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Attempting to decolonise academic development – designing an action learning approach to integrate sustainability into the higher education curriculum

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ABSTRACT

The broad context behind this article is the need to empower humanity quickly, yet meaningfully, to mitigate the social and ecological causes of climate change. More specifically, it deals with how academics might support this goal by changing the higher education curriculum to include, or ideally fully integrate, sustainability principles so graduates are better equipped to contribute to a sustainable future. Responses to calls for curriculum change are often slow and surface, suggesting approaches to curriculum change need further consideration. In this paper it is argued that a collaborative action learning approach to academic development will go a significant way towards engaging academics in curriculum change for sustainability learning. The paper describes the methodological rationale used to develop an epistemologically aligned academic development approach aimed at engaging a group of academics in sustainability curriculum change. It describes the critical contextual considerations, including organisational, discipline and curriculum design considerations. Finally, it demands a carefully facilitated action learning approach devoted to supporting curriculum change for sustainability.

I. CONTEXT BEHIND THE ISSUES

There is overwhelming agreement that teaching university students about sustainability and to act more sustainably in their chosen professions is a necessary part of a university education (Decade for Education for Sustainable Development, 2009, Corcoran and Wals, 2004). Essentially, the curriculum should "make students aware of the values that are present in the professional's work and options for their own role in global challenges" (Mulder, 2007, p. 155). Across the higher education sector worldwide, there is considerable discussion about changing curricula to focus on sustainability in order to address growing concerns about the future viability of life on Earth (Gough and Scott, 2007, Sterling and Thomas, 2006).

Of course curriculum change in higher education is not new. Staff are likely to be involved in many curriculum change initiatives over their career; it is part of the academic identity (Stefani, 2009). Moving to include sustainability in higher education curricula more broadly is, however, a relatively new concept for many within university communities. Many university and government policy makers have or are in the process of modifying their curriculum frameworks to guide curriculum change in programs across the disciplines to include sustainability principles. However, it is academic staff who develop and implement new curricula, and who must negotiate the realities and implications that this call for change involves.

II. ACADEMIC'S ROLE IN CHANGING CURRICULUM

In higher education profound curriculum change primarily involves academics. It is they who write and teach the curriculum within the constraints of a context influenced by stakeholders with varied perspectives on and expectations for learning and teaching. In the case of embedding sustainability principles into the curriculum, this additionally involves making sense of the complexity of the concept of sustainability itself,

relating it to the discipline context, as well as considering the pedagogical considerations of what teaching for sustainability may embody.

Sustainability is a complex concept and change relating to sustainabilty is difficult (Sterling, 2004, Mnguni and Long, 2006, de la Harpe and Thomas, 2009, Holdsworth et al., 2008). Barnett and Coate (2005), when referring to the need for a future focussed curriculum, uses the term supercomplexity which characterises a curriculum that anticipates and recognises a future that is unknown and uncertain.

A number of aspects are outlined in the literature as characteristic of a sustainability curriculum – a curriculum to which academic staff should aspire in order to demonstrate that they have met the gaol of integrating sustainability. First, and most often mentioned is the development of a number of generic sustainability skills or competencies, which need to be contextualised to the learning environment. For example, "…skills for creative and critical thinking, oral and written communication, collaboration and cooperation, conflict management, decision-making, problem-solving and planning, using appropriate ICTs, and practical citizenship" (UNESCO, 2005, p. 28) are the specific sustainability learning outcomes or skills and competencies outlined in the United Nations Educational, Scientific and Cultural Organisation (UNESCO) International Implementation Scheme Draft. Further, professional sustainability competencies include the ability to analyse using many disciplines; to act as a responsible, citizen locally and globally; to plan for the long term as well as the short term; and to use resources efficiently (Cade, 2008, p. 22).

Second, the sustainability curriculum must seek to achieve change by including an emphasis on the affective learning domain, including values, attitudes and beliefs (Shephard, 2008). This is seen as critical since affective dimensions are major influences of behaviour. The most cited values, attitudes and beliefs associated with sustainability curriculum include empathy and care for others, dissonance towards unsustainable practice and an inclination towards exploring options and making more sustainable decisions.

Third, it requires that learners think systemically (Wals and Jickling, 2002). Social and natural systems make up the world. Systemic thinking identifies the multiple elements within system and how these interact to form the system as a whole (Bawden, 2004, Blackmore, 2005, Cairns, 2005, Glasser, 2004). For instance, interdisciplinary approaches are needed to solve sustainability problems where complex problems cannot be addressed by one discipline alone; the discipline perspectives highlight the multiple elements which fit together within a system (Blewitt, 2004).

