



PURPOSE-LED EDUCATION

Education for Sustainable Development

edited by

Thian Lok Boon **Veronica Ng**

About this book

This book serves as a how-to guide for academics seeking to reorient their teaching and learning to support Education for Sustainable Development, thereby nurturing students' sustainability competencies and commitment to acting for a sustainable future. The careful curation in this book features ten chapters that present diverse education framing and interventions, orienting higher education towards sustainability.

The book is perfectly suited for its primary audience of higher education faculty, curriculum designers, and university administrators. It is well-positioned to become a key text in sustainability education and innovative pedagogy, distinguishing itself from the more theoretical works by offering a comprehensive and practical guide.

Associate Professor Wan Zuhainis binti Saad

Former Director, Academic Excellence Division,
Department of Higher Education,
Ministry of Higher Education, Malaysia (2018-2022)

This book exemplifies what it means to link institutional change with societal transformation, grounding education for sustainable development in local realities while aligning with global frameworks. I hope this volume will inspire others in higher education to embark on their purpose-led journeys towards embedding sustainability.

Professor Charles Hopkins

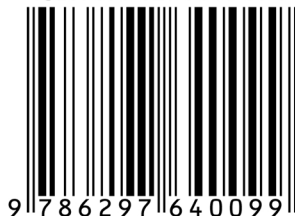
UNESCO Chair in Reorienting Education towards Sustainability,
York University, Toronto, Canada

From a purpose-driven university focused on being the best university for the world, this book offers thought-provoking insights on how higher education can become a force for good in a time when the world needs it the most. Its chapters guide academics and practitioners in their journey towards a more sustainable and impactful future.

Professor Debbie Haski-Leventhal

Author of The Purpose-Driven University

ISBN 978-629-7640-09-9



9 786297 640099

TABLE OF CONTENTS

PREFACE

FOREWORD

INTRODUCTION	1
 CHAPTER 1	 10
HUMANISING PHARMACY CURRICULUM THROUGH PURPOSE-DRIVEN LEARNING: MEDICATION REVIEW AT SENIOR CARE HOME	
<i>Renukha Sellappans</i>	
<i>Supporting SDG 3: Good Health and Well-being</i>	
 CHAPTER 2	 22
THE UNSEEN SOCIETY AND MENTAL HEALTH: A CASE REPORT FROM THE ORANG ASLI COMMUNITY PROJECT ON THE VALUE OF PURPOSEFUL LEARNING	
<i>Hiran Shanake Perera</i>	
<i>Supporting SDG 3: Good Health and Well-being</i>	
 CHAPTER 3	 33
NOURISH-U: AN INTERDISCIPLINARY COLLABORATIVE SERVICE LEARNING CURRICULUM TO EMPOWER UNIVERSITY STUDENTS IN PROMOTING NUTRITIONAL WELL-BEING FOR YOUNG CHILDREN	
<i>Leong Sze Ying, Wong Fang Lian, Chew Lye Yee, Yeo Siok Koon and Chong Li Choo</i>	
<i>Supporting SDG 2: Zero Hunger, SDG 3: Good Health and Well-being, SDG 12: Responsible Consumption and Production</i>	
 CHAPTER 4	 50
PROJEK BACABACA: ADVANCING LITERACY AND SOCIOLOGICAL CONSCIOUSNESS THROUGH PURPOSE-LED EDUCATION	
<i>Hema Letchamanan</i>	
<i>Supporting SDG 4: Quality Education</i>	
 CHAPTER 5	 67
THE REFLECTIVE PRACTITIONER: LEARNING FOR A SUSTAINABLE FUTURE	
<i>Siti Norzaini Zainal Abidin, Liu Hui and Edwin Chan Yean Liong</i>	
<i>Supporting SDG 11: Sustainable Cities and Communities</i>	

