1. Business cases for sustainability-integrated management education

Melissa Edwards, Suzanne Benn, and Mark Starik

INTRODUCTION

As the Decade of Education for Sustainable Development has now concluded, it is timely to reflect on progress attained toward embedding sustainability in higher education curriculum. Over this period (2004–2014), a number of scholars worked consistently towards the goal of embedding sustainability in management education, and many exemplars of holistic sustainability-integrated management education (SiME, also referred to as ‘sustainability in management education’) have been published as typified by special editions of leading management journals (e.g. Egri and Rogers, 2003; Rusinko and Sama, 2009; Starik et al., 2010). Reviewing these special editions and other published works, it can be claimed that the dimensions of and principles for holistic SiME have been widely deliberated across the academe of sustainability management scholars.

Arguably management education itself has failed because basic capabilities have not been developed in graduates (Navarro, 2008), a situation which can at least, in part, be attributed to a deficit in SiME principles being comprehensively implemented in the design of business and management higher education programs (Waddock and Lozano, 2013). If holistic SiME principles exist and exemplars of their successful implementation abound, important questions arise as to why comprehensive uptake is lacking. Are principles of holistic SiME relevant for the majority of business schools, given the constraints of their extant business model? Or are they only relevant to a limited number of specific programs or courses? If so, is implementation of SiME so limited because universities fail to recognize the business case for sustainability at the institutional level? In an increasingly marketized and globally oriented higher education market, are universities too narrowly developing their business cases through a compliance-based approach, only implementing sustainability as a risk avoidance strategy? Or is the situation such that universities fail to recognize the strategic potential of deeply integrating SiME into their core value propositions as a fundamental principle of curricula? Considering these queries, we propose an overarching question: how can SiME be feasibly implemented and viably sustained within higher education curricula?

In this chapter we consider the business cases for SiME beyond the design and implementation of individual courses or programs. In doing so, we develop a framework outlining a variety of viable business cases for implementing SiME into curriculum design. We commence by considering how sustainability scholars have developed the business case for the implementation of sustainability into management programs and courses. Then, taking a multilevel, multi-systems approach (Starik and Kanashiro, 2013), we signify broader drivers that shape and influence the business case for sustainability education at the individual, departmental, and organizational level of the higher education institution.

Finally, the framework of a sustainability phase model (Benn et al., 2014) enables various business cases to be conceptualized that would enable sustainability management education to be integrated at the organizational level. We conclude with a brief consideration of the current trend toward marketization of the higher education sector to consider how sustainability educators may broadly frame the ‘value add’ of sustainability education.

A HOLISTIC SiME APPROACH

Drawing on the widely accepted definition from the World Commission on Environment and Development Report (Brundtland, 1987), SiME can be defined as a holistic body of knowledge and understanding for management practice that meets the needs of current and future generations (Benn and Martin, 2010; Rusinko, 2010). Hence, SiME can be framed as incorporating the management of economic, social, environmental (Elkington, 1997), and cultural imperatives in all decision making. The underpinning imperative is to consider how decision makers minimize potential negative risks in each of these domains and to critically apply a set of sustainability assumptions, values, and principles to select decisions that have a restorative outcome and impact. Through this process diverse stakeholders are considered in an inclusive and dialectic approach, and the ambition is to direct activities toward broad value creation (Freeman, 1984) beyond the narrow neo-classic economic assumptions of value extraction for the benefit of shareholders and owners. Societal enrichment and environmental restoration are integrated and positioned at the core of SiME decision making.

Conceptualizing SiME requires a holistic understanding of the fundamental role managers play not only in maintaining organizations but in reinventing them to fulfill the encompassing aims of sustainable development. In 2010, a special issue of a leading management journal called for a “‘transformative’ sustainability approach to management education” (Starik et al., 2010) and asserted that this approach could be achieved through a holistic approach to SiME. That edition outlined various leading exemplars of such practices, and these are summarized later in this chapter. A year earlier, in 2009, another special edition addressed the state of sustainability in management education in a call for exemplars where educators had embedded environmental and sustainability education within management curricula (Rusinko and Sama, 2009). This edition concluded that many different approaches exist and that most were evolutionary in nature, while outlining the necessary conditions for revolutionary change. Most notably, the lack of support from across various organizational levels was considered a barrier to revolutionary change.

Drawing on the work of these and other sustainability scholars (e.g. Rands, 1993; Starik and Rands, 1995; Bradbury, 2003; Waddock, 2007; Porter and Córdoba, 2009; Rands, 2009; Benn and Martin, 2010; Marshall et al., 2010; Rusinko, 2010; Shrivastava, 2010; Naeem and Neal, 2012; Stubbs, 2013), key dimensions of holistic SiME approaches can be identified as part of a SiME framework. These dimensions are summarized in Appendix 1.1, and the following gives a brief overview of each according to the perspectives of the respective scholars. Considering that curricula vary between institutions and that individual scholars will give predominance to some dimensions over others, the framework is not intended to be prescriptive but only suggestive of some possibilities.

Waddock (2007) argues that management thinking itself requires a shift of mind – a *metanoia* (Senge, 2006) towards ‘more holistic, integrated ways of viewing the world’. According to Waddock, management theories need to consider ‘how to provide jobs or entrepreneurial activities for the un- or under-employed, how to create a more ecologically sustainable system, or how to better align the interests of all the peoples of the world coherently’ (Waddock, 2007: 549). She states that management theories themselves say very little about social justice and the fractured system of the globalized economy. Perhaps a *metanoia* shift in management education is blocked because universities themselves are stuck in a ‘business as usual’ paradigm, competing on dysfunctional rating games that focus on ‘excellence’ over impact. Such competition very often encourages a risk-adverse approach to curriculum design where sustainability is a peripheral theme. Waddock does not suggest abandoning striving for excellence, but suggests that the fundamental ways and means through which it is attained must be more inclusive and equitable. SiME from this perspective, if applied to the practice of university management, could facilitate a broader and deeper shift in curriculum design.

Shrivastava (2010) argues that a holistic approach to education for sustainability (EfS) requires more than a cognitive shift or changes in behavior patterns. He argues that other foundational factors such as physical and emotional engagement with sustainability issues that enable ‘emotional engagement and passionate commitment’ are necessary. The core elements of this ‘passion for sustainability’ are an ecocentric appreciation of the reverence of nature, whereby human individuals and organizations are considered within the bigger scheme of nature and society. This pedagogical approach encompasses three assumptions: (1) sustainability is practical and therefore passion for sustainable management is pragmatic; (2) understanding the environment must be an experiential, embodied experience; and (3) spiritual and emotional development are inextricably linked to learning. SiME, from this perspective, embodies the lived experience of decision making as it occurs in emotional and spiritual connection with an ecological worldview.

