2019). In Albania, there is an integration of ESD in HEIs curriculum especially in business studies through the course of business ethics. This study aims to provide insights on interdisciplinarity of the course of business ethics at Business Faculty (BF), Aleksandër Mosiu University of Durrës (UAMD) through a case study. In the second section the theoretical framework is analysed, methodology and results are explained in the third and fourth section and conclusions are presented in the fifth section.

2. THEORETICAL FRAMEWORK

2.1 The importance of interdisciplinarity in Education for Sustainable Development in Higher Education Institutions

ESD includes formal and non-formal learning through different study programs, courses, training and capacity building initiatives and raising public awareness initiatives. Higher education institutions (HEIs) are core players in ESD because they play a key role in the implementation of the ESD because sustainability based curricula can transform mindset in terms of sustainability (Žalėnienė and Pereira, 2021), HEIs play a crucial role as well in achievement of SDGs. ESD curricula in HEIs evolved especially during the UNDESD, research in sustainability in HEIs increased as well. ESD is integrated in different curricula such as environmental management, corporate governance, business ethics, corporate social responsibility sustainability oriented subjects and environmentally oriented subjects in STEM (Science Technology Engineering and Mathematics) disciplines, business related disciplines and social science. ESD curricula is interdisciplinary or transdisciplinarity. It is important to clarify the difference between multidisciplinary, interdisciplinary and transdisciplinary education. According to Multidisciplinary approach in education refers to the integration of different through respecting the boundaries of each discipline. Interdisciplinarity analyses and harmonizes between the disciplines into a coordinated and coherent role. Transdisciplinarity integrates social, natural and health sciences and transcends the boundaries between disciplines. The majority of the courses implemented during the UNDESD integrate the TBL (Triple Bottom Line) approach, use the precautionary principle and intergenerational equity, integrate the concepts of biodiversity and integral equity and evaluate incentives (Araneo, 2023). Moskki et al. (2022) identify two main trends in integrating

ESD in HEIs curricula, the first trend is to integrated ESD into existing disciplinary curricula and stand-alone ESD curricula, it suggested to adopt both approaches even with integrating e-learning and digital tools that for a better student engagement. Environmental-based curriculum was often development for sustainability education using and interdisciplinary approach with critical thinking concrete actions, collaboration and community engagement (Mazuki and Ansar, 2024). ESD can improve academic performance of students, learning motivation and engagement as well as the ability of students to resolve complex problems (Bollina-Jurado et al., 2024). ESD methods should not only focus on learning outcomes but as well as they include creative thinking and critical thinking. Service learning methodology can facilitate ESD; students through this methodology can provide service and can transfer values to the society while improving their communication skills and teamwork skills González-Sánchez et al. (2022).

Podgórska and Zdonek (2023) empathize that project based learning innovations can be used in order to promote SDGs education especially when employing interdisciplinary teams between students and staff. Annelin and Boström (2024) consider that there is a need of transformation of ESD through reuniting the intrapersonal and values thinking of different stakeholders and creating a sustainability competence-based model. This would facilitate a student-based learning. Teaching and learning environments for ESD should be adapted and tailored to students needs for ESD education (Anna-Diab and Molinari, 2017). Strachan et al.(2022) explain the suitability of Strathclyde’s Vertically Integrated Projects for Sustainable Development (VIP4SD) as an interdisciplinary learning and research tool for engineering students. Some other pedagogical approaches suggested for ESD are problem-based learning (PBL), research-based learning (RBL), environmental tools, lifecycle assessment (LCA) and computational thinking (CT) as suggested by (Marieta et al., 2021).

