Integrating Sustainable Development into the Curriculum

Enakshi Sengupta; Patrick Blessinger; Taisir S. Yamin, Editors.

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Creating a sustainable future is one of the biggest challenges that we face as a human race. This is often made even harder by the apathy of many towards the need for sustainability. Education will play a crucial role in finding a solution to the global climate crisis, by shaping future generations who are informed, enlightened and ready to take action.

This book explores the value of institutions of higher education in leading the way on the topic of sustainability education by ensuring that it is well entrenched in the curriculum, as well as in everyday practice and lifestyles. This unique volume features authors from different parts of the world who narrate their own experience of integrating sustainability into their curriculum, and teaching sustainability to students.

By exploring the idea that education and sustainability should be seen as intrinsically linked if we are to see global change, this important text will prove invaluable for leaders, scholars and policy specialists in higher education.



This must-read edited volume brings together a variety of scholars who offer their research results, insights, and practical and pedagogical recommendations for integrating sustainable development in diverse curricula. It is a very significant contribution to sustainability education literature, as it emphasizes not only teaching knowledge but the acquisition of sustainability values. Sustainable development is presented as a multi-dimensional integrated system that requires an interdisciplinary approach. It presents examples from a variety of areas that include: healthcare, urban development, and the global clothing industry. Examples are drawn from multiple countries.

This book clearly shows the scholarly efforts by the editors to bring together the researchers and practitioners to contribute their insights and experiences on the very important dimensions of sustainability integration into the curriculum at different levels and across different geographical terrain. The book will be an essential reference for the practitioners and academics on educational sustainability.

In the introduction, Sengupta and Blessinger highlighted the purpose and introduced their definition for innovation teaching and learning. It is "any approach, strategy, method, practice or means that has been shown to improve, enhance, or transform the teachinglearning environment." (p. ix). In other words, innovation involves doing things differently or in a novel way in order to improve outcomes. "This innovation can be any positive change related to teaching, curriculum, assessment, technology, or other tools, programmes, policies, or processes that leads to improved educational and learning outcomes." (p: ix)

In the first contribution, "Introduction to Integrating Sustainability into Curriculum", Enakshi Sengupta, Patrick Blessinger and Taisir Subhi Yamin pointed out that education has the capability of being a catalyst in changing and preparing students with capabilities to promote sustainability. "Studies have shown that students who are given discourses in sustainability are more motivated, better behaved, and sensitive toward their environment." (p. 4)

Russell Gurbutt and Dawne Gurbutt, in chapter one, "Integrating Sustainable Development into Healthcare Curriculum", set the scene for the need of sustainable development in the healthcare curriculum by discussing the contemporary context of healthcare provision and its associated challenges. "The integrated care programme therefore addresses the question: why are we facing the current issues in this particular setting? And guides learners to explore and construct an origin story to account for a trajectory of development that has resulted in the current position" (p. 19). This draws on their productive thinking skills and reflective analysis using a suitable model as a guide.

In chapter two, "Embedding Sustainable Development in the Curricula: Learning about Sustainable Development as a means to Develop Self-Awareness", Louise Manning and Luis Kluwe de Aguiar described how the spiral curricula are organized, and developed. In addition, they identified the key competences essential when developing a learning programme, including: Adaptability; interpersonal competencies; normative competences; anticipatory competences; and, strategic competencies.

Alana Griffith and Winston Moore, in chapter three, "A Comparative Analysis of Approaches to Integrating Sustainability into the Curriculum at a University in a Small Island Developing State in the Caribbean", compared the approaches used in different disciplines to highlight innovative teaching strategies (like the flipped classroom) that are employed to engage students. The authors emphasize different ways of integrating sustainability into the curriculum; they link teaching units to the sustainable development goals as well as how students confront these issues.