Following Starkey and Tempest (2009) and their call for hybrid narratives, Benn and Martin (2010) state that prescriptive frameworks are not sufficient to integrate sustainability across curricula. They outline a multilevel approach to SiME that is interpretative and functionalist and incorporates a complex adaptive systems approach. Through this perspective, SiME design within a multilevel system incorporates stakeholder participation through the identification and inclusion of multiple stakeholders in decision making. At a functional level, decisions are made in consideration of a life cycle analysis, which creates workplace policies, processes, and practices that embody sustainability values. The complex dynamic between the system and the functional level consciously influences ongoing decision-making processes. Implementation of this framework in curricula requires a holistic SiME community of practice (CoP) approach whereby individuals within their disciplinary contexts have domain-specific knowledge that can be translated across the boundaries of multiple intersecting communities. This occurs in a situated learning context facilitated by the identification of structural and visionary boundary objects (Benn and Martin, 2010) that can enable social learning to occur in relation to a complex sustainability issue. Such a model could be applied to business schools, whereby the university plays a facilitative role between and among policy makers, non-government organizations (NGOs) and communities, and business professionals.

Marshall et al. (2010) suggest that a paradigm shift is needed in which faculty members

focus on becoming ‘question marks’, where educator roles are instilled with a ‘confidence in questioning’ rather than a ‘certainty in application’. From this perspective, SiME should reframe and pose questions about the fundamental assumptions of the current business model, rather than make normative assumptions and prescriptively offer ready-made solutions.

Another consideration for a holistic SiME approach includes restructuring and reconceptualizing the place of the business school in relation to society. For example, Naeem and Neal (2012) identify organizational changes required for Education for Sustainable Development (ESD) in terms of the localized relationships between individual and group agency, and more macro-socioeconomic and inter-institutional structures.

While some progress has been made towards implementing holistic SiME approaches in association with the Decade of ESD, the viability of the business case to sustain progress at an organizational level has yet to be established. Attempts to deeply embed sustainability in curricula are often ad hoc and piecemeal and left to the initiative of individual faculty (Matten and Moon, 2004; Stubbs and Schapper, 2011). Furthermore, Benn and Martin (2010) note that holistic approaches can be undermined because faculty members often selectively and individually focus on dimensions of sustainability related to their own particular sub-disciplines or research interests. Questions remain as to whether transformative or incremental approaches are more relevant. Do university courses need an incrementalist approach so as to support graduates’ transition into the ‘real world’, or should the university play a transformative role, acting as a catalyst for creating sustainable organizations? In this sense universities may be exhibiting the same sustainability integration problematic as other organizations in society, including businesses.

Another ongoing debate concerns identifying the most significant outcomes of sustainability education. Essentially this debate centers on whether the graduate attributes should be focused on attainment of a body of sustainability knowledge alone, or if this should be accompanied by the mastery of knowledge, skills, attitudes and values conducive for applying sustainability knowledge in a transformative manner. Such discussions connect with broader debates regarding the purpose and function of higher education curriculum design and consequently its institutional viability.

DRIVERS FOR HOLISTIC SiME: A MULTILEVEL APPROACH

Various key issues and opportunities in the global higher education sector influence how universities develop their respective business cases for holistic SiME. Intertwined drivers related to the ecosphere, society, economy, and technological and regulatory systems contextualize how higher education institutions function and operate. Complex interaction between and among such drivers and the valuation attributed to them by universities will influence and shape the business case for the integration of SiME into the university curriculum. Therefore, adoption of holistic SiME can be understood through a multi-level conceptualization that considers institutional macro-forces, internal organizational drivers, and the role of institutional entrepreneurs as they engage in networks and CoPs. Combined, these influence the strategic positioning and the pedagogical approach a university adopts to ensure a feasible value proposition.

Multilevel analysis has advanced significantly over the past several decades. One broad

and long-term view of the literature has identified that multilevel analysis has been applied to different types of organizations, entrepreneurship, and strategy (Mathieu and Chen, 2011), as well as identity, organizational citizenship, and inter-organizational exchanges (Hitt et al., 2007). The former review identified that multilevel measurement and construct validity have advanced significantly in that time period, that other disciplines that are related to management have also used multilevel analyses, and that one potentially beneficial approach is to identify the connections between proximal levels within multilevel structures (Mathieu and Chen, 2011). The main research benefit of multilevel analyses is the attempt and opportunity to study the meso-level (in addition to the micro- and macro-levels, including within and beyond organizations) and to potentially connect them to provide another perspective on reality (Ghayour et al., 2013). Finally, it has been acknowledged that the multilevel interactions and influences in which organizations are involved can be either 'top-down' or 'bottom-up' (Costa et al., 2013).

Generalized drivers influence the general higher education business case, but there are many specific drivers that pertain to SiME. In the following subsections we examine some of the more prominent drivers closely related to those influencing the business case for holistic SiME.

External Drivers

External drivers shape the higher education field, providing the context for universities to strategically position themselves both globally and domestically. These drivers range from those which are compliance-based to those that are market- and voluntary-based.

Compliance-based drivers include accreditation, certification, and regulatory bodies that enforce minimum standards and ensure quality through audits and reporting. Prominent examples of international accreditation bodies include the Association to Advance Collegiate Schools of Business (AACSB) and the European EMFD Quality Improvement System (EQUIS). Such bodies provide principle-based guidelines and recommended standards, and they work with individual universities to set their own standards and to engage in a collegiate benchmarking process to enable continuous improvement among member institutions. The AACSB includes sustainability criteria across its core values and guiding principles in its most recent business school standards. One out of three of these guiding principles explicitly relates to sustainability: 'The school must demonstrate a commitment to address, engage, and respond to current and emerging corporate social responsibility issues (e.g., diversity, sustainable development, environmental sustainability, and globalization of economic activity across cultures) through its policies, procedures, curricula, research, and/or outreach activities' (AACSB, 2013). Additionally, a specific knowledge area (social responsibility, including sustainability, and ethical behavior and approaches to management) is required in all degree programs according to this standard. Where a standard emphasizes sustainability as a distinct body of knowledge and as a set of guiding principles for curriculum frameworks, then the business case for SiME is strengthened.

Market-based drivers include the degree of deregulation of the higher education sector, the relative positioning of the university in relation to close competitors and the incentives attached to the viability of the course offering. Although market views generally limit customers of universities to students and government (Duncan, 2015), from a broader

perspective wider society should also be considered a customer, given the benefits that higher education may contribute to the well-being of society and restoration of the environment. State regulations have great influence in setting conditions for the market. For example, recent deregulation in the Australian higher education market has changed the process of student selection and enrolments. Student enrolments were previously capped by course and institution; however, this is no longer the case, resulting in student demand becoming more influential in the positioning of university courses. Student preference for sustainability-related courses combined with competition for lead positioning in terms of SiME has become vital in this context.