There are several ways of including sustainability in business education such as university (stakeholders and shared mindset), student (pedagogical and curriculum) and international business (holistic integration) (Beaumont et al., 2024). In business related degrees the first steps of integration of ESD in the curricula were in late 1980s with the introduction of the first CSR (corporate social responsibility) case studies in business ethics courses in the USA, even though the discussions about CSR began since 1920s. HEIs have introduced courses on business ethics and CSR in their curriculum (UNESCO, 2018b). ESD is important for business students as future employees or employers or citizens to become prepared about sustainability and business ethics issues. Tormoet al.(2018) suggest that business ethics/CSR courses increase awareness on business ethics and the importance of business ethics in the workplace. Business ethics/CSR courses are useful not only for business students but as well as for students who study in other disciplines, they are expected also to influence ethical behavior of students. Business ethics /CRS courses can help to build sustainable curricula. It is important also that ethics and CSR should be as well integrated at an institutional level at HEIs reflected in HEIs’ vision, mission, values and strategy. Sustainability is often an accreditation standard and a quality assurance standard. Teaching and learning pedagogies in business ethics/CSR courses constructivist methods are relevant due the dynamics of business environment. Discursive resources are used too (Andersson, 2024) because they represent an educational practice and an analytical tool. Business ethics and CRS could be taught by acquiring knowledge through reasoning, intuition and perceptions mobilizing experiential action learning and critical action learning which are used in teaching business related courses but not enough explored in teaching business ethics/CSR courses. Co-creation and students’ engagement is supposed to improve. Service learning as well as is an emerging form of business ethics/ CSR teaching especially due to digital transformation, this an opportunity not only to raise students’ awareness but as well as to incentivize them

towards sustainable actions that have a long-term impact not only for learning purposes but as well as for civic participation and community awareness.

2.2 Sustainable skills and ESD

Weik et al. (2011) have developed sustainable development competencies that include systems thinking, anticipatory future thinking, normative/values thinking, strategic thinking and interpersonal and collaborative competencies. Lozano et al. (2017) propose a list of twelve competencies that include system thinking, interdisciplinary work, anticipatory thinking, justice, responsibility and ethics, critical thinking and analysis, interpersonal relations and collaboration, empathy and change of perspective, communication and use of media, strategic action, personal involvement, assessment and evaluation and tolerance for ambiguity and uncertainty.

At the EU level Green Competencies have been developed within the GreenComp - The European Framework on Sustainable competences (Bianchi et al. (2022). They include 12 competencies organized in four areas such as embodying sustainability values (valuing sustainability, supporting fairness and promoting nature); embracing complexity in sustainability (system thinking, critical thinking and problem framing); envisioning sustainable future(future literacy, adaptability, exploratory thinking) and acting for sustainability (political agency, collective action, individual initiative). A study by Wang et al. (2022) investigates how sustainability competences can be affected by students' beliefs in the new environmental paradigm (NEP) and pro-environmental behaviors (PEB) revealing that students competences are directly linked to their beliefs on NEP and PEB. Another study by Sa et al. (2022) suggests that in Portugal strategic and anticipatory competencies have been the most important competencies in ESD education in Portugal. For Hyytinen et al. (2023) learning and critical thinking are the most interesting competencies for students in ESD in HEIs. For Montanari et al. (2023) green competencies are different from sustainable competencies because green competencies are primarily related to the environmental approach of sustainable development whereas sustainable competences provide a more holistic framework. At the other Pimpa (2024) concludes that students' expectations on ESD education are skills, mindset, learning approaches and global perspective. In terms of skills, it is important as well to include technical skills. Soft skills (commitment, building interpersonal relationships, listening skills, teambuilding and recognition) as well are essential in cultivating and promoting sustainable business practices (Pons et al., 2024). Some of the skills needed for the Green Transition in Europe are skills related to sustainable thinking and action, technical skills which can be cross-sectoral skills and transversal skills (ICT,STEM and team work) (ETF, 2023).

2.3 ESD in Albanian HEIs

The National Strategy for Development and European Integration 2030 includes an agenda for sustainable economic development and green growth; several national priorities are integrated including the development of research and innovation in the field of sustainable development. A collaboration program for sustainable development between the Council of Ministers of Republic of Albania and United Nation for the period from 2017 to 2021. The National Youth and Children Strategy of Albania (2022-2029) is based on the Youth 2030 UN Youth Strategy and it is aligned to SDGs. An emphasis is put on specific objectives of youth employment and youth education opportunities that should be related to SDGs. The National Strategy on Education (2021-2025) establishes several priorities and objectives for the development HEIs where the major focus is put on quality of higher