Fourth, it should be transformative, encouraging critical and reflective approaches to learning, where existing assumptions are examined and questioned and new understandings result (Wals and Jickling, 2002, Sterling, 2004, Huckle, 2004). For Barnett & Coate (2005, p. 251), this is a curriculum where "…knowing produces further uncertainty", requiring high-risk and transformatory learning which promotes "personal disturbance" (dissonance) in order to create engagement for transformation" (p.258).

Finally, it requires learners to develop 'action competence', that is learners must be free and equipped to decide for themselves whether and how to act in a sustainable manner and the act itself must be authentic, concrete and address sustainability issues (Jenson and Schnack, 2006). The development of action competence is seen as providing a sense of empowerment and meaning to learners.

Re-defining the higher education curriculum to account for all the characteristics outlined above is not straight forward. Academics have a range of different understandings with varying complexity of both 'sustainability' (Reid and Petocz, 2006, Clugston and Calder, 1999) and 'curriculum' (Fraser and Bosanquet, 2006). Added to this is the unique paradigmatic understandings of knowledge content domains of each discipline (Healey and Jenkins, 2003) . Wals and Jickling (2002, p. 288) point out that in practice,

> [t]here is no universal remedy for programmatic reconstruction. The inclusion of aspects of sustainability in academic programmes is very much culturally defined. Also it is closely tied to the academic history and curricular tradition of the institutions concerned. Consequently, there is no panacea for curricula reform. Some institutions

> will choose to add on to existing programmes, others will opt for a more revolutionary approach. The decision about the most desirable reform approach is time and space specific and can only be taken in an open and communicative process in which all actor groups play their own respected roles.

It is, therefore, understandable that academics themselves report difficulties in engaging with such change and there are variations in responses to calls for sustainability curriculum change (de la Harpe and Thomas, 2009, Sterling, 2004, Holdsworth et al., 2006). Academics have responded to the calls for curriculum change in one of four ways (Sterling, 2004).

In order of increasing degrees of impact they include 1. *no response*, where there is no change; 2. *accommodation* where a veneer of sustainability is applied to the existing curriculum; 3. *reformation*, where significant sustainability related content and some critique of existing world systems are integrated into the existing curriculum; and 4. *transformation*, where the curriculum (along with its generative education system) is redesigned entirely to reflect significant paradigm change in line with the need for "new meaning-making and examination of existing assumptions" (p. 55) necessary to respond to conditions which have resulted in the world being on an unsustainable path. Sterling (p. 58) argues that to achieve both reformation and transformational responses a "critically reflective, adaptive response or second-order change" is required, and in the case of transformation, a profound paradigm change in belief system as well.

Overall and unsurprisingly, curriculum change for sustainability has been slow to happen (Holdsworth et al., 2006, p. 119) with few accounts of reformation or transformation reported. To address the issue of lack of progress and to assist staff with curriculum change, many universities are looking to academic staff development for support. Broadly, academic development is the facilitation of change initiatives associated with learning in the university, including changes to the curriculum (Blackmore et al., 2005), or as Rowland (2003, p. 13) put it "[a]cademic development is … the development of academic practice". As a discipline and practice academic development draws on a number of fields including adult learning, organisational development and change and instructional design. Academic development approaches can be underpinned by different educational and organisational change frameworks and perspectives.

Increasingly, academic staff are recognising the need for and becoming more accepting of professional development support to undertake curriculum change for sustainability (Holdsworth et al., 2008, Lotz-Sisitka et al., 2007). In fact, many academic staff report valuing opportunities to collaborate with academic developers on curriculum design that enhances their "…pedagogical and strategic knowledge and their ability to work in a structured way" and promotes them to think more critically about learning and teaching (Ferman, 2002, p. 152). In general academic development that focuses on curriculum design and is collaborative, authentic and anchored in changing practice is highly valued by staff (Ferman, 2002, Peseta and Manathunga, 2007, Reid, 2002).