Voluntary-based drivers occur through global alliances, networks, associations and platforms, social movements, and community and external engagement relationships. Through global alliances and associations, universities are connected and cooperate to set agendas to embed SiME in higher education. At the intergovernmental level, the United Nations through UNESCO led the Decade of ESD, concluding in 2014 with a new Global Action Plan announced to direct action through until 2020. A priority of this plan is that ESD be integrated comprehensively at the institutional level. Another example of global principles is reflected in the proposal for the United Nations Sustainable Development Goals (SDGs), where the goal for inclusive education explicitly states that all learners should acquire the knowledge and skills needed to promote sustainable development (SDG, 2014). According to Sterling (2014) the fundamental role that education and learning play is critical to the attainment of all other goals, and this message is still being undervalued by the higher education sector.

Global associations such as the Association for the Advancement of Sustainability in Higher Education (AASHE), Australian Campuses toward Sustainability (ACTS), and the Environmental Association for Universities and Colleges (EAUC) have specific agendas to drive sustainability into higher education facilities, research, and learning. The University Leaders for a Sustainable Future (ULSF) organization has championed the process of attaining over 400 college and university signatories to the Talloires Declaration, which features an explicit ‘ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach’ (ULSF, 2015). Institutes, alliances, and platforms such as the Aspen Institute, the Academy of Business in Society, the Network for Business Sustainability, and United Nations platforms such as the Principles for Responsible Management Education (PRME) and the Globally Responsible Leadership Initiative (GRLI) are prominent examples offering voluntary principles-based memberships to advance the uptake of sustainability in universities. The International Alliance of Research Universities released a *Green Guide for Universities*, which outlines the university as a catalyst for a sustainable society through a living lab approach, combined with leadership and interdisciplinary collaboration (IARU, 2015).

Professional- and student-led initiatives act as voluntary drivers within and outside of the university. Professional associations such as the Academy of Management’s Organizations and the Natural Environment (ONE) division influence and support integration between sustainability research and teaching. Student-based organizations such as Net Impact can provide extra-curricular opportunities for SiME and an enduring global network between current and graduate students. Net Impact publishes a report titled *Business as Unusual* that profiles and rates participating universities in relation to

their inclusion of sustainability and social impact in their programs. In Australia, two prominent student-led organizations, the Australian Youth Climate Coalition (AYCC) and the Australian Student Environmental Network (ASEN), take advocacy roles to influence universities to divest from fossil fuels and include sustainability in curricula through campaigns and annual conferences. In 2009, a small group of Harvard MBA students ignited a global movement through the development of an MBA oath that outlined a pledge for managers to serve the greater good as a guiding purpose. Growth in the prominence of these student-led networks is a signal of student demand.

Internal Drivers

Within the university, various drivers emerge in relation to governance strategies and policies that influence the business case for and the implementation of SiME. These are most apparent at the individual business unit level through the program learning objectives, syllabi, knowledge content, and teaching materials offered by the various programs. Actions taken through the leadership of individual faculty members to embed sustainability in course programs are facilitated through an increasing trend towards collaboration across disciplines (Edwards and Benn, 2015).

University strategic priorities for teaching and learning can also influence curriculum design. Strategic priorities signal how the university differentiates itself from other close competitors. Often these are defined in consultation with external stakeholders, such as graduate employers and industry associations, and through internal dialogue. Priorities are further articulated through a set of graduate attributes that detail the university vision for the knowledge and abilities students will develop throughout any degree program. For SiME to be a core value in the determination of the university business case, it should be apparent in the learning and teaching strategic priorities and in the graduate attributes. Further integration will be evidenced through prioritization of sustainability in the overall university strategic objectives, including those for research, external engagement, and facilities management.

Graduate attributes provide the guidelines for the development of learning objectives¹ that are contextualized by program, usually by discipline. A holistic approach to embed sustainability in the curriculum will relate all learning objectives to sustainability. In 2015, an Australian government-funded project developed a Learning and Teaching Academic Standards (LTAS) statement for environment and sustainability that included a comprehensive set of learning objectives (Phelan et al., 2015). Such learning objectives present a holistic approach of sustainability education as a guiding framework for development of a comprehensive set of graduate attributes that is broadly applicable to many disciplinary contexts.

The curriculum designed within a set of graduate attributes is the university's unique mechanism to signal the knowledge, skills, and attitudes that are valued and developed through its programs. The curriculum is defined by Kiley 'as all the *planned learning* opportunities offered to learners by the educational institution and the *experiences* learners encounter when the curriculum is implemented' (Print, 1993). How SiME is therefore integrated into the curriculum is subject to wide variation in both the planned learning opportunities and the student experience. For example, the designs of planned learning activities are subject to the ontological and epistemological assumptions regarding how

the environment and society are positioned in regard to specific disciplines. Recent work has demonstrated that, while some key concepts can act as boundary objects to transfer knowledge and understanding across disciplines, barriers still exist between disciplines regarding basic assumptions that frame how they view other disciplines (Benn et al., 2015). These assumptions in turn influence how sustainability is considered through a critical, normative, and/or instrumental lens, and the degree to which sustainability is considered holistically in relation to disciplinary domain knowledge, ranging from holistic- to compliance-based approaches.

Experiences encountered throughout the process of planned learning can be partially influenced by course and program design. For example, experiential design might expose students to situated problem-based learning in which they may be confronted with the complex dilemmas that are frequently associated with sustainability issues. In part, their experience may be shaped by unanticipated activities students encounter in their planned learning process through their course work, and in part through their extra-curricular activities and casual interactions on campus. For example, a holistic ‘whole of campus’ approach where the university is considered a ‘living lab’ centers sustainability as a foundation principle for the design of all curricula, programs, facilities, and the built environment. Through this approach, it is more likely students will encounter sustainability-focused extra-curricular activities, and their day-to-day, casual interactions may be influenced by the sustainability features of the built environment. For the university to be a living lab, overall governance and human resource and facilities management systems should represent, reward, and incentivize sustainability. Sustainability will influence codes of conduct, policies, and practices across teaching and learning, research, facilities management, and external engagement.