education, quality of research, students, internationalization of higher education and integrity and transparency. The Albanian Law on Higher Education Ligji 80/2015 states that research activities in higher education institutions build capacities for students and academic through independent research in order to prepare them for professional sustainable development and their academic career. The Law for Climate Change, Ligji155/2020 empathizes that formal and nonformal education are crucial for capacity building in terms of climate change in Albania, collaboration with education institutions and the Ministry of Education and Sports is essential. HEIs in Albania have elaborated several strategic documents in terms of sustainable development and related to the achievement of SDGs. As an example, the University of Tirana has elaborated The Strategy for a friendly university towards environment, (2022-2027). Development Strategy of the University of Tirana (2023-2028) includes several objectives related to sustainable development in terms of learning and teaching, university's social engagement etc. The Institutional Strategy for Teaching of the University of Tirana (2022-2027) has objectives that focus on the university's social responsibility. The university has also adopted a Gender Equity Plan (2022-2024) and it is has a Code of Ethics. Another university that has made several improvements in terms of including sustainable development in its strategic documents the Plan of Strategic Development of UAMD 2020-2025 has as its priorities university's civic and social responsibility. UAMD has adopted as well GEP 2022-2025 and it has a Code of Ethics. University's social and civic responsibility strategic priority is reflected as well in BF Strategic Plan.

Concerning the development of curricula or courses related to business studies or business degrees, traditionally the course of business ethics has been part of business studies curricula focusing in several aspects that connect business to ethics and sustainable development. Another course that has been traditionally related to ESD is CRS course. In the case of BF at UAMD, business ethics course is a compulsory course of the second year of studies (second semester) of the Bachelor degree program in “Business Administration”. Corporate sustainability is another course related to ESD. This course is covered by the Department of Management of BF. Other courses from other taught by other departments related to ESD such as from marketing and tourism. As well as in the academic year 2024-2025 a new Bachelor degree program in Circular economy has opened to students. This study program belongs to the Department of Economics Science. Different Erasmus+ capacity building programs have developed in terms of curricula modernization related to sustainable development.

There exists a gap in the research in terms of the integration of interdisciplinarity approach in sustainable development courses and of the perspective of integration of ELA, CLA or service learning approach. The aim of this study is to explore based on the case study business ethics course the perceptions of the students on the interdisciplinary approach of ESD education in business studies degrees

RESEARCH METHODS

Case study methodology is one of the most used qualitative methodologies. The case study research approach is used to explore complex research issues in real-life settings (Crowe et al., 2011). This research approach is useful when there is needed to gain in-depth understanding of an issues or of a phenomena involving an extensive analysis of the phenomena. Case study allows the use of the existing theoretical concepts and drawing new lines of research through interpretation and explanation (Welch et al., 2011). As the aim of this study is to explore based on the business ethics course, the perceptions of the students on the interdisciplinary approach of ESD education in business studies, case study research approach is suitable for this study. Case study methodology allows to limit the study on

specific time and on a specific space. Data can be gathered from different data collection instruments such as documents, observations, semi-structured interviews or surveys. Case study approach is used as well in education studies because it allows incorporating different data sources and flexibility (Grauer, 2012). EDS research employees as well case study methodology especially when dealing with the particular exploration of a specific topic that involves courses and students' perceptions (Alm et al., 2012).

Business Ethics course taught in the second semester of the second year of the Bachelor Degree in Business Administration is main unit of analysis of this case study. This course is most form of ESD education in business degrees in HEIs in Albania. Business ethics course is a course that tackles ESD from different perspectives such as CSR, sustainable production, sustainable consumption, discrimination and inclusion in the workplace, ethical management, social management, ethical auditing social auditing, communication and sustainability, technology and sustainability, environment and sustainability, sustainable decision making and internationalization and sustainability. The evaluation of the course is composed by two midterm exams and one individual or group assignments.

As this study aims to understand the perspectives of interdisciplinary approach of the course students perceptions were analyzed through four focus groups interviews realized after the final exam in June 2023. Focus group interviews are a tool of qualitative data collection that are conducted in the form of guided discussion by the moderator in order to explore different insights on a topic or phenomena. It is crucial to focus as well on the interaction between the different participants of the focus group interviews. The suggested number of participants for a focus group interview is from four to twelve participants. As the course of business ethics had forty students the students were divided into four groups of ten participants. Focus groups took place in the physical mode, their duration was of one hour each, they were moderated by the instructor of the course and they were recorded fulfilling confidentiality principles concerning the data privacy of the participants. Questions of the focus group interviews were focused in topics such as the integration of the environmental, social and economic dimension of ESD in the business ethics course, the integration of other disciplines such environmental science, food, nutrition, agriculture, consumer rights in the business ethics course and the perception on the current learning and teaching methods and students' suggestions for the integration of the interdisciplinary approach on the project assignments. Qualitative data was coded and analyzed through thematic analysis which groups codes in major themes.

