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Embedding sustainability education into hospitality, tourism, and events management curricula – a preliminary best practice model

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Abstract With over seventy percent of millennials preferring to spend disposable income on experiences rather than consumer goods, organizations operating in the tourism, hospitality, and events sectors are predicted to see increasing demand. Despite being recognized as a major contributor to economic activity, these sectors have been criticized for being a root cause of environmental degradation, acculturation, economic leakage, and migration. The recent collapse of international travel firms with far-reaching consequences for employees, suppliers, and destinations has highlighted the vulnerability of organizations to volatility in the business environment and calls for a reassessment of business and leadership models. Since the adoption of the United Nations Sustainable Development Goals in 2015, sustainability initiatives are becoming more embedded into corporate strategies with an increasing focus on the triple bottom line. Following the creation of the Global Reporting Initiative Standards and sector-specific standards, there is a growing expectation that organizations demonstrate accountability for their sustainability initiatives. In Western societies, this reflects a shift away from the liberalist notion of the "Theory of the Firm" towards the sustainability paradigm. The purpose of this exploratory paper is to propose a preliminary framework for embedding innovative sustainability education in undergraduate degree programs. The paper first reviews UK-based guidelines for sustainability education at the university level. It then proposes a framework for the development of a corresponding curriculum audit tool that assesses how comprehensively sustainability education is embedded into undergraduate curricula. The University of Gloucestershire's degree programs in International Hospitality and Tourism Management and Event Management are used as case studies to demonstrate how an audit tool design based on relevant principles can be used in practice for assessing and enhancing sustainability education. The paper recommends the further development of the tool into a best practice model integrating graduate attributes, key learning outcomes and skills, and an appropriate learning and teaching infrastructure. Transferability across subjects and transnationally is identified as an area for further research.

Keywords: Customer goods, event management, sustainability, tourism

1. Introduction

Over seventy percent of millennials prefer to spend disposable income on experiences rather than consumer goods [3] This means that organizations operating in the tourism, hospitality, and events

sectors are predicted to see increasing demand. Despite being recognized as a major contributor to economic activity, these sectors have been criticized for being a root cause of environmental degradation, acculturation, economic leakage, and migration. The recent collapse of international travel firms with far-reaching consequences for employees, suppliers, and destinations has highlighted the vulnerability of organizations to volatility in the business environment and calls for a reassessment of business and leadership models.

Since the adoption of the United Nations Sustainable Development Goals in 2015, sustainability initiatives are becoming more embedded into corporate strategies with an increasing focus on the triple bottom line. Following the creation of the Global Reporting Initiative (GRI) Standards (https://www.globalreporting.org/standards/) and sector-specific standards, there is a growing expectation that organizations demonstrate accountability for their sustainability initiatives. In Western societies, this reflects a shift away from the liberalist notion of the "Theory of the Firm" towards the sustainability paradigm.

The purpose of this exploratory paper is to propose a preliminary framework for embedding innovative sustainability education in undergraduate degree programs. Based on a selected literature review considering research and guidance documents from the past five years, the paper first reviews UK-based guidelines for sustainability education at the university level. It then proposes a framework for developing a corresponding curriculum audit tool that assesses how comprehensively sustainability education is embedded into undergraduate curricula. Using selected examples, the University of Gloucestershire's degree programs in International Hospitality and Tourism Management and Event Management are used as case studies of applied management education to demonstrate how an audit tool designed based on relevant principles can be used in practice for assessing and enhancing sustainability education. The last section discusses how the curriculum audit tool can form an integral part of a wider institutional best practice model.

2. Current guidelines on sustainability education at the university level and their limitations

Following the adoption of the Sustainable Development Goals (SDGs) by all United Nations Member States and within the context of Agenda 2030, higher education institutions have been given the mandate of promoting sustainability education. Meeting the ambitions of Agenda 2030 requires a political willingness to change socioeconomic and environmental policies and a corporate willingness to adopt socially responsible business models [9]. This means that applied management education must impart knowledge and skills and develop competencies needed by future leaders, i.e. future "SDG implementers" to address complex social, economic, and environmental challenges whilst instilling confidence in the value and ethicality of corporate activity [10].

Higher education institutions shape the attitudes and behaviors of future leaders through a variety of formal activities, including teaching, learning, assessment research, work experience, and extracurricular activities. Less tangible activities include the promotion of specific values or ways of thinking linked to specific graduate attributes that the institution seeks to nurture as well as institutional approaches toward operating sustainably and responsibly in themselves [10]. Integrating the SDGs comprehensively and coherently into this wide range of activities is a complex task that requires a systems perspective and is best understood as a process of creating an ecosystem for sustainability education [5]. This process is challenged by an insufficient understanding of the complexity that has led to the current sustainability crisis in the first place and by differing conceptualizations of sustainability [4].