CHAPTER 6	101
CULTIVATING PURPOSE THROUGH SUSTAINABILITY-ORIENTED, COMMUNITY-FOCUSED, ARCHITECTURAL EDUCATION: MY BAMBOO PROJECT	
<i>Chang Yan Yee, Lydia Foong Yoke Yean and Yoon Sook Jhee</i>	
<i>Supporting SDG 11: Sustainable Cities and Communities</i>	
CHAPTER 7	120
ARCHITECTURAL MULTIDISCIPLINARY LEARNING IN PROMOTING SUSTAINABLE DEVELOPMENT: LESSONS FROM PPR SERI CEMPAKA PROJECT	
<i>Filzani Illia Ibrahim, Khairool Aizat Ahmad Jamal, Soon Lam Tatt, Ahmad Fahmi Zainazlan and Shirley Chin Ai Ling</i>	
<i>Supporting SDG 11: Sustainable Cities and Communities</i>	
CHAPTER 8	139
CREATIVE PLACEMAKING THROUGH SENSORY ETHNOGRAPHY: AN EXPERIMENTAL PEDAGOGY IN INTERIOR ARCHITECTURE DESIGN STUDIO	
<i>Noraishah Mokhtar and Vickram Thevar</i>	
<i>Supporting SDG 11: Sustainable Cities and Communities</i>	
CHAPTER 9	159
LEVERAGING PREDICTIVE ANALYTICS TO ENHANCE BUSINESS RESILIENCE IN SMEs: AN EDUCATIONAL PERSPECTIVE	
<i>Afizan Azman, Husna Sarirah Husin and Syed Muhammad Dayyan Shah</i>	
<i>Supporting SDG 8: Decent Work and Economic Growth, SDG 9: Industry, Innovation, and Infrastructure</i>	
CHAPTER 10	178
PURPOSE-DRIVEN LEARNING: A STRATEGIC FRAMEWORK OF MULTI-LEARNING EXPERIENCE (MLX)	
<i>Chockalingam Aravind Vaithilingam and Manee Sangaran Diagarajan</i>	
<i>Supporting SDG 6: Clean Water, SDG 7: Affordable and Clean Energy</i>	
CONCLUSION	196
ABOUT THE EDITORS	

PREFACE

Our journey of reorienting education for a sustainable future

Thian Lok Boon and Veronica Ng

Our students seldom ask us why we do what we do. However, at the back of our minds, we are aware that this is potentially the most important question to discuss with our students. In 2022, the university decided to pursue purpose-led and impact-driven education through Impact Labs, providing us with the opportunity to explore and declare our purpose as educators.

“I will make learning impactful by being an empathetic and creative educator.”

Veronica Ng

“I will empower students to live their purpose and make a positive impact on the world.”

Thian Lok Boon

Under this initiative, Lok Boon co-led the effort alongside the Executive Deans of the four faculties and the Pro Vice-Chancellor, Research and Enterprise. Additionally, Veronica volunteered to be the founding director of the Liveable Urban Communities Impact Lab, one of the 11 Taylor’s Impact Labs. Through this journey, we have the opportunity to explore deeply what purpose means and how to offer students opportunities to develop and live their purpose by making a meaningful difference in the community. We spent hours discussing what an Impact Lab should do and what an Impact Project should look like. Veronica conceptualised one of the first Impact Projects, MY Bamboo, and integrated it into a module of the programme under her leadership. She reoriented the Bachelor of Science (Hons.) in Architecture to nurture architects who are purpose-led change agents, leading to winning the Most Innovative Curriculum award from the Minister of Higher Education Malaysia in 2024.

My Bamboo aims to activate green public spaces for community well-being through sustainable bamboo structures. Partnering with the local city council and community, architecture students, as part of their curriculum, design and build life-size bamboo structures, which they then place in dormant green spaces in the neighbourhood, such as urban farms. These structures attract and increase participation by local communities in urban farming and other activities that promote community well-being and sustainable living. This curriculum-integrated impact project contributes to the UN’s Sustainable Development Goal 11, Sustainable Cities and Communities, which focuses on making cities inclusive, safe, resilient, and sustainable.

“It takes a village to raise a child.” This statement best describes our realisation through this initiative. Reflecting on our journey, we learn the power of working together with our colleagues, students, and partners. We would like to thank the following individuals for their significant contributions to the purpose-led and impact-driven education through Impact Labs, which enabled the establishment of this book.

