Responsible education in a complex context of sustainable development:
Co-creating a pedagogic framework for participatory reflection and action

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Abstract

The central premise of this chapter is to offer a conceptual framework for making sense of the sustainability agenda in an educational environment from multiple perspectives. The focus is on the complex interface between the global ecological crisis and economic growth. Ethical considerations are argued to be necessary in examining the contradictions and risks associated with polarized definitions of problems and with globally entertained solutions. The proposed framework encourages the questioning of epistemic assumptions on the basis of which certain knowledge and truth-claims tend to dominate contemporary debate. Its pragmatic use rests on an experiment with a participatory pedagogic approach that respects and acknowledges students' and lecturers' differences in values, and cultural and disciplinary backgrounds. In the spirit of the UN PRME, it is hoped that through their collective experience of participative pedagogy and awareness of the '4Es' (Ethics, Economy, Ecology and Epistemology) captured by the framework, the participants can co-create a responsible community of learners and knowers, ready to influence the way society is developing.

Positioning: Sustainability and Sustainable Development as Contested Issues

Back in 1992, the World Bank recognised that, 'the achievement of sustained and equitable development remains the greatest challenge facing the human race' (see Gladwin *et al*., 1995:900). In 1995, it was argued that transforming 'management theory and practice so that they positively contribute to sustainable development is, in our view, the greatest challenge facing the Academy of Management.' (*ibid*.). Over 20 years later, these statements hold true. The United Nations' (UN) 17 Sustainable Development Goals (SDGs) and Global Compact (GC) reflect the intention to implement universal sustainability principles and encourage an orientation towards 'a principled approach to doing business' (UN Global Compact, 2016).

One responsibility of academic institutions is 'to develop a new generation of business leaders capable of managing the complex challenges faced by business and society in the 21st century' (UN PRME, 2016). But how best to 'teach' sustainable development when the concept is complex, elusive and undetermined (Cicmil *et al*., 2015)? It has to be participatory, embrace multiple perspectives, address head-on the contradictions, and give voice to ethical issues. It is a point of principle to open to debate the relationship between *development*, defined as economic growth, and the *sustainability crisis*, characterized by scarcity of non-renewable resources, climate injustice and environmental harm. Sustainable development should be pursued as an ideal, the benchmarks for which are interdependence, connectedness, equity, security and prudence (Gladwin *et al*., 1995). The aim of the chapter is to contribute to the praxis of responsible management education by proposing a conceptual framework developed to match the complexity of a global sustainability agenda.

Underlying deliberations exposed in this chapter is a search for meaning in the context of the tension between growth-based development and sustainability, whilst also recognising that the definitions of sustainability and sustainable development are themselves contested, controversial, elusive and subject to multiple interpretations (Gladwin *et al*., 1995; Banerjee, 2003; Porritt, 2007; Jackson, 2009; Hutchings, 2010; Curry, 2011; Dow Jones Sustainability Indices, 2016). Sustainability has been described as 'one of the least meaningful and most overused words in the English language' (Owen, 2011:246). Understood as 'functional integrity' of any system, be it social, ecological or economic (Thompson, 2007), it has become a contested term, meaning anything and everything in contemporary ordinary usage, made more ambiguous by models like the triple-bottom-line (see also Marshall, 2011; Blowfield, 2013). The focus (linguistic, political and educational) on 'economic' sustainability tends to hijack other interpretations (Marshall, 2011). If economic sustainability is the priority, what distinguishes sustainability education from the topics that have always been taught: competitiveness, financial performance and profitability, and a narrowly defined notion of development from a dominant standpoint of industrial capitalist growth?

How could someone, as a 'knower' (be it business leader, lecturer or student) reconcile this tension in his/her mind and then be in a position to make an effective contribution to progress towards a sustainable society? The backdrop is a human society that is already exceeding the environmental carrying capacity of a planet with a finely balanced eco-system and finite resources (Gladwin *et al*., 1995; Cook, 2004; Rockström *et al*., 2009;

Steffan *et al.*, 2015). The dominant global socio-economic order and the increasing inequalities between citizens, in both developed and developing nations, amplify the tensions between growth and sustainability (Banerjee, 2003; Curry, 2011; Klein, 2014). This chapter takes as its guide Thompson's (2007) claim that it is ethically important to recognise and respect the fact that 'there are certain limits in renewal of everything' (p. 381), including society itself, and that the current sustainability crisis evolves around the overuse of resources, endangered biodiversity and uncontrolled greenhouse gas emissions (Rockström *et al.*, 2009). The challenge is that planet Earth has a limited carrying capacity, and planetary boundaries in those categories are already overstepped, representing an existential threat to both humanity and to the other species inhabiting the planet.