In chapter four, "Integrating Sustainable Development into the Curriculum: A case Study on the Developing of Sustainability Competencies in Industrial Design Students at a Bachelor Level in Mexico", Martha López, Robert Huddleston and Roberto Lozano presented a case study on integrating sustainable development into the industrial design. The focus of this study is on the goal of quality education to make scientific, technological, and innovation development pillars for sustainable economic and social progress. This chapter reported that the students recognized a significant advancement in their development of sustainability competencies and that this had resulted from this curriculum intervention. This chapter proposes that the findings of the study indicate that a holistic approach has the potential to contribute, in strategic and practical terms, significantly to sustainable development education in Mexico, and thereby to achieving the quality education goals.

Alice Cassidy, Yona Sipos and Sarah Nyrose, in chapter five, "Programmes, Workshops, Resources, and Other Supports for Post-Secondary Sustainability Educators:, provided an overview of integrating of curricular sustainability development and education as well as related institutional leadership at the post-secondary level. In addition, the authors shared tools and resources to support educators from any discipline, to introduce, integrate, and/or enhance sustainability in their course, programme, or initiative. As they are future leaders, it is important that educators address the environmental, social and economic issues that demand attention.

In chapter six, "Hortus in Urbe: Building a Sustainable Development Curriculum in Chicago", Euan Hague, Howard Rosing and Joseph P. Schwieterman described the development of an interdisciplinary graduate programme focusing on sustainable urban development at Chicago's DePaul University. The authors discuss the process of programme formation and adjustment over its first five years of operation, 2013-2018. The chapter highlights some of the interdisciplinary innovations, such as requiring courses in Geographic Information Systems to aid spatial data analysis and visualization.

Niki Harré and others, in chapter seven, "An Interdisciplinary Teaching Module on the Global Clothing Industry: Lessons from Working across Four Disciplines and Two Universities", integrated the interdisciplinary sustainability module into existing courses and has four features, including: (1) it focuses on a complex industry with ramifications for social and environmental sustainability; (2) it involves an issue of direct relevance to the students; (3) students teach those from another discipline as "subject experts;" and (4) students are assessed on their learning within their home course. The authors concluded that universities "can play a vital role in advancing sustainability knowledge awareness, and action, and we argue that they should take this role seriously. One way to do so is for teaching staff to work together on interdisciplinary partnerships. Cross-course teaching modules, such as the one discussed here, not only expose students to useful information from outside their primary discipline, but also give them insight into the complexity of sustainability issues and the need for multi-faceted solutions." (p.123)

In January 2016, Georgia Tech launched a campus-wide academic initiative aimed at preparing undergraduate students in all majors to use their disciplinary competencies to contribute to the major societal challenge of creating sustainable communities. This initiative calls for faculty members to develop courses and co-curricular opportunities that will help students learn about sustainability and community engagement and hone their competencies by engaging in real-world projects. In chapter eight, "Integrating Sustainability into a Freshman-Engineering Course through an Institute-Level Initiative: A Teaching-Learning Model with Authentic Activity and Context", Raghu Pucha and others described this initiative and reported the outcomes. In addition, the authors present the pedagogical approaches to learning, strategies, and challenges for implementation and assessment of intervention activities. These programmes allow students to explore different avenues of engagement and provide opportunities for them to connect course-based projects to broader, multi-stakeholder initiatives.

There is an increasing interest in integrating sustainable development into higher education curricula to increase young graduates; agency in addressing sustainable development goals, and raising awareness of opportunities to create local solutions and the organizational competencies to implement these solutions in context. In chapter nine, "Integrating Sustainable Development into the Curriculum: Enacting Scalar Shifting in Education for Sustainable Development Competencies", Paul Benneworth and others developed a model by which a single educational experience could help to bridge between two types of orientations (theoretical and practical). The authors reflect on tensions, problems, and solutions in producing graduates oriented to tackling contemporary societal issues, while gaining valuable personal development experience.

Reference:

Sengupta, E.; Blessinger, P.; and Yamin, T.S. (2020). *Integrating Sustainable Development into the Curriculum*. Volume 18: Innovations in Higher Education Teaching and Learning. United Kingdom: Emerald Publishing Limited.

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