Comprehensive assessment frameworks are necessary to help institutions understand their approaches to delivering sustainability education more systemically and to audit their institutional and pedagogic strategies against a recognized set of standards (Kioupi and Voulvoulis, 2020). There is a

consensus that pedagogic models and institutional frameworks for embedding sustainability education are still in their infancy and that more research is required to understand how institutions frame

both discourse and practice, to validate the relevance of sustainability education for different professions and to test the effectiveness of pedagogic approaches [4, 9].

Existing sustainability assessment tools like the globally orientated Sustainability Tracking, Assessment and Rating System (https://stars.aashe.org/) or sustainability reporting formats like the UKfocused Alliance for Sustainability Leadership Education (https://www.eauc.org.uk/further_and_higher_education_sustainability_rep) encourage institutionwide sustainability audits and typically address leadership and governance, student experience, business operations, academic innovations, community engagement, and partnerships. The same is reflected in many research papers (see for example Adams, Martin, and Boom, 2018; Kapitulcinova et al, 2018; Blanco-Portela et al, 2017).

There is currently no single strategy for embedding sustainability education into business or applied management curricula as debates continue to revolve around the most effective mechanisms for doing so [10,6]. Questions to address include whether sustainability education is best vertically integrated through designated modules or horizontally embedded across a range of subjects, how it should be distributed within the degree program, and what the balance between compulsory and elective sustainability education should be. What is therefore missing is a framework that assists institutions in systematically mapping program learning outcomes against an agreed set of sustainability education benchmarks designed in alignment with frameworks for higher education qualifications [5].

There is a consensus that sustainability education calls for pedagogic innovations that provide interactive, experiential, transformative, and real-world learning which has led to the development of some pedagogic toolkits. However, only very few attempts have been made to link pedagogical approaches and competency development. Which assessed a range of pedagogical techniques and assessed how likely they were to address the development of specific competencies. Results were mixed with no evident pattern, which suggests a need for more sophistication in both pedagogic research and the design of teaching, learning, and assessment strategies. It is also understood that embedding sustainability education into curricula will not guarantee that graduates attain the desired attributes unless emphasis is placed on testing the effectiveness of pedagogic techniques and on assessing competency development [5].

3. Developing a comprehensive framework for embedding sustainability education into undergraduate curricula

Formulated learning outcomes are a key component of rigorous program design and learning, teaching, and assessment planning and define what knowledge and competencies graduates should have attained at the end of their studies [5]. The process of embedding sustainability education into curricula thus needs to start with the formulation of an appropriate set of sustainability learning outcomes (SLOs). Formulating SLOs requires a systematic definition of sustainability competencies and associated knowledge and skills that are informed by commonly accepted sustainability paradigms and multidisciplinarity.

Previous work has identified three main dimensions of sustainability education that rely on different values and understandings of the transformations required for sustainable development and business models. These include (1) the eco-modern paradigm advocating technological progress as a means for building sustainable futures, (2) the social transformation paradigm arguing for economic redistribution and degrowth, and (3) the resilience paradigm promoting risk management through socio-technical mechanisms [9]

General sustainable development competencies have been identified to inform the design of curricula and pedagogic techniques with the UK's Quality Assurance Agency (QAA)'s Education for Sustainable Development Guidance published in March 2021 being the most recent iteration. Based on the key competencies for sustainability identified by UNESCO, the range of competencies appears to be less comprehensive than those identified by other contributions. However, a closer examination of the QAA competency descriptions shows that planning and innovation competencies are considered integral to

strategic competency. Respect for different ways of thinking, acting fairly and ecologically and participation are seen as integral to collaboration and normative competency, whilst dealing with ambiguity and frustration is seen as integral to self-awareness competency.

QAA (2021)	**Stough et al (2018)**	**Lozano et al (2017)**	**Mula et al (2017)**
Systems thinking	Systemic thinking	Systems thinking	Systems thinking
Critical thinking competency	Critical thinking	Critical thinking and analysis	Critically reflective thinking
Anticipatory competency	Anticipatory thinking	Anticipatory thinking	Futures thinking
Normative competency	Empathy and change of perspective	Empathy and change of perspective	
Collaboration competency	Cooperation in groups		
	Planning and realizing innovative projects		
	Respect for different ways of thinking		
	Interdisciplinary work	Interdisciplinary work	
	Participation	Personal involvement	Participatory learning
	Acting fairly and ecologically		
	Communication and use of media	Communication and use of media	
	Evaluation	Assessment and evaluation	
	Dealing with ambiguity and frustration	Tolerance for ambiguity and uncertainty	
		Justice, responsibility, and ethics	
Strategic competency		Strategic action	
Integrated problemsolving competency			
Self-awareness competency			
			Learning to change
			Stakeholder engagement

In addition to providing a more detailed description of each competency, the guidance published by the QAA also identifies corresponding knowledge, skills, and attributes. Integrating the three sustainability paradigms, the document, therefore, provides a relatively comprehensive framework for formulating SLOs adapted to different subjects. It also presents a catalog of suitable pedagogic techniques including collaborative learning, inquiry-based learning, play-based learning, storytelling, and problem-based learning, and links these to specific competency development.