Finding a resolution is perhaps the most important issue of our time, and yet highly contested scientifically, politically and ethically (Curry, 2011). Solutions tend to polarise (Blowfield, 2013), with some arguing that free markets, use of resources, and technology will deliver prosperity, after which problems such as climate change can be tackled (Nordhaus, 2007; Lomborg, 2010); or that creative design, eco-efficiency and increased resource productivity will deliver prosperity without a negative impact on the environment (Hawken *et al*., 1999; Braungart and McDonough, 2009; McDonough and Braungart, 2013). Others see growth-based prosperity as the enemy, advocating mobilisation of grassroots movements and a reversal of the privatisation of the public sphere (Klein, 2014). A middle ground incorporates a reformed capitalist model that recognises the value of natural, social and human capital (Porritt, 2007). 'Sustaincentrism' , introduced by Gladwin *et al*., (1995), focuses on the greater balance within the elements of the economy-ecology-ethics triad, and 'offers a vision of development which is both people centered (concentrating on improvement in the human condition) and conservation based (maintaining the variety and integrity of nonhuman nature)' (p. 894). Therefore, the challenge for educators, particularly organisation and management scholars, is to re-examine their approach to organisational existence, and to illuminate often neglected aspects like the organic, biotic and intersubjective moral dimensions. The PRME principles, particularly 1 (Purpose), 3 (Method) and 4 (Research), encourage this kind of holistic and inclusive thinking in management education.

The '4Es' Framework – A Conceptual Proposition

What would it mean to reconceive the scholarly domain of organisation and management studies as 'one of organization-in-full community, both social and ecological… as if sustainability matters' (*ibid.:*896)? What kind of pedagogic framework could accommodate the complexities of the sustainability vision and the need to re-conceive the onto-epistemological foundations of management education? Moreover, how could it be used as a dialogical tool to encourage and facilitate a dialogue between varied, possibly opposing, but equally valid voices and points of view (in line with PRME Principle 6 - Dialogue). These deliberations inspired the chapter authors to, collaboratively with their students, develop the '4Es' framework (Figure 1) as a construct to facilitate a critical evaluation of the global sustainability agenda viewed through the four lenses of

Epistemology, Ecology, Ethics and Economy. Critically examining the disparate definitions of the crisis and proposed solutions against all four elements surfaces the risks surrounding them and allows for deeper and more transparent consideration of, e.g.:: What is risky? Who is at risk? What else is at risk?

Ultimately, it is about accountability and responsibility in the appraisal of problems and suggested solutions to the sustainability crisis, in a global context where diverse communities are exposed to the same existential vulnerabilities (resource and food shortages, pollution and climate change, security and safety).

Figure 1 – The '4Es' Framework

The '4Es' framework foregrounds risk and ethics as always implicated in framing sustainability/sustainable development problems and their solutions at a global level and encourages the dialogue with a polyphony of voices: from purely scientific and analytical to those which embrace complexity. Risk is always pragmatically connected with the choices made and moral responsibility taken for resulting actions in an imperfect, indeterminate, globalised world of interconnected and interdependent strangers (Hutchings, 2010), because in such a world:

- unpredictability is always present;
- cause-effect relationships between hazard and impact are often unknown in advance, which limits the predictive power of risk assessment models; and
- it is so easy to misunderstand what is at stake in ethical conflicts and because no one can control all of the consequences of his/ her actions, however well-intended.

As the next section explains, the main quality of this framework as a dialogical tool, is in facilitating a space for contemplation and learning in which participants are free to express their humanity in healthy and mutually respectful relationships with others, and to question dominant values, discourses and agendas in relation to any of the elements in the Framework, e.g.:

Ethics – concerning the questions of values (how should we live our lives?) and problems which have emerged out of the global interconnection and interdependence of the world's population in the contemporary social order (, poverty, ecological harm, rights of women and children; etc.)

Ecology – concerning biodiversity, natural resources and healthy environment (clean air, water, soil) as elements of the ultimate life-supporting system for all everywhere*;* understanding the relationship between eco-sustainability and social-cultural sustainability;

Economy – concerning the contemporary drive towards increased capitalist production and economic growth; understanding the relationship between corporate sustainability and social responsibility;

Epistemology – concerning the epistemic assumptions on the basis of which certain knowledge and truth-claims tend to dominate contemporary debates about the sustainability crisis and define the level of credibility of a knower/speaker; understanding the link between epistemic variety, ethics and aesthetics.