Turning to the literature, the most successful academic staff development approaches that foster engagement are those that do not alienate or disempower academic staff by inadvertently imposing hegemonic notions of academic learning. In his evaluation of a UK government ESD development initiative, which included a number of group projects, Blewitt (2005) highlights the difficulties (and frustrations) of working within fixed project management methodologies in relation to process, outcomes and learning. For transformative engagement to occur Blewitt suggests the need for approaches which are open ended, experiential, reflective and sharing of meaning which require support, time and space for transformation to occur. Such an approach is consistent with constructivist or learner centred philosophies. In addition, Blewitt (2005, p. 174) promotes an approach where those involved "…learn from experience, identify what is significant and develop new insights, which both confirm the veracity of the initial account and contribute to future educational work". According to Holdsworth et al. (2008, p. 136),

> [s]ustainability capabilities will only be embedded into curriculum as part of a long lasting cultural change program, with a strong focus on well structured PD programs that allow for rigorous debate, discussion, sharing and learning in safe spaced within the academic community of universities

III. IMPORTANT THINGS TO CONSIDER

Next, based a synthesis of the literature, we identify the most important contextual considerations that need to be considered for an academic development approach to be successful in engaging academic staff in curriculum change for sustainability and lead to learning that will result in lasting changes to the curriculum.

The context is fundamental. Each curriculum change project will be undertaken its own context which needs to be understood and considered. Variations amongst individuals, the discipline and the organisation setting all have play a role when designing an academic development approach. For instance, individuals have differing attitudes and beliefs about sustainability as well as learning and teaching. Disciplines also vary and sustainability may not necessarily be seen as part of discipline content and, therefore, engaging in curriculum change may require an academic development approach that asks staff to critique their often deeply held beliefs about their discipline. Similarly, the organisational setting may influences the curriculum change project. Notably, organisational policy frameworks and the extent of support from leaders influence the extent to which academics are able to make curriculum changes and the types of changes they can make (Fraser, 2006, Knight, 2001, Ryan et al., 2005). Finally, structural influences can impact negatively on the agency of participants (Ashwin, 2008, Carr and Kemmis, 1986).

In order that the academic development is responsive to the context it needs to be situated within it, which requires taking time to understand the context. Rather than taking a one size fits all approach it is best if approaches are bespoke; that is designed specifically to meet the needs of the learners in their local contexts. Taking this approach to academic development mitigates barriers to learning and maximises opportunities for success (Reid, 2002). Accounting for context also encourages participant engagement and supports authenticity. In fact, participants are more likely to see the tasks as relevant and useful which can support motivation when academic support is contextualised or situated (Fraser, 2006, Grace et al., 2005, Radloff et al., 2001)

Transformative learning is fundamental. Approaches to sustainability curriculum change must involve transformative learning experiences(Sterling, 2004). Transformative learning, a constructivist view of learning, is one where new meanings are made through active critical reflection and deep learning (Moon, 1999). Taking a transformative learning approach is well suited to adult learning(Cranton, 2006). and in particular to professional development contexts(Cranton and King, 2003, Cranton, 1994, Moon, 1999) as it gives "new perspective on our goals, what we do in our practice, and how we think about our work" (Cranton and King, 2003, p. 36). Given that curriculum and learning and teaching related change are often seen as complex, using a transformative constructivist learning approach allows "decisions … to evolve while new insights are created during the actual change process" (Lueddeke, 1999, p. 247)

Peer learning is fundamental. Learning in peer groups is especially appropriate for academic development, since it contains many of the elements known to promote transformative learning. First, academics working together form a shared identity and allegiance through the common culture of the discipline(Healey and Jenkins, 2003). The discipline based department is the "natural activity system of universities" thus, with appropriate leadership, the discipline is well placed to support peer learning and collaboration(Knight and Trowler, 2000, p. 81). Discipline based peer group share a common epistemology and conceptions of knowledge which can advantage academic development ands allow deep and complex discipline based problems to be explored (Healey and Jenkins, 2003). Second, peer groups are the ideal vehicles to provide situated experiences where learners are active and "engaged to do something"

(Taylor, 2006, p. 210). In peer groups, shared (Barnett and Coate, 2005) problems can be addressed resulting in engagement and in authentic change.

Top-down and bottom-up leadership is fundamental. There are obvious tensions for academic developers between "…supporting managerial 'top-down' initiatives and the needs or wishes of.." staff on the ground which can create conflicts of interest .(Macdonald, 2003, p. 9) Whilst leadership is required for engagement in curriculum design (Barnett and Coate, 2005)., Hicks (2005) cautions about the academic developer being perceived as an agent of management. Responding primarily to managerial requests will result in academic development being seen as instrumentalist (Clegg, 2009), to which academics respond by employing resistance in the forms of avoidance, refusal and qualified compliance (Anderson, 2008). This may result in the academic development support being subverted. Therefore, the intentions of academic development needs to be clear to participants so they feel free to make choices and decisions about their learning and feel that they have a voice (Kirk and MacDonald, 2001).