What the QAA guidance does not provide is a taxonomy that would assist in formulating a progressive set of SLOs based on increasing academic demand levels. GHH framework offers a potential

reference point for the development of such taxonomy. The framework is an epistemological and heuristic tool for the comprehensive study of complex phenomena integrating the elements of **G**eneralism, **H**olism, and **H**olarchism. Generalism extends to the two dimensions of object generalism and viewpoint generalism, whereby the former examines multiple objects within the context of the same framework (such as multiple waste materials within the context of recycling) and the latter examines the same object from multiple perspectives (such as multiple stakeholder perceptions on recycling). Holism offers a systems perspective by studying interrelationships between different agencies and their impact on the evolution of the system, therefore acknowledging the importance of emergence. Holarchism provides an advanced perspective by additionally viewing systems as hierarchical, whereby some entities are located at the same systemic level and others either at higher or lower levels of the same hierarchy. Examples of this would be the interrelationships between local, national, and global policymaking or industries made up of different groups of organizations including SMEs, large corporates, professional associations, and regulatory bodies.

Bloom's taxonomy is typically used to formulate learning outcomes at different higher education levels with lower-level outcomes such as knowledge and understanding typically linked to Level 4, midlevel learning outcomes such as analysis and application typically linked to Level 5, and higher-level learning outcomes such as critical evaluation and synthesis typically linked to Level 6 and beyond (see for example [7]. Providing increasingly complex perspectives on systems thinking, the GHH framework can be used in a similar way to create a progressive set of learning outcomes. Here, generalist thinking would most likely inform Level 4 SLOs, holist thinking would inform Level 5 SLOs and holarchies perspectives would be introduced at Level 6 and beyond.

4. Sustainability education at the University of Gloucestershire

UOG hosts a United Nations Regional Centre of Expertise in sustainability education. UOG has pioneered the transformation of the whole university towards sustainability and resilience. This covers high-level policy, curriculum innovation and student development, and practical impacts such as carbon reduction, waste, and food. UOG has a long-standing commitment to sustainability and a track record for its performance and innovation in this area. The step change came from integrating education for sustainable development into courses to change the 'brain print' of graduates. This recognizes critical resilience and sustainability as an educational priority, inspiring change in individuals, professions, and organizations. Students across UOG are increasingly driving the change, supported through Live Smart, a student-led initiative to help people live in ways that benefit their well-being, finances, local community, and the wider planet (https://sustainability.glos.ac.uk/).

Selected examples from UoG's undergraduate programs in international hospitality and tourism and events management will be introduced to illustrate how the latest QAA Guidance. GHH model can inform the embedding of sustainability education into applied management curricula.

At Level 4, the module "Tourism in the World", introduces students to systems thinking, anticipatory thinking, critical thinking, and strategic thinking. One of the module learning outcomes expects students to establish relationships between tourism entrepreneurialism within ethical, sustainability, and legal dimensions. Whilst the module covers the tourism system as a whole, the cognitive approach at this level is mostly based on viewpoint generalism as students are encouraged to differentiate between different types of tourism and assess their socio-economic and environmental impacts.

At Level 5, the module "Live Event Production" encourages students to additionally develop collaboration, integrated problem-solving, self-awareness, and normative competencies. In a previous year, students delivered a pop-up event exploring the Sustainable Development Goals as part of Cheltenham Jazz Festival. The event recorded over 800 interactions with visitors, including many families, and over 250 children completing the experience. Students working in teams developed unique interactive pop-ups, choosing 7 of the 17 Global Goals to provide an integrated journey through sustainability ideas and practice. The journey involved fun activities such as arts and crafts, mini golf,

planting, an immersive ocean plastics experience, and a treasure trail. Children were given 'passports' and encouraged to collect stamps by visiting each of the pop-up activities to gain rewards. This engagement activity simultaneously improved awareness of the SDGs among the university students as well as the wider community. From 599 signatories in 63 countries, this event was one of only four selected for discussion at the UN in New York as an example of good practice in sustainability education (The SDG Accord, 2018). Emphasizing stakeholder engagement and the need to work collaboratively with different agencies, this module encourages holistic thinking.