The '4Es' Framework as a Dialogic Tool: Getting into the Mood for Critical Participatory Pedagogy

> '*Ultimately, nature is what enables us to do anything, including assess truth […] For the same reason […] to 'know', or 'assess' or 'consider' is not possible without participating in a relationship with what is being known, assessed or considered.' (Curry, 2011:271)*

The '4Es' framework emerged over time in the process of the authors' experimenting with a critical pedagogic approach grounded in participatory praxis (Freire, 1970; Fals Borda, 2001; Reason and Bradbury, 2008; Evans, 2010; Collins, 2016) to deliver courses related to sustainable development. In practice, this means involving students as equal partners, as far as possible, in the co-creation of both knowledge during the module and a learning strategy at large (Cicmil *et al*., 2015) and encouraging them to be critical enquirers who learn through action and reflection, 'creating' curriculum in the process. The principles of participation are transparent at the outset and open to students' comments in a cyclical, hermeneutic enquiry. Students, visiting practitioners and lecturers are encouraged to reflect together on their own deeply held assumptions about human beings and human reason and how they shape and influence their views about particular ethical questions arising from the discussions.

At its core, participation in knowledge creation (both pedagogy and research) is about transformation, about making change for the better. Freire (1970) understood that before people could engage in transformative action they had to become aware of their current circumstances. This awareness could not be achieved in a traditional paternalistic, or 'banking' mode of education (which, he argued, was designed to perpetuate the status quo, treating the people as objects and sustaining their oppression by the powerful elite), but through a participative process with fellow citizens within their community. The raising of consciousness enables the student to engage his/ her critical faculties, reflect on situations, question the existing order and conceive the possibility of a better world. This, in turn, could lead to action for social change and more equitable development. Shaull (1970), in his introduction to Freire's Pedagogy of the Oppressed, argues that parallels exist between the objectification of the peasants in 1950s Brazil and the education of students in the technological society of the Western world to conform to the logic of the current system. Therefore, a participatory pedagogy after Freire can be seen to be relevant in today's context of education for sustainable development, where the ability to critically question the dominant socio-economic order is a necessary prerequisite for transformative change. Collins (2016) acknowledges the key influence of Freire and points to this radical heritage as reminding us of what participatory work is supposed to be, i.e. looking critically at the dynamics of power, enabling participants to express themselves and create their own knowledge, all in the context of creating social change.

In the chapter authors' experience, university students on sustainability-related modules epitomise the diversity of the global society (backgrounds, ages, nationalities). Equally diverse are their expectations, anxieties and values. Some are searching for a 'recipe' or best practice for implementing organisational sustainability; others harbour deep concern for the health of the planet, twinned with a sense of powerlessness amid the spectrum of views about business and society, as discussed in previous sections. The classes typically contain a mix of nationalities and languages, and students are regularly asked to find an adequate word in their own language for 'sustainability'. This quote captures one among the responses:

> *'In our international class, we have been asked to translate the term sustainability into our own native languages. The class is quiet as we ponder on this – the silence is overwhelming. Then, someone translates the word to mean "never give up" in his language…then, someone says "longevity, long-term orientation", "nurturing and caring with patience, from below"… I felt a mix of emotions of where my true identity lay. I found myself getting very angry about the global situation.'*

This student quote illustrates how limiting the imaginative powers of the English word 'sustainability' can be, and reveals also the cultural, psycho-social and ethical ambiguities that can be silenced by a Western-centric, English-language-based education for sustainability. Facilitated by the '4Es', collective deliberations upon anxieties and concerns give primacy to the importance of culture, imagination, narrative and spirituality and are in the spirit of PRME Principle 2 (Values) and Principle 6 (Dialogue). Regarding language that is used to discuss 'critical issues related to global social responsibility and sustainability' (PRME, 2016), there is a

tendency for the vocabulary of economics to dominate, crowding out other valid perspectives, such as the innate value of the non-human natural world. A student stated: "*My concern is that the language of marketing and pricing can be used to support a particular ideology or dogma, to the detriment of the value of nature*." Take, for example, SDG 15, Life on Land, 'Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss' (UN, 2015). Whilst the goal of protecting and restoring balanced ecosystems is laudable, on further critical examination the promotion of sustainable *use* in the statement implies that ecosystems remain a resource for humans to exploit, legitimising interpretations that would privilege the continuation of business as usual (exploitation). No target (again, a term with economic connotations) embodies the intrinsic value of nature. There is no emphasis on the web of life, the dependence of both human and non-human species on a functioning ecosystem and all the scarce natural resources, essential for their survival and sustainability (Curry, 2011; Thiele, 2013).