RESULTS

Business ethics and ESD

Students perceive that business ethics and ESD are connected even though their previous definition on ESD was somehow limited or canalized mainly towards EE or CSR. Remarks were made on the specific context of Albania and WB region because the level on awareness on ESD especially among young people remains low. Students feel that that they have an individual behaviour for ESD issues but this is present mainly at the individual level and family level while respect common family spaces in terms of EE or applying principles of circular economy (CE) of reusing and recycling. The perceived level of community awareness remains low, this due mainly because they feel that policies and other external factors do not incentivize them to apply ESD. The general perception is that the course can equip with basic notions of ESD and raising awareness but they seem sceptical in applying ESD in Albanian context. Another issue raised was on social and economic approach of ESD

that are urging issues in Albania and students show an increased interest on these issues even for the future of their career or as citizens.

Perceived interdisciplinarity

Topics such as sustainable consumption or sustainable production were perceived as the most interdisciplinary by the students especially they consider that these topics should include elements of CE, nutrition, architecture, food industry, textile industry. They would prefer to have more experiences from sustainable businesses and they would like to transfer good practices on sustainable consumption to their peers or to younger people and their wider communities. They perceive that the topic of gender discrimination and inclusion remains still sensitive in the Albanian context, taboos sometimes colour their discussion even though they would prefer to have some readiness for the workplace and as well as citizens. Students perceive that ethics and ESD connection with ICT, digital transformation and AI transformation need to be addressed more. They consider that some of the online social networks do not provide a safe space for them as citizens because hate speech is presented and somehow Generation Z tends to misuse online social networks.

Transversal sustainable competencies

The main sustainable competencies and that they could develop through the course were problem framing, critical thinking adaptability and exploratory thinking. They consider that is very important to develop collective action and individual initiative. Collective action could be developed through service learning and actively connecting learning to the community. Individual initiative in terms of ESD remains challenging and learning should be oriented towards real action and should be transformed into real action. Students perceive that their individual action could be better and their motivation does not depend only in external factors but as well as in internal factors especially ESD could improve their self-efficacy.

CONCLUSIONS

This study examined the importance of ESD in the context of HEIs after giving an extensive theoretical explanation on the definition, benefits and challenges of interdisciplinarity of ESD in HEIs especially in business studies where ESD is traditionally focused in the course of business ethics/CRS. Learning and teaching methods were addressed as well. Previous research on sustainability skills showed that ESD could be based on sustainability, which are holistic and green skills, which are more connected to EE. Research gaps were identified in Albania in terms of empirical studies on the interdisciplinarity of ESD in business studies. The case study of business ethics course at the BF, UAMD provided students perceptions on ESD education in business ethics, on interdisciplinarity approach on topics such as sustainable consumption, sustainable production, gender issues and inclusion in the workplace etc. In terms of competencies students perceived that their community awareness could be improved through individual initiative and collective action. The qualitative variables identified in this study could be further operationalized for a quantitative study.