At Level 6, the module "The Global Experience Economy" builds on the previously developed competencies and encourages students to adopt a monarchist perspective on the industry and associated sustainability issues. Students are introduced to the concept of sustainability reporting and are asked to critique corporate sustainability agendas within the global experience economy adopting commonly recognized reporting formats, such as the GRI Standards. They develop a critical understanding of how organizations and destinations can work in partnership with other stakeholders to maximize the triple bottom line of people, profits, and the planet. Specific topics addressed in the module include cultural diversity, disruptions, and wicked problems, responsible management, ethics and moral decision making, and the critical sustainability agenda.

5. Recommendations for the development of an institutional best practice model

The initial literature review has shown that the current guidance for embedding sustainability education into undergraduate curricula is relatively comprehensive in identifying sustainability competencies and corresponding knowledge, skills, and attributes. However, the development of a progressive set of SLO's corresponding to different academic demand levels needs to be additionally informed by an appropriate taxonomy that describes increasingly sophisticated sustainability thinking. Bloom's taxonomy and model can inform the development of an advanced framework for embedding sustainability education in undergraduate curricula.

Embedding sustainability into higher education curricula requires policy shifts and institution-wide approaches [6] and is complicated by a range of challenges. Key barriers to effectively embedding sustainability and sustainability education in higher education related to human resistance, communication, empowerment, involvement and organisational culture [4]. From a professional perspective, challenges arise from the need to understand how sustainability thinking and practice articulates in different industries and professions and to reframe learning outcomes accordingly through a sustainability lens. Moreover, there is a need to apply suitable learning, teaching, and assessment methodologies and to challenge power relationships in learning to engage students at levels of the learning process [6].

What stands out strongly from both the literature review and the UoG case study is the centrality of staff and partnerships in effectively formulating and embedding SLOs into undergraduate curricula. Academics responsible for developing curricula and for educating students need to adopt a sustainability mindset and seek internal and external dialogues on all aspects of the educational process. This is not only to ensure the professional relevance of sustainability education but also to establish partnerships for the delivery of appropriate real-world learning experiences and research-informed teaching. Whilst the effectiveness of different pedagogic techniques in developing sustainability competencies requires further examination, there is an evident need for innovating teaching, learning, and assessment methods. This consequently also requires a review of teaching qualifications to ensure that pedagogy for sustainability education is duly embedded.

The paradigm shift from education to sustainability education calls for academics to reflect on their values and to act as role models in promoting the ambitions of the SDGs. Whilst this has obvious implications for staff development and review approaches, it also places an increased emphasis on extracurricular activities where the principles of responsible citizenship are practiced as a way of being outside of the professional or academic domain.

A second part of the QAA Education for Sustainable Development Guidance thus advises that, alongside curriculum development and staff development for sustainability education, an institutional sustainability ecosystem must be formed on the principles of multi-stakeholder engagement and comprehensively integrate institutional strategies for research and knowledge exchange; employability; enterprise and entrepreneurship; internationalization; equality, diversity and inclusion; partnership with students; civic engagement; and health and wellbeing.

6. Conclusion

This exploratory paper has reviewed current UK guidance on embedding sustainability education into undergraduate curricula to express recommendations for the development of an advanced best practice model. The QAA document "Education for Sustainable Development Guidance" was identified as the most comprehensive framework currently available. Based on UNESCO's key competencies for sustainability, the guidance document systemically identifies knowledge, skills, and graduate attributes linked to those competencies and recommends pedagogic approaches thought to support their development in university students.

Academic research into sustainability education has however highlighted that more rigorous testing is required to validate the proposed pedagogical approaches as effective methods for cultivating the identified set of key competencies. Further research is also needed to explore and validate suitable assessment methods for testing the attainment of associated knowledge and skills. As the current QAA guidance does not differentiate between lower-level and higher-level knowledge and skills there is scope for developing a taxonomy of sustainability learning outcomes to inform curriculum development at different undergraduate levels.

From the arguments presented in the QAA guidance document, relevant academic papers, and the short case study it is evident that embedding sustainability education into university curricula requires the development of an institutional sustainability eco-system. Whilst the QAA document provides guidance on multi-stakeholder integration in these endeavors and provides examples of good practices from around the higher education sector, future research will need to focus on understanding how comprehensively higher education institutions have embedded sustainability into their institutional strategies as well as the typical challenges encountered in this process.

The guidance for embedding sustainability education is predominantly based on a UK perspective with input from a variety of European collaboration projects giving scope for comparative international studies and the development of regional adaptations of future best practice models.

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