The language concern flows into an epistemic one. If the language of today's dominant socio-economic order suppresses the languages of nature and different cultures, then knowledge created through the prism of the globalised western-centric economic model potentially suppress knowledge derived from other diverse sources, allowing them to languish in the background at a time when alternative epistemologies could potentially offer healthier solutions to modern day global problems. In the process of co-creating the '4Es' framework, one student put it, "*What is knowledge? With the media giving voice to everything, it leads to too much superficiality and insufficient substance.*" Another student observed, *"We are losing our cultural identity and adopting someone else's. Just look at the [global] chain culture.*" This student was remarking on the homogenising effects of global brands and western values and the consequent displacement of local identity and cultures. The '4Es' framework and participatory approach adopted in class not only encourage a critical evaluation of such contradictions in the use of language but highlight the challenges and contradictions posed by the UN Global Compact's10 Principles and 17 SDGs at the intersection between different perspectives, while remaining transparent and relevant, that is, true to the complex realities of the unpredictable and diverse life we share on the 'globalised' Earth.

The perceived reality of some current business behaviours is another source of debate, one that illuminates the incompatibility of vision, values and interests between the capitalist imperative of unlimited growth and ecological sustainability including environmental justice. The catastrophic forest fires that occurred in Indonesia in autumn 2015 provide a topical example. Rainforest clearance for conversion to palm oil, pulp and paper plantations 'reduced millions of hectares of vibrant, living tropical rainforest and peatland to smoking ash – and with it, some of the last habitat of Indonesian orangutans' (Rahmawati, 2016). Two of the largest multinational corporations, PepsiCo and Johnson & Johnson, both participants in the UN Global Compact, are allegedly making insufficient headway in ensuring that no deforestation is involved in their palm oil supply chains (Rahmawati, 2016). This calls into question their commitment to Principles 7 and 8: 'Businesses should support a precautionary approach to environmental challenges' and, 'undertake initiatives to promote greater

environmental responsibility' (United Nations, 2016). In this case, business entities with the greatest influence appear to be under-performing on their public commitments. This example highlights the criticality of SDG 8, the promotion of sustainable and inclusive economic growth, as it implies a radical change in the criteria for evaluating business success.

Practical Implications and Concluding Remarks

The elusiveness and contradictions surrounding the ideal of sustainable development can give rise to both emotional and intellectual challenges for students. Some indicated that they "*felt a tension because trade-offs appear to be necessary when striving for sustainability,*" another said, "*I felt overwhelmed. The subject matter caused me a lot of emotional strain.*" Facilitated by a participatory 'reflective process that brings to consciousness knowledge one may have acted on but not fully realized or elaborated, making possible future, purposeful action' (Lyons, 2002: 96), the '4Es' framework encourages students to develop a personal stance based on their learning and then to be 'coherently persuasive' (Gladwin *et al.*, 1995:882) in communicating it. Used as a dialogical tool, the '4Es' enables the following:

- inclusion and debate of multiple 'truths', epistemologies and ways of knowing (PRME Principle 4 - Research) towards a spirit of dialogue and action which creates new understandings of 'responsibility' and new possibilities for development (PRME Principle 6 - Dialogue);
- engagement of educators, practitioners from profit and not-for-profit sectors, and students of a variety of disciplinary backgrounds, with a potential to strengthen 'partnering' relationships among colleagues across the university and beyond (PRME Principle 5 – Partnership);
- assuaging anxiety (at both individual and group level) in a multi-cultural, international learning environment by prioritising and developing sensitivity to difference and giving time for thinking and reflection; and
- development of a sense of fairness, emancipation and practical wisdom (theory-practice relationship).

As an implementation guide, Table 1 summarizes the key pedagogic practices that have worked for the chapter authors.