Trust is fundamental. To engage academics meaningfully, academic development must establish trusting relationships with academics by using value based approaches (Gosling, 2003). Such approaches are underpinned by the values that the learner brings to the learning process and contribute to improved outcomes. While the academic developer can act as a facilitator for change, bringing a different expertise to complement the expertise of the staff involved (Reid, 2002), this must occur in the context of mutual learning. Reciprocity of learning between discipline academics and academic developers is needed where the academic developer is a co-learner in the group (Manathunga, 2006). And of course, this includes making time to build strong trusting relationships with and between all involved (Smyth, 2003). A 'tentative' (Manathunga, 2006) approach to academic development will include negotiation amongst participants. In the academic development project "each group is surrendering some of their own disciplinary power and identify in the effort to co-construct transcultural, interdisciplinary, "new" but always-contested ways of seeing teaching and learning" (Manathunga, 2006, p. 28). Holdsworth et al. (p. 135) warn against academic development which prescribes or privileges certain beliefs and attitudes relating to sustainability education, in favour of "…experiences from which people can extract and develop their own meaning from the world around them".

Facilitation is fundamental. To ensure that tacitly held paradigmatic assumptions are likely to be 'critically interrogated' – a necessary element for transformation (Kreber, 2004, p. 43) – Moon(1999) recommends a facilitator to support learners to critique and re-evaluate their frames of reference. As Peseta and Manathunga suggest, "[t]he credibility of the academic development project relies on [the facilitator] being attuned to the various manifestations and operations of resistance to teaching and learning practice" (2007, p. 167).

Critique is fundamental. To maintain credibility academic development, as a discipline, needs to critique its own paradigms, assumptions and approaches (Clegg, 2009, Manathunga, 2006). This is most important in exposing and redressing colonising attitudes.

In summary, there are a number of aspects that are fundamental to academic development approaches and it is argued that these are all significant to the outcomes that can result. An academic development approach is more likely support deep, transformative change when, as summarised by Smyth (2003, p. 57)

- it is based on core values founded on understanding rather than controlling the learning environment
- change processes embrace negotiated rather than imposed collaboration
- deep learning takes place during the process of change
- the development of an atmosphere of trust is based on authentic rather than placatory consultation.

In addition we have highlighted the fundamental role of the context, discipline, peer learning, carefully balanced top-down and bottom-up leadership, self-critique and last but not least deft facilitation.

IV. A BETTER WAY TO SUPPORT CURRICULUM CHANGE

Action learning is one approach that supports this type of curriculum change, since it accounts for the real world contexts within which academics work; fosters deep and reflective learning; and translates learning into real world practice. Such a transformative approach employs the educational principles of learner empowerment and freedom to experience and reflect.

The characteristics of Zuber-Skerritt's (Zuber-Skerritt, 2002), action learning model, (adapted from Revan and Revan's book (1998)) have been synthesised and are listed below. Zuber-Skerritt's model involves:

- A group of people coming together to form the project team, who collaborate and share ideas as they undertake the project.
- The group takes ownership of the problem and responsibility for engaging in the learning and action identified by the group to address the problem, and accept the outcomes of the project.
- The problem is highly relevant to the work of the group.
- The project is workplace based and needs to account for realities of the workplace context. The purpose is to address the real and complex problems and impacting on multiple systems within the organisation.
- The solutions often require change within the organisation's processes and systems.
- The project has the support of leadership within the organisation.
- The project is undertaken within a values framework of "collaboration, trust and openness; team spirit and mutual respect for individual differences, talents and needs; and tolerance of mistakes, from which we learn" (p. 119).
- Action learning is consistent with a constructivist view of learning, which is developmental and social and involves doing, questioning and critical reflection on action.
- A facilitator may support participants' learning by probing understandings to stimulate reflection.

Each of the characteristics of Zuber-Skerritt's action learning model is consistent with the critical considerations presented earlier in the paper. This match suggests a strong epistemological alignment between the action learning model and what has been suggested as an appropriate academic development approach to successfully support academic staff with curriculum change for sustainability.

V. CONCLUSION

Overall, the most successful academic development for supporting academic staff with sustainability curriculum change is aimed at transformative and lasting change. This academic development approach is in real world contexts and focused on practice-based outcomes, where academic staff are motivated to actively and collaboratively participate in authentic learning from and with one another in disciplinary homes. Such an approach also requires managing the fine balance between top down support and locally owned and driven change. But most importantly, it relies on a highly skilled, self critical, reflective, intuitive facilitator who is able to understand, value and work inside existing academic cultures to advance the interests, concerns and methods of the community. This paper demonstrates that an action learning approach is likely to contribute significantly to achieving these academic development goals.

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