Accompanying this recognition of consistency and effectiveness, is the need for accompanying leadership that will facilitate the transformation of the university to a living lab. Despite strategic actions that signify support of international agendas such as PRME and Talloires, the approach taken by universities in deeply embedding sustainability in curricula is often ad hoc and piecemeal and left to the initiative of individual faculty (Matten and Moon, 2004; Stubbs and Schapper, 2011). A key driver within the university therefore comes from high profile sustainability academics with specialist expertise, sustainability education academics, and professional staff who are dedicated to the development and implementation of sustainable programs and policies. Such leaders can be seen as institutional entrepreneurs, intrapreneurs, boundary spanners, or change agents (Benn et al., 2014) driving cultural and systemic change from within the university. Connections between professionals both inside and external to the universities through communities of practice (Benn and Martin, 2010) can facilitate new approaches to curriculum development. Another interpretation of leadership is identified at the institutional level by Moore (2005), who outlines a process incorporating ‘value focused thinking’ that develops such a holistic strategic approach for universities that seek to position themselves as leaders in the sustainability movement. This approach is commensurate with the campus as living lab approach outlined earlier and may only apply to a limited number of universities.

Conceptualizing Drivers through a Multilevel Approach

Having outlined major drivers in regard to sustainability education we can apply a multilevel analysis. As applied to universities and their sustainability management education efforts, these studies point to the opportunity to consider multiple levels within and even across universities. Within universities, those levels at which sustainability management education activities have been observed are at the university level proper, the multi-school level (such as the institute), the school level (such as the business school), the multi-department level (such as the center), the department level, the program level (which could be either within the school or within departments, the sub-department level), and the individual (or collaborating individuals) level.

Universities, too, can collectively be engaged in sustainability management education, such as efforts to collaborate with other universities in the advancement of PRME and Net Impact, among many other cooperative sustainability management education efforts. Multilevel analysis helps to answer the question about how these various entities at different levels interact with and influence one another. The multilevel interaction and influencing in the sustainability management education realm that have been most obvious is the role of individual faculty champions. Champions involve other faculty, within their own departments, schools, and universities, to cooperate to offer multiple sustainability-related courses and to build them into programs. This is also an illustrative example of how systems operate at multiple levels (Moliterno and Mahony, 2011), with, in this case, individual faculty often using their own networks for resources and support (both within and outside the university), helping to develop not just faculty networks but school and university networks that include attention to sustainability management education. Administrators and committees at various levels, such as department chairs and program committees, business school deans and program committees, and university presidents and executive teams, can play roles in either encouraging the individual (and often eventually collective) champions of sustainability management education or discouraging them.

Connecting the concept of multilevel analyses regarding sustainability management education to systems, as in the networks example above, if systems are minimally defined as related inputs, process, outputs, and feedback mechanisms, all connected to other systems, both conceptually and practically, these systems components can be identified at multiple levels of human (in this case university) activity, and therefore can be analyzed to ascertain their suitability and sufficiency to advance the sustainability education management agenda. Can a department make room on its curriculum offerings schedule to include new courses on sustainability management? If not, can the course be offered (at least initially) at the school or university levels? Does the faculty member have the necessary information and contacts to offer such a course competently enough to attract students, and, if not, can faculty members from other departments and schools within (or even outside) the university be asked to contribute their expertise? Basically, at a very rudimentary level, the outputs of one level might be the inputs of another level (Starik and Rands, 1995), such as when students take a sustainability management course that satisfies them and they then decide to advocate for (or select) a school- (or university-) wide degree program on sustainability management.

Less mechanistically, if one considers a broader view of systems as being able to accommodate various perspectives, at least three have been identified in the sustainability

management education discussion: interpretative, functionalist, and complexity (Porter and Córdoba, 2009). Regarding the principles and assumptions of each, it appears that very few, and perhaps even only one level, might be associated with the functionalist systems perspective, while it appears that far more level-related phenomena might come into play in complexity systems. So, while the functionalist perspective could involve as little as the offering of a single sustainability management course, the latter could include ‘learning networks (that) create sustainable value in new or existing products and processes’ (Porter and Córdoba, 2009: 329) as well as a networked CoP connecting academics across disciplines as sustainability is integrated throughout the university.

MULTIPLE PERSPECTIVES ON THE BUSINESS CASE FOR HOLISTIC SiME

Given the diversity and complexity of the drivers identified in the previous section, it can be assumed that universities will develop and are developing their SiME positioning in diverse ways. Consequently it is unlikely that a single business case for SiME exists. In order to begin to conceptualize the variety of business cases for SiME, we describe two dimensions. These two dimensions are: (1) how sustainability is positioned in the curriculum; and (2) how the university determines its strategic positioning in terms of the viability and feasibility of course offerings. Variation in relation to these elements could provide explanatory power for the development of generic business cases for SiME.

Curriculum Design: Philosophical Assumptions and Integration

Curriculum design defines the core business of the university and ties together the related activities of research, external engagement, and campus facilities management. A SiME curriculum outlines how sustainability knowledge, skills, and capabilities are articulated and integrated into the planned course offerings to assure learning objectives, and how sustainability influences the campus experience. Considering how SiME is embedded into the curriculum design reveals a variety of approaches related to the degree of integration and how the university frames and interprets sustainability knowledge, skills, and attitudes.

Rusinko (2010) developed a useful matrix to classify how SiME can be integrated into the curriculum, in which the dimensions are the focus of integration (ranging from narrow and disciplinary-specific to broad and cross-disciplinary) and the type of delivery (ranging from built into existing structures through to designed and implemented through development of new structures). Considering this matrix, we can distinguish between approaches on a spectrum ranging from narrow integration in which SiME is an ‘add-on’ to existing disciplinary knowledge to a broad integration in which SiME is a foundation to a cross-disciplinary framing of knowledge delivered through new courses and program offerings. In the former, where SiME may be assumed as an ‘add-on’ to the existing curriculum, it may be raised only in the context of a case study of contemporary practice. Knowledge required for the assurance of learning through graduate attributes framed with a narrow focus might position sustainability as something to be ‘managed’ in order to continue with ‘*business as usual*’, or sustainability might be a stand-alone objective

contextualized in relation to ethical and responsible decision making. The basic assumptions of such a ‘business as usual’ approach do not fundamentally challenge traditional pedagogy, nor do they challenge traditional business assumptions.

On the other end of the spectrum, ‘*business as unusual*’ reframes the pedagogical approach that may encompass techniques inspired by education for sustainability principles. Sustainability knowledge is a foundation for developing a conceptual understanding of managing a business as being one of many interconnected stakeholders embedded within socio-economic and ecological systems. Sustainability management frames all decision making, and therefore such an approach establishes new assumptions regarding how value is created and distributed through managing business activities. Universities following this approach holistically integrate sustainability across entire course offerings in addition to offering stand-alone programs.