REFERENCES

1. Alm, Karin, Thomas H. Beery, David Eiblmeier, and Tarek Fahmy. 2022. “Students’ Learning Sustainability – Implicit, Explicit or Non-Existent: A Case Study Approach on Students’ Key Competencies Addressing the SDGs in HEI Program.” *International Journal of Sustainability in Higher Education* 23 (8): 60–84. <https://doi.org/10.1108/ijshe-12-2020-0484>.
2. Andersson, Pernilla. “Equipped for responsibility? Discursive resources in business education for sustainability – an analytical tool.” *Environmental Education Research*, August 19, 2024, 1–18. <https://doi.org/10.1080/13504622.2024.2387298>.
3. Annan-Diab, Fatima, and Carolina Molinari. 2017c. “Interdisciplinarity: Practical Approach to Advancing Education for Sustainability and for the Sustainable Development Goals.” *The International Journal of Management Education* 15 (2): 73–83. <https://doi.org/10.1016/j.ijme.2017.03.006>.
4. Annelin, Alice, and Gert-Olof Boström. 2024. “Interdisciplinary Perspectives on Sustainability in Higher Education: A Sustainability Competence Support Model.” *Frontiers in Sustainability* 5 (July). <https://doi.org/10.3389/frsus.2024.1416498>.
5. Araneo, Phyllis. 2023. “Exploring Education for Sustainable Development (ESD) Course Content in Higher Education; a Multiple Case Study Including What Students Say They Like.” *Environmental Education Research* 30 (4): 631–60. <https://doi.org/10.1080/13504622.2023.2280438>.
6. Bianchi, Guia. “Sustainability competences: A systematic literature review.” *RePEc: Research Papers in Economics*, January 1, 2020. <https://doi.org/10.2760/200956>.
7. Beamond, Maria Teresa, Marina Schmitz, Miguel Cordova, Maria Vasileva-Ilieva, Shasha Zhao, and Daria Panina. “Sustainability in business education: a systematic review and future research agenda.” *Critical Perspectives on International Business*, August 30, 2024. <https://doi.org/10.1108/cpoib-06-2022-0071>.
8. Bonilla-Jurado, Diego, Ember Zumba, Araceli Lucio-Quintana, Carlos Yerbabuena-Torres, Andrea Ramírez-Casco, and Cesar Guevara. 2024. “Advancing University Education: Exploring the Benefits of Education for Sustainable Development.” *Sustainability* 16 (17): 7847. <https://doi.org/10.3390/su16177847>.
9. Crowe, Sarah, Kathrin Cresswell, Ann Robertson, Guro Huby, Anthony Avery, and Aziz Sheikh. 2011. “The Case Study Approach.” *BMC Medical Research Methodology* 11 (1). <https://doi.org/10.1186/1471-2288-11-100>.
10. Dahl, Thomas. 2019. “Prepared to Teach for Sustainable Development? Student Teachers’ Beliefs in Their Ability to Teach for Sustainable Development.” *Sustainability* 11 (7): 1993. <https://doi.org/10.3390/su11071993>.
11. Development Strategy of the University of Tirana (2023-2028)
12. European Training Foundation. 2023. “SKILLS FOR THE GREEN TRANSITION.” <https://www.etf.europa.eu/sites/default/files/2023-11/Skills%20for%20the%20green%20transition.pdf>.
13. Grauer, Kit. 2012. “A Case for Case Study Research in Education.” In *Palgrave Macmillan US eBooks*, 69–79. https://doi.org/10.1057/9781137046635_4.
14. González-Sánchez, Rocío, Sonia Medina-Salgado, María Torrejón-Ramos, Soraya González-Mendes, and Sara Alonso-Muñoz. “The service-learning methodology as a facilitating tool for education for sustainable development (ESD).” *REIRE Revista D Innovació I Recerca En Educació* 15, no. 2 (May 19, 2022): 1–9. <https://doi.org/10.1344/reire.38357>.
15. GREECE. “Greece - Report 2017-2019,” 2019. https://www.unece.org/fileadmin/DAM/env/esd/Implementation/NIR_2018/Preface_final_G_R.pdf.
16. Hyytinen, Heidi, Senja Laakso, Janna Pietikäinen, Rami Ratvio, Lotta Ruippo, Tarja Tuononen, and Annukka Vainio. 2023. “Perceived Interest in Learning Sustainability Competencies among Higher Education Students.” *International Journal of Sustainability in Higher Education* 24 (9): 118–37. <https://doi.org/10.1108/ijshe-06-2022-0198>.

