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## **Looking Ahead – Sustainability and Responsibility in Management Education**

Advancing on the transformation pathway towards sustainable development in a world, which has become more volatile, uncertain, complex and ambiguous (VUCA) is one of the biggest societal developmental challenges of the 21st century. The complexity and interrelatedness of social, ecological and economic systems require actors with systemic and interdisciplinary thinking capabilities, who employ critical thinking and creative problem-solving skills, cooperate and empathise, have a sense of responsibility towards community and environment, ethically weigh today's actions against the possible long-term consequences, and ultimately take knowledgeable and morally guided actions (Rieckmann, 2018; Wiek et al., 2011).

Higher Education Institutions (HEIs) are considered to play a crucial role in developing students into sustainability change-makers (UNESCO, 2017) who – upon leaving academic or educational institutions and entering the working life – are equipped with the knowledge, abilities, values, and motivation needed to become responsible actors and leaders creating more sustainable futures.

Linking the goals of education (learning objectives) to the right tools (pedagogical approaches/methods) is key in directing and influencing desired behavioural change. Effective teaching and learning require knowledge about (pedagogical and other) variables that influence the learning process and the internal predictors of responsible and sustainable behaviour. Persisting with the same old seems to be not an option if educators want to avoid the conformity trap of trying to solve today's problems with yesterday's tools (Major et al., 2020). Instead, they must take an active approach to tackle these challenges and develop, implement, test, and validate new and innovative ways of teaching (and learning) (Walder, 2014).

The first part of the book suggested a number of teaching approaches (e.g. experiential, active and transdisciplinary learning) and methods (e.g. self-reflection tasks/exercises, gamification or service learning) considered as appropriate. From these, a list of “pedagogical impact variables” was derived, that are assumed to positively influence the attainment of learning objectives and goals (e.g., degree of emotional involvement or experience of real-life

situations). A survey with educators throughout the world (N=45) furthermore provided insights about which teaching approaches and methods are commonly used by teachers, who indicate that they are innovative in their teaching. It showed a slight predominance of collaborative and active learning accompanied by lecture inputs, while self-directed learning was an approach used by least of the respondents (N=21). Looking at methods, respondents considered group discussions, self-reflection tasks and case studies as most relevant for their courses, while service learning, gamification and vision building exercises seem to be the least relevant for their classes.

Teaching approaches and methods need to be linked to learning objectives, but also fit to course contents and learning environments. Besides, appropriate exercises and resources are important for teaching effectiveness. The second part of the book, therefore, provided descriptions of innovative teaching formats, linking learning objectives with contents, learning approaches, methods and exercises and giving insights into the course structure as well as resources.

In the introduction, we suggested to understand pedagogical innovation as "teaching approaches and practices that are new or different in a particular context, and which are designed to purposefully and responsively benefit student experiences and outcomes in that context" (Major et al., 2020). Drawing on the contributions in this book and the inclusivity principle of the SDGs (United Nations, n.d.), we furthermore propose the following commonalities regarding sustainability-oriented teaching innovation:

1. the intentional implementation in formal education of (education)
2. any method/approach, instrument or subject (type),
3. that is equally available and applicable (inclusivity),
4. that brings additional value (innovation)
5. to effectively facilitate cognitive, socio-emotional and behavioural learning objectives that underline behavioural predictors and competencies (effectiveness)
6. for the specific purpose of fostering change agents of sustainable development (sustainability change).

The contributions in this book cover a wide array of pedagogical advances applied at different types of HEIs in 13 countries across the globe. Regardless of the approach/method implemented, a few commonalities among the teaching formats could be identified. First, teaching formats often try to couple knowing with feeling, focusing on ways to increase each student's commitment, emotional involvement and motivation towards respective issues. Second, many formats are action oriented, going beyond conducting analyses and providing the opportunity for students to become actual developers, solvers, and creators. Joining these three aspects (knowing, feeling and acting) is also referred to as

the “head, heart and hand approach” (Gazibara, 2013). Third, abstract concepts of sustainability are transformed into tangible elements and linked to practice for increasing employability prospects. Fourth, educators, as facilitators and co-learners, break down typical status roles between teachers and students for a more equal and open teaching and learning experience.

Many of the formats described in the book included digital education instruments, which might be also a consequence of the period in which the contributions were collected, where teaching was affected by the Covid-19 pandemic. Even if face-to-face teaching offers many advantages that are difficult to attain with online teaching, experimenting and enriching face-to-face teaching with digital elements leads to new ways of doing things and provides the potential to incorporate the best of both worlds.

Interestingly, very few teaching formats presented in this book used a sustainability-related research project as one of the primary teaching methods. Community-oriented research projects provide the potential for student involvement and co-creation of research (UNESCO, 2017). They might also be a good method for “decolonialising” sustainability knowledge and represent growth potential for a very impactful way of teaching. In addition, as reflected in the survey and in the collection of teaching formats in this book, virtual reality simulation and peer teaching is only seldom used.

The teaching materials suggested in the different chapters of the book ranged from films/documentaries, podcasts and photography over games to social media formats. This richness of teaching material offers fertile ground to increase the diversity and inclusivity of teaching by drawing on the incorporation and utilization of diverse media material going beyond literature.