Strategic Positioning

The drivers outlined earlier demonstrated that both market and regulatory factors shape how universities determine the financial viability of core course offerings. Consideration of SiME in the core offering of the university value proposition must also be considered in relation to the strategic positioning of the individual institution. This is dependent on how universities position themselves relative to close competitors and in regard to market conditions to attain a unique value proposition. The value proposition influences the degree to which sustainability is central to the university mission and values, the graduate attributes, the disciplinary degree program and related learning objectives, and the knowledge content assured within subjects in those programs. Determination of a viable value proposition relates to: how the institution positions the value add of SiME; the relative reputation capital the institution attains from students, employers, and alumni; and the revenue stream and cost structures used to determine the financial viability of course offerings.

When analyzing the university value propositions, there are many factors to be considered, and these in turn should be evaluated in relation to long- versus short-term perspectives. Narrow value propositions consider the value of SiME through metrics such as the number of student enrolments, the relative student to academic ratio, and the overheads and resources required to deliver and implement the course. Quality and output measures are used as guideposts to determine course viability according to these basic indicators. A broader and long-term value proposition considers the intangible value associated with the advancement of knowledge, contribution to the profession, reputation attained through broad value creation for stakeholders, and economic indicators associated with well-being and quality of life, in addition to the financial indicators outlined earlier.

While drivers may be global, strategic variation by region and country must be considered, as valuation of higher education is distinctly bound by localized factors, particularly in relation to ownership and governance models. For example, the European tradition is characterized by a higher proportion of government funding, with some countries such as Germany offering free public education after enrolments are controlled through strict testing. In contrast, the American system is dominated by a collection of prestigious private universities modelled on revenues attained from high tuition fees and mass education provision. Recent reports state that the American-inspired model of excellence that

is reliant on high tuition fee-based revenue and mass education, combined with research excellence being concentrated in a smaller collection of elite universities, is spreading across the world (Duncan, 2015). This marketized higher education model and stratification of the sector may influence the significance placed on sustainability in the curriculum dependent on the demand-pull factor. Understanding this trend in relation to the integration of SiME would be an interesting future research direction.

Therefore there is much variation between and among universities in regard to the sources of revenue on which they rely to determine the value proposition. Some courses may remain viable despite low student fee revenue because they attract strategic priority funds from the university, funding from philanthropic donors, corporate sponsorship, or government funding. Examples exist of private colleges founded and funded by beneficiaries that are entirely dedicated to SiME. For these institutions, the market-based drivers are less influential in determining the strategic positioning.

VARIATION IN BUSINESS CASES AND IDEAL TYPES

Considering these elements and in relation to the various multilevel drivers for SiME, we classify ‘ideal types’ of business cases for SiME according to the dimensions of a sustainability phase model (Benn et al., 2014). The proposed phase model approach provides a diagnostic tool for analyzing various different business cases adopted when operationalizing sustainability. It outlines ‘ideal type’ sustainability approaches organizations take that range from the non-responsive through to the sustaining organization. In an integrative model, each of the phases outlines how the organization responds to both human sustainability (the development and fulfillment of human needs) and ecological sustainability (the protection and renewal of the biosphere). Figure 1.1 outlines the generic approaches according to this phase model as an organization moves from a compliance-based, audit-oriented approach to one with transformative potential.

An adaptation of this model applied to SiME in business schools or universities allows a more nuanced way of interpreting how varying assumptions lead to starkly different interpretations of the value proposition for SiME. The model can be applied to compare and contrast between multiple business cases and used as a means for positioning and justifying a holistic approach to SiME. Business cases range from a reactionary ‘business as usual’ approach to a holistically integrated whole of campus approach. Essentially faculties and universities may not fit entirely within the features of any one phase. However, the model allows us to theorize a variety of business cases. The key elements of each of these phases in relation to management education can be found in Figure 1.2.

In the first wave, ‘profits are first’ (Slater and Dixon-Fowler, 2010) is the framing in which essential knowledge, skills, and attitudes are defined and implemented within the curriculum. Sustainability is not considered a distinct knowledge domain, nor is it included within the curriculum. Sustainability may be considered a ‘fad’ and incorporated into existing courses in an ad hoc manner through single learning topics or as a component of assessment items.

The second wave can be broadly considered as a ‘risk avoidance’ approach. Sustainability is framed through a legal and regulatory lens. Sustainability is an ‘add-on’ that business schools include in order to meet their accreditation and regulatory requirements. Such an

Source: The Phase Model – Benn et al., 2014.

Figure 1.1 Phases of organizational sustainability/CSR

Source: Adapted from Benn et al., 2014.

Figure 1.2 Waves of sustainability: management education

approach is consistent with the ‘greening’ of existing courses (Stubbs and Cocklin, 2008a) or the efficiency-based ‘green themed’ courses (Steketee, 2009). Effective risk management system relationships are developed with key stakeholders to monitor expectations, and staff development is implemented in relation to sustainability knowledge for quality assurance purposes. In the cost case, sustainability is either adopted in courses based on student demand through a stand-alone course or integrated into one unit or subject in an existing knowledge domain where there is staff expertise (for example a lecture topic in a unit or subject on change management where the staff member has sustainability knowledge in addition to change management).

In the strategic case, sustainability knowledge may be positioned as a strategic integrator perhaps at the peak of a degree as a capstone subject. Sustainability is viewed as a source of competitive advantage, with an aim of becoming a market leader. Specialist sustainability academics may lead entire courses or degrees where sustainability is an integrating knowledge, skills, and attributes theme (Rands, 2009) such that a new generation of ‘bio-inspired’ professionals might emerge (Steketee, 2009). Stand-alone subjects will integrate learning of core management subjects in experiential learning, situated learning, and/or service learning techniques. Support from university senior administrative and academic management is critical.

In the final wave the business case prioritizes sustainability through a ‘whole of campus’ approach to be leaders of ‘sustainability education’ in the very broadest sense. Sustainability is considered in an integrated holistic approach based on a shift in mind (Waddock, 2007), a critical pedagogy (Kearins and Springett, 2003), and a passion for sustainability (Shrivastava, 2010). The university itself may be a ‘living lab’ (Orr, 1994) for SiME, a platform for critical thinking, experimentation, testing, and experiencing sustainable livelihoods. Sustainability knowledge, skills, and attitudes will be foundational in all curricula. Programs will be delivered across disciplines focusing on problem-based learning in relation to a real-world context (Welsh and Murray, 2003). The university is understood as embedded in a multi-systems, multilevel (Starik and Rands, 1995; Starik and Kanashiro, 2013) eco-socio-system and as one of many interconnected stakeholders (Waddock, 2005) engaged in transition to a sustainable future. Addressing environmental and social problems and natural and social capital restoration, critically engaging with both education and research (Starik and Turcotte, 2014), and designing systems that support social inclusion and natural resource preservation are prioritized.