Table 1 - Pedagogic Practices in the Spirit of the '4Es' Framework

ELEMENT	CONCRETE PRACTICAL EXAMPLES AND TOOLS
Teaching team	Multidisciplinary team of active academic researchers; syllabus is research-informed exposing a number of different, sometimes irreconcilable, views on: sustainable development (including legal, anthropological, sociological, political-economy), sustainability itself (e.g. strong/weak), corporate social responsibility (e.g. normative/critical), and organisational leadership (e.g.

	complexity/spirituality); the critical examination of the suggested solutions (techno-scientific, market based, socio-political) and contemplation and theorizing (including ethics, phenomenology, hermeneutics).
Out-of-classroom activities	In addition to conventional classroom activities, outings and walks, site visits and conversations with employees and management, (social enterprises, businesses, national parks) exercises encouraging reflexivity and paying attention to language; visual means (drawings, art, poetry and film) have been included..
Practitioner guest speakers	Sustainability champions and decision makers with various levels of seniority and from various sectors of industry; and also consultants and activists.
Modes of student participation	Curriculum co-creation (direct teaching inputs by participating students with relevant practical experience; suggestions for syllabus change); inter-cohort collaboration (different stages of study and alumni); cross-disciplinary learning (e.g. MBA and MSc in Sustainable Development studying together), final year research dissertations involving pedagogic research.

The '4Es' conceptual framework can also help managers comprehensively and pragmatically address risks and responsibilities concerning these complex and changing issues in policy and practice, acting in an economically sound, environmentally friendly and socially responsible way. One of the authors was a course participant and part of the participatory 4E-informed pedagogic experiment, and also a sustainability practitioner in a local community. This was his reflective account at the time, which illustrates the practical impact of this experience:

> *"I came to the course overwhelmed with anxiety about whether there really is a way of dealing with the issues around sustainability in practice; I felt powerless to influence events towards a less ecologically destructive path. Also a lack of confidence in countering the dominant economic arguments that seemed to be routinely presented by the majority of people I was talking to. I was not necessarily looking for a blueprint or recipe for success, but a safe space for contemplation of the issues that I felt had moral and ethical dimensions. I found the '4Es' framework a valuable tool to understand this conflict of ideas and perspectives and it gave me the confidence to approach the subject with a considered stance. Concurrently I had responsibility for a community project that I had initiated. Over the life of this project I discovered that my learning and my actions became inseparable. The 4E-based dialogical tool provided me with the confidence to lobby my Member of Parliament, to approach bodies for grant funding, negotiate with the Local Authority and promote the project to the wider community, secure in the knowledge that I had considered issues from all four perspectives and weighed up risks and trade-offs appropriately. I found that by marrying the 4Es, as a way of framing my thinking about the issues associated with the project, with an understanding about*

my own role as an initiator, community organiser and researcher, I was able both to guide the project to a successful conclusion and derive meaningful learning both for myself and the community concerned. Later, I returned to the classroom as a contributor to the module in the spirit of this participatory approach. I noticed that this approach can be problematic and confusing for those participants in the learning process who expect ready-made academic answers to sustainability related problems. For example, those looking for tools and techniques for concrete action would find a dialogue-based examination of the controversies within the sustainability debate unsettling. This for me raises a wider issue of the extent to which the contemporary academic curriculum encourages sufficient ethical scrutiny of this and other complex global phenomena. Perhaps, the '4Es' framework could have a more general application within other areas of the curriculum?"

Looking Ahead

The chapter provides reflections on a participatory pedagogic practice (Table 1), which created and was simultaneously informed by the '4Es' framework (Figure 1) to provide an inspirational space accommodating epistemological, ethical and conceptual plurality and flexibility in the learning process which always involves multiple and diverse knowers with their individual anxieties, values, agendas and existential vulnerabilities. The resulting shared understanding bonds the participants, irrespective of their backgrounds and nationalities, and provides an informal support network built on mutual trust. Perhaps, through their collective experience of this participative style of pedagogy, they have co-created a responsible community of learners and knowers, who can go on to be influencers towards a more sustainable future? They could be the countervailing voices arguably so desperately needed to critically evaluate the risks inherent in the way most modern societies are 'developing'. Students' reflections indicate that this approach to education for sustainability co-creates communities of virtue, engaged in continuous conversations, advocacy and social activism.

The evolving understanding of the interconnectedness between economy, ecology, epistemic judgement and global ethics dovetails with PRME Principle 3 (Method): 'We will create educational frameworks, materials, processes and environments that enable effective learning experiences for responsible leadership'. The proposed '4Es' framework indicates that the debate about the sustainability crisis simultaneously reflects these four interconnected concerns against which choices, progress and risks in a global context should be evaluated. It provides the means for structuring such evaluations and simultaneously allows for the consideration of the ideal of sustainable development that the 17 SDGs and 10 UNGC principles endeavour to capture. As such, this dialogical tool is suggested to have both theoretical and practical applications for learners, equipping them with the capabilities to be 'future generators of sustainable value for business and society at large and to work for an inclusive and sustainable global economy' (PRME Principle 1 – Purpose).

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