17. Institutional Strategy for Teaching of the University of Tirana (2022-2027)
18. KRYEMINISTRIA and AGJENCIA SHETËRËRE E PROGRAMIMIT STRATEGJIK DHE KORDINIMIT TË NDIHMËS (SASPAC). 2022. “Strategjia Kombëtare Për Zhvillim DheIntegrimEuropean 2030.” Report. *Strategjia Kombëtare Për Zhvillim DheIntegrim European 2030*. https://konsultimipublik.gov.al/documents/RENJK_538_Draft-Strategjia-Kombetare-per-Zhvillim-dhe-Integrim-2021--2030-.pdf.
19. Lambrechts, W.D.B.H.M. “Learning ‘for’ and ‘in’ the future: on the role of resilience and empowerment in education.” Open Universiteit Research Portal, August 1, 2020. <https://research.ou.nl/en/publications/learning-for-and-in-the-future-on-the-role-of-resilience-and-empo>.
20. LigjNr. 80/2015 “Për Arsimin e Lartëdhe Kërkimin Shkencorë Institucionet e Arsimittë Lartë”
21. Ligj 155/2020 “Përndryshimetklimatike”
22. Lozano, Rodrigo, Michelle Y. Merrill, Kaisu Sammalisto, Kim Ceulemans, and Francisco J. Lozano. 2017. "Connecting Competences and Pedagogical Approaches for Sustainable Development in Higher Education: A Literature Review and Framework Proposal" *Sustainability* 9, no. 10: 1889. <https://doi.org/10.3390/su9101889>
23. Marzuki, Kartini, and AnsarAnsar. “Curriculum Development Based on Environment for Sustainable Education.” *West Science Interdisciplinary Studies* 2, no. 05 (May 27, 2024): 993–98. <https://doi.org/10.58812/wsis.v2i05.900>.
24. Moksiki, Elliott, Walter Leal Filho, Simone Sehnem, and José Baltazar Salgueirinho Osório De Andrade Guerra. “Education for sustainable development in higher education institutions: an approach for effective interdisciplinarity.” *International Journal of Sustainability in Higher Education* 24, no. 1 (August 10, 2022): 96–117. <https://doi.org/10.1108/ijsh-07-2021-0306>.
25. Montanari, Sibilla, Evi Agostini, and Denis Francesconi. “Are We Talking about Green Skills or Sustainability Competences? A Scoping Review Using Scientometric Analysis of Two Apparently Similar Topics in the Field of Sustainability.” *Sustainability* 15, no. 19 (September 25, 2023): 14142. <https://doi.org/10.3390/su151914142>.
26. National Strategy on Education (2021-2025)
27. National Strategy of Youth and Children (2022-2029)
28. Pimpa, Nattavud. 2024. “Sustainability: Learning and Teaching in the Business Education Context.” Mahidol University. April 1, 2024. <https://mahidol.elsevierpure.com/en/publications/sustainability-learning-and-teaching-in-the-business-education-co>.
29. Plan of Strategic Development of UAMD
30. Podgórska, Marzena, and Iwona Zdonek. “Interdisciplinary collaboration in higher education towards sustainable development.” *Sustainable Development* 32, no. 3 (September 24, 2023): 2085–2103. <https://doi.org/10.1002/sd.2765>.
31. Pons, Sydney, Jalayer Khalilzadeh, Melvin R. Weber, and Ruth Annette Smith. “Cultivating sustainability savvy: the role of soft skills in shaping sustainable practices.” *International Hospitality Review*, May 30, 2024. <https://doi.org/10.1108/ihr-01-2024-0007>.
32. Sá, Patrícia, Mónica Lourenço, and Vânia Carlos. 2022. “Sustainability Competencies in Higher Education Research: An Analysis of Doctoral Theses in Portugal.” *European Journal of Investigation in Health Psychology and Education* 12 (4): 387–99. <https://doi.org/10.3390/ejihpe12040028>.
33. Strachan, Scott, Louise Logan, Stephen Marshall, and Department of Electronic and Electrical Engineering, Education Enhancement, Centre for Sustainable Development, University of Strathclyde. “Embedding Interdisciplinary Research-Based Education for Sustainable Development in Higher Education through Vertically Integrated Projects.” *8th International Symposium for Engineering Education*, 2022. https://pure.strath.ac.uk/ws/portalfiles/portal/138989203/Strachan_etal_ISEE_2022_Embedding_interdisciplinary_research_based_education_for_sustainable_development_in_higher_education.pdf.

34. Strategy for a friendly university towards environment, (2022-2027)
35. Strategy of Business Faculty
36. Tormo-Carbó, Guillermina, EliesSeguí-Mas, and Víctor Oltra. 2018. “Business Ethics as a Sustainability Challenge: Higher Education Implications” *Sustainability* 10 (8): 2717. <https://doi.org/10.3390/su10082717>.
37. Žalėnienė, Inga, and Paulo Pereira. 2021. “Higher Education For Sustainability: A Global Perspective.” *Geography and Sustainability* 2 (2): 99–106. <https://doi.org/10.1016/j.geosus.2021.05.001>.
38. Wiek, Arnim, Lauren Withycombe, and Charles L. Redman. “Key competencies in sustainability: a reference framework for academic program development.” *Sustainability Science* 6, no. 2 (May 18, 2011): 203–18. <https://doi.org/10.1007/s11625-011-0132-6>.