Rusinko (2010) emphasizes both curricular and co-curricular learning as significant. She illustrates this using a case study that outlines the different types of integration used at a northeastern US university. Qualitative findings of that study report how stand-alone courses and integration into one disciplinary subject were effective, but were dependent on the enthusiastic implementation conducted by single faculty members. However, a greater degree of integration requires more systemic support at the department, school, and university levels, and this supports the findings of other studies (Benn and Dunphy, 2009; Bradfield, 2009). Additionally, Rusinko (2010) found that the implementation of sustainability in curricula requires both top-down and bottom-up support. This is supported by the approach we have outlined in this chapter that emphasizes the need for systemic consideration of a multitude of factors through a multilevel approach to be critical when considering the determination of business cases for SiME.

LIMITATIONS AND FUTURE DIRECTIONS FOR DEVELOPING SiME BUSINESS CASES

While alternate models for sustainability business models have been developed (see for example Stubbs and Cocklin, 2008b; Schaltegger et al., 2012), such models have not been applied to education. Where integration of SiME has been conceptualized, models were generated according to the embedding in the curriculum within the specific management discipline (Rusinko, 2010) or in a business school (Walck, 2009). In particular, many have examined integration of the specific principles such as PRME (Blasco, 2012; Forray and Leigh, 2012; Solitander et al., 2012; Dickson et al., 2013; Young and Nagpal, 2013), and the *International Journal of Sustainability in Higher Education* regularly publishes case study examples of specific course and program level integration. However, many of these can be considered as either interpretative or functionalist level integration. This chapter has developed a broader conceptual phase model within a multi-systems, multilevel conceptual framework. While this model is one of many other possible frameworks to explain how sustainability can be integrated into a business model, the perspective we offer acknowledges the complexity of integration within a system.

While the phase model has been applied to corporations (Benn et al., 2006, 2011, 2014), it has not been explicitly applied to the higher education sector, universities, or business schools. Owing to the many variables associated with a phase model that is multilevel and multi-systems, viability of the integration approach may not be generalizable. That is, there may not be a one best way to feasibly and viably implement SiME. If this is the case, then the model we have outlined provides a framework that can be used to inform sustainability champions as they seek to implement sustainability into their programs.

We have demonstrated how both multiple levels and systems may play key roles in the planning and implementation of SiME. Universities will integrate SiME into their curricula relative to their strategic positioning after considering a multitude of drivers, and this can be considered across a continuum of business cases. Taking this into account allows change agents and champions to adopt much broader and more sophisticated perspectives on the development and advancement of SiME. The caveat is not to ‘get lost in the weeds’ and bury oneself in complexity. However, making the most obvious connections between drivers, levels, and systems and identifying their mutual influences could both better explain and perhaps improve them over time.

We return to our question of whether there is a feasible and viable business case for SiME. Considering this question led us to conceptualize the broader system and multilevel context in which business cases are developed. How can an integrated, holistic SiME approach move beyond the initiatives conducted by individual faculty to become a strategic priority across the curriculum and the university? Raising this question allows us to address the critiques that have highlighted the instrumental, myopic, and piecemeal approach that some universities take towards implementation of sustainability education whereby initiatives sit alongside existing institutional frameworks (Sharma and Hart, 2014). Implementing sustainability education in this way is just one version of a business case that is either compliance-based or, according to the phase model, in the first wave, in which sustainability might be viewed as a temporary ‘fad’. Business cases justified in this way limit universities to ‘business as usual’ approaches, and do not comprehensively

consider the normative and values-based knowledge, skills, and attitudes that would signify a shift towards ‘business as *unusual*’.

Can a ‘business as *unusual*’ case in which environmental restoration and societal well-being are essential and integral in curriculum design be commensurate with a viable business case in an increasingly deregulated and marketized sector? Perhaps the current assumptions shaping the foundations for curriculum design are themselves being increasingly influenced by the marketization of higher education (Jongbloed, 2003; Furedi, 2010). Before the holistic SiME approach can be rightfully acknowledged as sustainable and viable, we suggest universities must shift their value assumptions for determining a viable business case to be in line with the ‘third wave’ of the model we have proposed. In such a model, the entire university experience immerses students experientially in sustainability practice relevant to their disciplines so they can apply what they learn. In this way the university is a catalyst for enabling transformative systems change beyond the classroom. Future research might be directed towards new approaches to validating the viability of the SiME business case, for example attributing the impacts of SiME as students engage more frequently and with more breadth and depth with sustainability in the curriculum and also as they transition into their professional and personal lives.

The danger with distinctions between normative approaches and profit-driven approaches is that, by the very nature of creating an either/or choice, they become the ‘self-fulfilling’ prophesy that Ghoshal (2005) outlined. In other words, if we accept that there is a trade-off between the normative ‘business as *unusual*’ case and the ‘business as *usual*’ case, then the ‘business as *usual*’ case may prevail. As management educators, we become our own worst enemies if we teach courses within curricula bound by the assumptions of the ‘business as *usual*’ case that we critique. Instead, we should treat ‘business cases’ within a multilevel, multi-systems framework that exemplifies the third wave so that holistic SiME may surface across the entire curriculum.

NOTE

1. Learning objectives can refer to program learning objectives (PLOs) or threshold learning objectives (TLOs).

REFERENCES

- AACSB (2013), ‘Eligibility procedures and accreditation standards for business accreditation’, accessed 5 June 2015 at <http://www.aacsb.edu/~media/AACSB/Docs/Accreditation/Standards/2013-business-standards.ashx>.
- Benn, S., and D. Dunphy (2009), ‘Action research as an approach to integrating sustainability into MBA programs: An exploratory study’, *Journal of Management Education*, **33** (3), 276–295.
- Benn, S., and A. Martin (2010), ‘Learning and change for sustainability reconsidered: A role for boundary objects’, *Academy of Management Learning and Education*, **9** (3), 397–412.
- Benn, S., D. Dunphy, and A. Griffiths (2006), ‘Enabling change for corporate sustainability: An integrated perspective’, *Australasian Journal of Environmental Management*, **13**, 35–44.
- Benn, S., D. Dunphy, and A. Griffiths (2007), *Organizational Change for Corporate Sustainability: A Guide for Leaders and Change Agents of the Future*, New York: Routledge.
- Benn, S., D. Dunphy, and A. Griffiths (2014), *Organizational Change for Corporate Sustainability*, London: Routledge.