Based on the gathered contributions, we want to encourage educators to integrate holistically economic, social and environmental aspects in their teaching and to widen perspectives beyond the mere business case to reflect on the pluralism in the sustainability debate by drawing on different readings, interpretations and normative connotations of the debate (e.g. sufficiency, post-growth, degrowth, etc.).

Emerging development directions that could find increasing application in teaching formats are inter-, and transdisciplinary teaching being taken a bit further towards truly open, integrative, and anti-disciplinary teaching (Ito, 2014); embodiment and activation of multiple senses, which goes beyond listening and seeing (e.g. through arts disciplines incorporating dance, theatre, music, painting, etc.) (Kelan, 2011; Leigh, 2018; Quinn & Maddox, 2022); and hands-on community projects or nature-based experiences (e.g. out-of-classroom learning and immersive experiences) (Albrecht, 2020).

Additionally, we believe that innovativeness could move further, departing from the focus on the sources of teaching innovation towards a focus on

increasing its impact across institutions, geographies and communities (see table 27–1). The sources of teaching innovation that were presented in this book exclusively cover learning cohorts within classrooms with an emphasis on the domain of novel teaching approaches and methods yet complemented by aspects of digital tools and contemporary topics, bringing forth innovative teaching formats. Thus, we encourage educators to come forward with even bolder steps in driving teaching innovation.

*Table 27–1: Classification of educational innovation*

Sources of teaching innovation	Impact on stakeholders		
	Within classrooms	Across institutions and geographies	Across communities and regions
Novel teaching methods or approaches (e.g. experiential learning)	Innovative teaching	Leading pedagogy innovations	Revolutionising education programmes globally
Adoption of new technologies in education (e.g. virtual reality)	Innovative integration of technology	Leading EduTech innovations	Technology platform innovations
Adoption of contemporary topics in the classrooms (e.g. new topics in the field of sustainability)	Future-ready teaching	Teaching materials for front-runners in sustainability	Shaping sustainability thinking (e.g. decolonising sustainability, regenerative cultures)

Source: Adapted from Dieleman et al. (2022) to fit the sustainability context

Educators need to courageously share, benchmark, develop and implement innovative teaching formats in support of pedagogies for sustainable development and keep an active discourse of what innovative sustainability teaching should entail with all the key stakeholders – educators, researchers, HEIs and students. Sharing the results and best practices more broadly among the educational and scientific community would be strongly beneficial in the name of an open science and practice approach (sharing of, e.g., best practices, materials, exercises, and experiences). This will enable educators to more quickly and efficiently create and mould pedagogies towards the needed direction. For example, the collection of innovative teaching formats represented in this book can be used by teachers to draw inspiration from and to build on the experience and insights of others – eliminating the need to reinvent the proverbial wheel in classrooms far and near. It is crucial to stay curious and continuously cultivate change by disseminating teaching innovation (Gannaway et al., 2013).

Gaining insights on the impact of different teaching approaches and methods on (future) sustainable behaviour is key in guiding the institutionalization

of the most effective means. The controlling tool developed in the EFFORT project<sup>37</sup> is an instrument for testing the effectiveness of CSR-, (business) ethics- and sustainability-related courses. It is based on a theoretical model that comprises several variables (knowledge, awareness, attitudes, values, affects, and norms) that potentially influence the responsible and sustainable behaviour of future leaders. Therefore, it can be used to measure the teachings' impact and directly inform further development of teaching formats. The controlling tool consists of two standardized questionnaires (a pre-course and a post-course questionnaire), that should be conducted by students before and after participation in a course.

As teaching formats are embedded in the HEIs in which they are taught, the institutional context is also expected to play an important role in the effectiveness of those formats. Therefore, co-development and alignment between teaching formats and institutions is highly recommendable. The self-evaluation tool developed in the EFFORT project<sup>37</sup> can be used to assess the state of sustainability in institutions and courses and to determine development needs. It evaluates social responsibility and sustainability maturity according to three dimensions (culture, mission and people) and their respective subcriteria (Pizzutilo & Venezia, 2021).

Overall, as indicated by the results of the survey and the diverse collection of teaching formats, there seems not to be a "one-size-fits-all" solution. However, as at the beginning of every innovation journey, one must bear the uncertainty of not yet knowing all the answers and only gradually, through experimentation and accepting the inevitable risks and rewards associated to this iterative process, being able to accrue a true understanding of the most suitable pedagogies for sustainability.

Throughout this book, the role of teachers for implementing effective teaching for sustainability has been emphasized. To conclude, however, educators might want to think about focusing on the importance of students as an integral part of this process. Supported by the educational community, institutions and newest research, teachers can only drive this sustainability reformist educational agenda until a certain point. Beyond that, teachers need to bridge the last gap by communicating, learning and co-creating fitting learning spaces with students and by doing so, enable students to take an active role themselves in shaping and channelling their learning towards the actualization of a more sustainable future.

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37 All instruments produced in the EFFORT project are open access and can be found on the project website: <https://effort.lehre.hwr-berlin.de/>

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