1. Professor Dr. Pradeep Nair, the former Deputy Vice-Chancellor, Taylor's University, who conceptualised the idea and led the establishment of Impact Labs, resulting in the university's win of the QS Reimagine Education awards in 2023.
2. The oversight chairs (Executive Deans) who oversee the various Impact Labs and the academic leadership team, including:
 - a. Professor Dr. Neethiahnathan Ari Ragavan, Executive Dean, Faculty of Social Science and Leisure Management
 - b. Professor Dr. Paraidathathu Thomas A/L P.G. Thomas, Executive Dean, Faculty of Health and Medical Sciences
 - c. Professor Dr. Eddy Chong Siong Choy, Executive Dean, Faculty of Business and Law
 - d. Professor Dr. David Asirvatham (former) and Professor Dr. Sim Yee Wai (acting), Executive Dean, Faculty of Innovation and Technology
 - e. Josephine Tan Lian Lei, Campus Director, Taylor's College
 - f. Associate Professor Dr. Anthony Ho Siong Hock, Pro Vice-Chancellor, Research and Enterprise
 - g. Angie Ng Sok Ping, Pro Vice-Chancellor, Academic Planning and Development
3. The leadership team of each Impact Lab, especially the following founding directors:
 - a. Active Ageing: Associate Professor Dr. Anthony Ho Siong Hock
 - b. Clean Technology: Professor Dr. Chockalingam Aravind Vaithilingam
 - c. Digital Health and Medical Advancement: Professor Dr. Chong Pei Pei and Professor Dr. Yeong Chai Hong
 - d. Digital Innovation and Smart Society: Associate Professor Dr. Afizan Azman
 - e. Education for All: Associate Professor Dr. Logendra Stanley Ponniah
 - f. Eradicating Poverty: Professor Dr. Anindita Dasgupta
 - g. Food Security and Nutrition: Associate Professor Dr. Chong Li Choo
 - h. Liveable Urban Communities: Professor Dr. Veronica Ng Foong Peng
 - i. Mental Health and Well-being: Professor Dato' Dr. Andrew Mohanraj Chandrasekaran
 - j. Peace, Justice and Strong Institutions: Associate Professor Dr. Harmahinder Singh Iqbal Singh
 - k. Sustainable Tourism: Professor Dr. Seyyed Mostafa Rasoolimanesh

4. The heads of schools, the module leaders with impact projects embedded in their modules, and the impact project leaders and members.
5. Colleagues from the Centre for Future Learning and other functions who supported this initiative

We would also like to thank the authors of the book chapters for their trust and contributions to this book. We would like to thank our students and partners for their support throughout this journey. We are deeply grateful for this opportunity to contribute to reorienting higher education for sustainable development. We hope that by sharing our experience, we can accelerate the process for the betterment of the world.

FOREWORD

In a world increasingly defined by complexity, uncertainty, and interdependence, the role of education must transcend the traditional mandate of knowledge transfer and workplace preparation. The purpose of education, especially in higher education, must urgently and intentionally evolve towards empowering individuals and communities to offer responses and paths to cope with the urgent challenges of our time, while finding meaningfulness in life. This volume, *Purpose-led Education: Education for Sustainable Development*, presents a concrete, timely, and powerful response to the call to reconsider the potential of education and move towards new ways of educating future generations.

I have had the privilege of witnessing and supporting global movements around Education for Sustainable Development (ESD) for several decades. From the early days of environmental education—emerging through the Stockholm Conference in 1972 and ESD conceptually established in Chapter 36 of *Agenda 21* at the *Rio Earth Summit* in 1992—to the global mobilisation during the *United Nations Decade of Education for Sustainable Development* (2005–2014), and the follow-up *Global Action Programme on ESD*, the international community has steadily recognized that sustainability must be embedded at the heart of education. Now, as we work in the framework of the Sustainable Development Goals (SDGs), it is also articulated in the *ESD for 2030 Roadmap* that systemic transformation in education content and delivery is not only desirable but essential. These milestones mark a shift from viewing education as a means of implementing sustainable development to positioning it as a critical key enabler for shaping just, inclusive, and resilient societies. Yet, this transformation must not occur in abstraction. It must be rooted in the lived realities of all learners and the aspirations of their communities.

The work presented in this book is exemplary in this regard. Through a series of rich, context-specific case studies from Taylor's University in Malaysia, the authors bring to life what it means to make education purpose-led and impact-driven. They demonstrate that embedding sustainability in higher education is not merely a matter of curriculum reform, but rather requires reimagining the purpose of teaching and learning.

What stands out most in this collection is the integration of sustainability as a foundational principle of educational design. Across the ten chapters, readers encounter a range of academic disciplines, including pharmacy, psychology, architecture, data analytics, and others, engaging with real-world issues in authentic, relational, and transformative ways. The common thread is a deep commitment to fostering essential life competencies, especially systems thinking, collaboration, critical reflection, and – most importantly –, the ability to act with purpose and compassion.