- Benn, S., D. Dunphy, and B. Perrott (eds.) (2011), *Cases in Corporate Sustainability and Change: A Multidisciplinary Approach*, Prahran, Australia: Tilde University Press.
- Benn, S., T. Angus-Leppan, M. Edwards, P. Brown, and S. White (2015), 'Changing directions in business education: Knowledge sharing for sustainability', *Building Sustainable Legacies*, **5**, 87–102.
- Blasco, M. (2012), 'Aligning the hidden curriculum of management education with PRME: An inquiry-based framework', *Journal of Management Education*, **36** (3), 364–388.
- Bradbury, H. (2003), 'Sustaining inner and outer worlds: A whole-systems approach to developing sustainable business practices in management', *Journal of Management Education*, **27** (2), 172–187.
- Bradfield, S.L. (2009), 'The value of sustainability education', *Journal of Management Education*, **33** (3), 372–375.
- Brundtland, G.H. (1987), *Report of the World Commission on Environment and Development: Our Common Future*, New York: United Nations.
- Costa, P.L., A.M. Graça, P. Marques-Quinteiro, C.M. Santos, A. Caetano, and A.M. Passos (2013), 'Multilevel research in the field of organizational behavior', *Sage Open*, **3** (3), 1–17.
- Dickson, M.A., M. Eckman, S. Loker, and C. Jirousek (2013), 'A model for sustainability education in support of the PRME', *Journal of Management Development*, **32** (3), 309–318.
- Duncan, E. (2015), 'Universities: Excellence v equity', *The Economist*, 26 March.
- Edwards, M., and S. Benn (2015), 'Transdisciplinarity by interdisciplinary integration: A proactive sustainability education case', Academy of Management Conference, Vancouver, Canada.
- Egri, C.P., and K.S. Rogers (2003), 'Teaching about the natural environment in management education: New directions and approaches', *Journal of Management Education*, **27** (2), 139–143.
- Elkington, J. (1997), *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*, Oxford, UK: Capstone.
- Forray, J.M., and J.S. Leigh (2012), 'A primer on the Principles of Responsible Management Education: Intellectual roots and waves of change', *Journal of Management Education*, **36** (3), 295–309.
- Freeman, R.E. (1984), *Strategic Management: A Stakeholder Approach*, Cambridge, UK: Cambridge University Press.
- Furedi, F. (2010), 'Introduction to the marketisation of higher education and the student as consumer', in M. Molesworth, R. Scullion, and E. Nixon (eds.), *The Marketisation of Higher Education and the Student as Consumer*, Abingdon, UK: Taylor & Francis, pp. 1–8.
- Ghayour, S.M., S. Nazemi, F. Rahimnia, and M. Lagzian (2013), 'Application of the multilevel analysis approach in management theory', *Management Science Letters*, **3**, 3065–3074.
- Ghoshal, S. (2005), 'Bad management theories are destroying good management practices', *Academy of Management Learning and Education*, **4**, 75–91.
- Hitt, M.A., P.W. Beamish, S.E. Jackson, and J.E. Mathieu (2007), 'Building theoretical and empirical bridges across levels: Multilevel research in management', *Academy of Management Journal*, **50** (6), 1385–1399.
- IARU (2015), *A Green Guide for Universities*, accessed 26 April 2017 at <http://www.iaruni.org/sustainability/green-guide>.
- Jongbloed, B. (2003), 'Marketisation in higher education, Clark's triangle and the essential ingredients of markets', *Higher Education Quarterly*, **57** (2), 110–135.
- Kearins, K., and D. Springett (2003), 'Educating for sustainability: Developing critical skills', *Journal of Management Education*, **27** (2), 188–204.
- Marshall, S., V. Vaiman, N. Napier, S. Taylor, A. Haslberger, and T. Andersen (2010), 'The end of a "period": Sustainability and the questioning attitude', *Academy of Management Learning and Education*, **9** (3), 477–487.
- Mathieu, J.E., and G. Chen (2011), 'The etiology of the multilevel paradigm in management research', *Journal of Management*, **37** (2), 610–641.
- Matten, D., and J. Moon (2004), 'Corporate social responsibility education in Europe', *Journal of Business Ethics*, **54**, 323–337.
- Moliterno, T.P., and D.M. Mahony (2011), 'Network theory of organization: A multilevel approach', *Journal of Management*, **37** (2), 443–467.
- Moore, J. (2005), 'Seven recommendations for creating sustainability education at the university level: A guide for change agents', *International Journal of Sustainability in Higher Education*, **6** (4), 326–339.
- Naeem, M., and M. Neal (2012), 'Sustainability in business education in the Asia Pacific region: A snapshot of the situation', *International Journal of Sustainability in Higher Education*, **13** (1), 60–71.
- Navarro, P. (2008), 'The MBA core curricula of top-ranked U.S. business schools: A study in failure?', *Academy of Management Learning and Education*, **7** (1), 108–123.
- Orr, D.W. (1994), *Earth in Mind: On Education, Environment, and the Human Prospect*, Washington, DC: Island Press.
- Phelan, L., B. McBain, A. Ferguson, P. Brown, V. Brown, I. Hay, R. Horsfield, and R. Taplin (2015), 'Learning and teaching academic standards statement for environment and sustainability', Office for Learning and

