

# TEACHING AND LEARNING STRATEGIES FOR SUSTAINABLE DEVELOPMENT

**Edited by** Enakshi Sengupta,  
Patrick Blessinger and Taisir Subhi Yamin

INNOVATIONS IN HIGHER  
EDUCATION TEACHING AND LEARNING

**VOLUME 19**

**TEACHING AND LEARNING  
STRATEGIES FOR SUSTAINABLE  
DEVELOPMENT**

# INNOVATIONS IN HIGHER EDUCATION TEACHING AND LEARNING

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# **SERIES EDITORS' INTRODUCTION**

## **INNOVATIONS IN HIGHER EDUCATION TEACHING AND LEARNING**

The purpose of this series is to publish current research and scholarship on innovative teaching and learning practices in higher education. The series is developed around the premise that teaching and learning is more effective when instructors and students are actively and meaningfully engaged in the teaching–learning process.

The main objectives of this series are to:

1. present how innovative teaching and learning practices are being used in higher education institutions around the world across a wide variety of disciplines and countries;
2. present the latest models, theories, concepts, paradigms, and frameworks that educators should consider when adopting, implementing, assessing, and evaluating innovative teaching and learning practices; and
3. consider the implications of theory and practice on policy, strategy, and leadership.

This series will appeal to anyone in higher education who is involved in the teaching and learning process from any discipline, institutional type, or nationality. The volumes in this series will focus on a variety of authentic case studies and other empirical research that illustrates how educators from around the world are using innovative approaches to create more effective and meaningful learning environments.

Innovation teaching and learning is any approach, strategy, method, practice, or means which has been shown to improve, enhance, or transform the teaching–learning environment. Innovation involves doing things differently or in a novel way to improve outcomes. In short, innovation is positive change. With respect to teaching and learning, innovation is the implementation of new or improved educational practices that result in improved educational and learning outcomes. This innovation can be any positive change related to teaching, curriculum, assessment, technology, or other tools, programs, policies, or processes that leads to improved educational and learning outcomes. Innovation can occur in institutional development, program development, professional development, or learning development.

The volumes in this series will not only highlight the benefits and theoretical frameworks of such innovations through authentic case studies and other empirical research but also look at the challenges and contexts associated with

implementing and assessing innovative teaching and learning practices. The volumes represent all disciplines from a wide range of national, cultural, and organizational contexts. The volumes in this series will explore a wide variety of teaching and learning topics, such as active learning, integrative learning, transformative learning, inquiry-based learning, problem-based learning, meaningful learning, blended learning, creative learning, experiential learning, life-long and life-wide learning, global learning, learning assessment and analytics, student research, faculty and student learning communities, as well as other topics.

This series brings together distinguished scholars and educational practitioners from around the world to disseminate the latest knowledge on innovative teaching and learning scholarship and practices. The authors offer a range of disciplinary perspectives from different cultural contexts. This series provides a unique and valuable resource for instructors, administrators, and anyone interested in improving and transforming teaching and learning.

**Patrick Blessinger**

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# FOREWORD

Teaching is a practical approach to shape one's ideas through education. On the other hand, learning is the acquisition of knowledge or skills through study, experience, or being taught. It is the process of acquiring new or modifying existing knowledge, behaviour, skills, values, and preferences. Education is one of the most important factors for human development and society because it helps an individual to increase the mental and physical capacity as well as productivity. Teaching and learning strategies are a set of activities to accommodate different abilities, skills, and styles that allow every student/learner to participate and be able to achieve success.

Sustainability education is often referred to as Education for Sustainable Development (ESD), which has been defined as the type of education that allows every human being to acquire the knowledge, skills, attitudes, and values necessary to shape a sustainable future (UNESCO, 2014). ESD in Higher Institutions of Learning is based on student-centered approach with a focus on improving academic and higher-order thinking skills. It is also research based and aims at promoting environment for current and future generations. A well-structured curriculum should therefore include sustainable development issues, such as biodiversity, poverty reduction, climate change, sustainable consumption, etc. Council of the European Union (2010) states that ESD is essential for the achievement of a sustainable society and is therefore desirable at all levels of formal education and training as well as non-formal and informal learning. Institutions of Higher Learning all over the world are responding to political, economic, and social pressure to impart knowledge to students that will enable them to develop knowledge, values, and skills to improve the quality of life now and for the future.

In this book, authors provide practical examples and results from case studies in which teaching and learning strategies for sustainable development which enable students to use knowledge, skills, and values for sustainable development. The practical examples are from different countries, such as the United States of America, the UK, Sweden, New Zealand, Canada, Italy, Ghana, Zimbabwe, Nigeria, Australia, Costa Rica, Thailand, and others. There are numerous teaching and learning strategies, such as *Experiential Learning* in which students using prior experiences are engaged in critical thinking, problem-solving, decision-making, and applying ideas and skills to new situations; *Storytelling* in which students and faculty provide practical insight to environmental challenges that affect our planet; *Values Education* in which designed curricula contain attitudes and human values, such as social equity and peace, appropriate development, conservation, and democracy that are key in shaping a sustainable future; *Enquiry learning* in which students are given opportunity to think and develop problem-solving skills, discover, and create activities for sustainable development;

*Appropriate assessment* in which leading assessment practice is identified as fostering higher order thinking in solving complex multi-interdisciplinary problems; *Future problem-solving* in which curricula are designed to assist students to develop skills for analysing problems from a future perspective using research and group work; *Learning outside the classroom* in which students are provided with high quality learning activities by visiting local communities so that they appreciate first-hand experience and are able to practice skills of enquiry and value analysis and *Community problem-solving* in which students are given opportunity to develop practical skills that are needed in finding solutions to local challenges in the realm of sustainable future.

In a good number of cases, authors use multiple teaching and learning strategies which could be referred to as a hybrid approach for achieving sustainable development.

Apart from case studies, readers will also find the book useful to learn about a new program called ESD for 2030 which is intended to promote sustainable development for an entire institution which is referred to as “Whole Institution Approach for ESD.” The book provides immense contribution to our genuine desire of incorporating strategies of teaching and learning for sustainable development in our respective curricula. However, it must be borne in mind that there is no case of “fit for all” in developing strategies of teaching and learning for sustainable development. Each Institution of Higher Learning should develop its own strategies by taking into account its own circumstances and respective regional perspective.

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