The concept of *Impact Labs* at Taylor's University is particularly noteworthy. These labs exemplify the whole-institution approach to sustainability that UNESCO and many global partners have advocated for and continue recommending as crucial for the desired sustainability transformation. The Labs are dynamic spaces for students, faculty, practitioners, and communities to collaborate, co-create solutions, and advance the SDGs in locally meaningful and culturally appropriate practice. The projects described in this book reflect the challenging, iterative, and deeply human nature of transformative learning. They embody the values of ESD in action: justice, solidarity, well-being, and ecological balance.

As the world is more than halfway through implementing the SDGs, with two-thirds of the SDG targets still off track in 2025, empirical examples like those in this book that highlight good practices cannot be overstated. Higher education institutions have both the potential and the responsibility to take a leading role in societal transformation. But they must do so by placing learners at the centre, grounding knowledge in real-world challenges, and equipping the next generation with technical skills and a sense of meaning and direction to act for the common good.

This book also makes an important contribution to advancing the discourse on pedagogy. It is not enough to know *what* to teach—we must explore *how* to teach in experiential, inclusive, empowering ways that inspire a passion for lifelong learning. The chapters collectively offer a “how-to” guide for embedding purpose in pedagogy and present models for other institutions seeking to align education with the SDGs and respond to sustainability challenges yet to emerge. By documenting the challenges, reflections, and learnings of academic teams across disciplines, the editors have curated a resource that is both evidence-based and practical, as well as inspiring.

Taylor's University's commitment to purpose-led education is evident in these pages and is also being recognised globally. The institution's recognition at the QS Reimagine Education Awards signals that this approach is innovative and impactful. Perhaps most important, however, is that this work is being done with humility, authenticity, and a willingness to learn. In this way, Taylor's University is helping to shift the paradigm of what higher education can and should be when united in purpose.

Let me conclude by commending the editors, Dr. Thian Lok Boon and Dr. Veronica Ng, for their visionary leadership. Their efforts exemplify what it means to link institutional change with societal transformation, grounding ESD in local realities while aligning with global frameworks. I hope this volume will inspire others in higher education to embark on their purpose-led journeys towards embedding sustainability.

For those of us committed to more sustainable and just futures, this book serves as a reminder that education must not only inform but also transform—and can—and that transformation begins with purpose.

Charles Hopkins

UNESCO Chair in Reorienting Education towards Sustainability
York University, Toronto (Canada)

ABOUT THE EDITORS



Dr. Thian Lok Boon was the Pro Vice-Chancellor, Learning and Teaching, Centre for Future Learning at Taylor's University, Malaysia. She has led major educational innovation and transformation, including institutionalising Taylor's Curriculum Framework and Multidisciplinary Learning. She spearheads Taylor's Purpose-led Education initiative, fostering students' and academics' contributions to the UN Sustainable Development Goals through 11 transdisciplinary Impact Labs that focus on education, impactful research, and advocacy. This initiative has earned the top honour of Overall Education Winner at the 10th QS Reimagine Education Awards and a Gold Award for Sustainability Education. Her team establishes a dynamic, transdisciplinary learning environment that fosters collaboration across disciplines, government agencies, businesses, NGOs, and communities, driving societal impact. Her mission as an educational leader is to empower students to unleash their full potential, becoming purposeful leaders who champion positive societal change and thereby embody their life purpose.



Dr. Veronica Ng was a Professor and the Head of the School of Architecture, Building & Design at Taylor's University, Malaysia. In recent years, she has been actively involved in the conceptualisation and execution of purpose-led education through her role as Director of the Liveable Urban Communities Impact Lab, which she assumed in 2023. She has led collaborative initiatives addressing urban resilience and liveability. Veronica leads the educational programme in Malaysia with Aga Khan Trust for Culture, and she has curated projects such as PavilionNOW, SentulWorks, and the Kampong Baru Vernadoc Camp, fostering partnerships between academia, industry, and communities. Committed to bridging education, research, and real-world application, she champions empathetic, place-based design approaches that empower local communities and contribute to a sustainable urban future. Currently, Veronica serves as a Professor and the Head of the Department of Architecture at Sunway University.