- Teaching, accessed 5 June 2015 at <http://www.olt.gov.au/project-learning-and-teaching-academic-standards-ltas-environment-and-environmental-sustainability-2>.
- Porter, T., and J. Córdoba (2009), 'Three views of systems theories and their implications for sustainability education', *Journal of Management Education*, **33** (3), 323–347.
- Print, M. (1993), *Curriculum Development and Design*, St Leonards, Australia: Allen & Unwin.
- Rands, G. (1993), 'Preparing students to work for sustainability: Teaching as if the earth's future mattered', *Journal of Teaching in International Business*, **5** (1/2), 19–46.
- Rands, G.P. (2009), 'A principle–attribute matrix for environmentally sustainable management education and its application: The case for change-oriented service-learning projects', *Journal of Management Education*, **33** (3), 296–322.
- Rusinko, C.A. (2010), 'Integrating sustainability in management and business education: A matrix approach', *Academy of Management Learning and Education*, **9** (3), 507–519.
- Rusinko, C.A., and L.M. Sama (2009), 'Greening and sustainability across the management curriculum: An extended journey', *Journal of Management Education*, **33** (3), 271–275.
- Schaltegger, S., F. Lüdeke-Freund, and E.G. Hansen (2012), 'Business cases for sustainability: The role of business model innovation for corporate sustainability', *International Journal of Innovation and Sustainable Development*, **6** (2), 95–119.
- SDG (2014), 'Open working group proposal for Sustainable Development Goals', United Nations Department of Economic and Social Affairs, accessed 5 June 2015 at <https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=1579&menu=1301>.
- Senge, P.M. (2006), *The Fifth Discipline: The Art and Practice of the Learning Organization*, New York: Broadway Business.
- Sharma, S., and S. Hart (2014), 'Beyond “saddle bag” sustainability for business education', *Organization and Environment*, **27** (1), 10–15.
- Shrivastava, P. (2010), 'Pedagogy of passion for sustainability', *Academy of Management Learning and Education*, **9** (3), 443–455.
- Slater, D.J., and H.R. Dixon-Fowler (2010), 'The future of the planet in the hands of MBAs: An examination of CEO MBA education and corporate environmental performance', *Academy of Management Learning and Education*, **9** (3), 429–441.
- Solitander, N., M. Fougère, A. Sobczak, and H. Herlin (2012), 'We are the champions: Organizational learning and change for responsible management education', *Journal of Management Education*, **36** (3), 337–363.
- Starik, M., and P. Kanashiro (2013), 'Toward a theory of sustainability management: Uncovering and integrating the nearly obvious', *Organization and Environment*, **26**, 1–24.
- Starik, M., and G.P. Rands (1995), 'Weaving an integrated web: Multilevel and multisystem perspectives of ecologically sustainable organizations', *Academy of Management Review*, **20** (4), 908–935.
- Starik, M., and M.-F. Turcotte (2014), 'With a little (urgent) help from our friends: Management academic leadership for a sustainable future', *Organization and Environment*, **27** (1), 3–9.
- Starik, M., G. Rands, A.A. Marcus, and T.S. Clark (2010), 'From the guest editors: In search of sustainability in management education', *Academy of Management Learning and Education*, **9** (3), 377–383.
- Starkey, K., and S. Tempest (2009), 'The winter of our discontent: The design challenge for business schools', *Academy of Management Learning and Education*, **8** (4), 576–586.
- Steketee, D. (2009), 'A million decisions: Life on the (sustainable business) frontier', *Journal of Management Education*, **33** (3), 391–401.
- Sterling, S. (2014), 'Separate tracks or real synergy? Achieving a closer relationship between education and SD, post-2015', *Journal of Education for Sustainable Development*, **8** (2), 89–112.
- Stubbs, W. (2013), 'Addressing the business–sustainability nexus in postgraduate education', *International Journal of Sustainability in Higher Education*, **14** (1), 25–41.
- Stubbs, W., and C. Cocklin (2008a), 'Teaching sustainability to business students: Shifting mindsets', *International Journal of Sustainability in Higher Education*, **9** (3), 206–221.
- Stubbs, W., and C. Cocklin (2008b), 'Conceptualizing a “sustainability business model”', *Organization and Environment*, **21** (2), 103–127.
- Stubbs, W., and J. Schapper (2011), 'Two approaches to curriculum development for educating for sustainability and CSR', *International Journal of Sustainability in Higher Education*, **12** (3), 259–268.
- ULSF (2015), *Talloires Declaration*, accessed 8 May 2015 at http://www.ulsf.org/talloires_declaration.html.
- Waddock, S. (2005), 'Corporate citizens: Stepping into the breach of society's broken contracts', *Journal of Corporate Citizenship*, **19**, 20–24.
- Waddock, S. (2007), 'Leadership integrity in a fractured knowledge world', *Academy of Management Learning and Education*, **6** (4), 543–557.
- Waddock, S., and J.M. Lozano (2013), 'Developing more holistic management education: Lessons learned from two programs', *Academy of Management Learning and Education*, **12** (2), 265–284.

- Walck, C. (2009), 'Integrating sustainability into management education: A dean's perspective', *Journal of Management Education*, **33** (3), 384–390.
- Welsh, M.A., and D.L. Murray (2003), 'The ecollaborative: Teaching sustainability through critical pedagogy', *Journal of Management Education*, **27** (2), 220–235.
- Young, S., and S. Nagpal (2013), 'Meeting the growing demand for sustainability-focused management education: A case study of a PRME academic institution', *Higher Education Research and Development*, **32** (3), 493–506.

APPENDIX 1.1: ELEMENTS OF A HOLISTIC APPROACH TO SIME

Table 1A.1 Key dimensions of holistic SiME approaches

Holistic design element	Description	Business as usual	Business as unusual
Integration	The degree to which sustainability is embedded into core program offerings and graduate attributes.	Sustainability included as one learning unit or as a single case study within one subject. Sustainability positioned as a peripheral value in a range of graduate attributes.	Sustainability integrated across the entire curriculum and in stand-alone experiential course and extra-curricular offerings. Sustainability as a core graduate attribute in skills, knowledge, and values.
Knowledge, skills, and attitudes (KSA)	Graduates gain an understanding of sustainability issues; they have the skills to act sustainably if they wish to; and they have the personal and emotional attributes that require them to behave sustainably.	KSA defined generically with sustainability being peripheral.	KSA aligned with sustainability to enable transformative systemic change.
Multilevel and systemic	Value-based and inclusive of stakeholders; functionalist, including value chain and life cycle analysis. Systems thinking introduced in management curriculum. Multilevel systems integrated to conceptualize multiple sustainability factors.	Stakeholder values externalized and saliency determined according to efficient attainment of specified objectives.	Business model embedded in network of stakeholders. Value proposition determined through internalization of stakeholder values.
Community of practice	Boundary objects facilitate knowledge transfer across disciplines and between academics, students, and society. Learning situated in an active community of practice.	Domain-specific knowledge forms basis of core curriculum. Community considered as external stakeholder and basis of relationship is for knowledge transfer.	Cross- and trans-disciplinary knowledge base as core curriculum. Management considered in context of local community, designed for knowledge creation.
Passion and emotional engagement	Environmental appreciation must be experiential, and spiritual and emotional development linked to learning.	Emotional and spiritual development considered as peripheral. Case-based or rote learning prioritized.	Emotional and spiritual development as core function of management. Experiential learning prioritized.

Table 1A.1 (continued)

Holistic design element	Description	Business as usual	Business as unusual
Metanoia	Management theories themselves need to be more inclusive and holistic.	Dominant paradigm – planning, leading, organizing, and controlling model, with sustainability considered as a contextual factor to be managed.	Sustainability frames interpretation of managing.
Critical and questioning approach to knowledge	Educator's role is to instill 'confidence in questioning'.	Established frameworks and models used to determine knowledge.	Socratic style embedded in delivery of knowledge, and opportunities for creative, critical, and collaborative knowledge creation are prioritized.
Institutions embedded in context	Consider application of management to localized relationships between individuals, groups, and macro-socioeconomic and organizational institutional structures.	International or global management approach and knowledge transfer.	Management embedded within glocal context.