

Working together, driven apart: Reflecting on a joint endeavour to address sustainable development within a university.

Associate Professor Chris Shiel, BA (Hons), MSc, PhD
Faculty of Science and Technology, Bournemouth University, Fern Barrow, Poole, Dorset,
BH12 5BB

Email: cshiel@bournemouth.ac.uk

Amanda Williams, BSc (Hons) MIEMA,
Environment & Energy Manager Estates, Studland House (S501), Christchurch Road,
Bournemouth, BH1 3NA

Email: awilliams@bournemouth.ac.uk

ABSTRACT

A holistic and transformational approach to Sustainable Development within a university requires systemic change and embraces new ways of working. Champions must challenge silo mentalities, develop new processes to encourage synergies across university functions, and strive to re-align systems and goals towards the common endeavour of sustainability. But how easy is this to achieve? It is well documented that working across disciplines presents challenges but forging a synergistic relationship between the environmental management function of Estates and an academic champion for ESD is not only logical but might be an easier place to explore how two roles can work together to achieve change.

This paper provides a reflective account of such an alliance, outlining a joint endeavour to address sustainable development. An analysis is provided of those factors which impede such working and the different role tensions that make working together challenging. It will also consider the benefits of collaboration, as the perspectives from the operational and academic domains provide a broader context for understandings, access to different forums, an ability to tackle conflicting agendas together and an opportunity to genuinely effect change, providing mutual support through shared perseverance. The paper will conclude by questioning the extent to which progress made will endure, if the benefits of this synergy are not acknowledged by university leadership.

Introduction

A holistic and transformational approach to sustainable development within a university requires systemic change and new ways of working (Sterling et al. 2013; Wals & Corcoran 2006). Champions need to challenge silo mentalities, develop new processes to encourage synergies across university functions, and strive to re-align systems and goals towards the common endeavour of sustainability. The aim would be to move beyond one dimensional approaches, such as campus-greening (which is important but not enough on its own), and initiatives where ‘integrating sustainability’ result in the development of a single module (an ‘add-on’, or ‘package of knowledge’ response (Haigh 2005) and again insufficient), to a response which requires whole-institutional change, systemic transformation, and a radical re-thinking of the purpose of education.

But how easy is this to achieve? In a sector that is “*notoriously resistant to change*” (Wals & Blewitt 2010, p57) the vision that universities should play a key role in contributing towards sustainable development, remains largely unrealised. The evidence suggests (at least within the UK) that while a few institutions exemplify attempts at a holistic approach and are exploring institutional change (evidencing the emergence of what Walls & Blewitt

describe as “*third-wave sustainability*”), there are few examples of what might truly be called ‘the sustainable university’ (Sterling et al. 2013); many universities find it easier to focus on campus greening/environmental management (Leal Filho 2010), rather than engage with a more ambitious and integrative endeavour. Addressing sustainability across campus, curriculum and community (Jones et al 2010) not only continues to be a big challenge but is such, that champions will confront what can seem like insurmountable hurdles, when they seek to transcend organisational boundaries.

‘Transcending boundaries’ and sharing learning with multiple stakeholders has to be at the heart of sustainable development (the solutions to many of the problems that the world faces will not be solved by a single discipline, or one group of people alone); finding ways to incorporate academic and practitioner knowledge is important for sustainability research (White 2013) and must be part of an integrative approach to sustainability within a university (given that universities comprise both academics and practitioners). However, it is not always easy to get academics to work collaboratively with their own academic colleagues, let alone to align education and research, with the interests of professional services/administrative staff (Sharp 2002).

The challenges of inter-disciplinary working (in both research and education) are well documented (Holley 2009; Wade & Stone 2010; Richter & Paretto 2009; Whitfield 2008). Barriers to collaboration are often cited as: a lack of resources to support interdisciplinary working; lack of supportive academic reward systems; contrasting academic cultures in different disciplines; different departmental policies and procedures and; decentralised budget strategies. While creating the right conditions for academic inter-disciplinary working has received attention, there is very little written about the challenges of collaboration between academic and professional services staff, where it might be expected that the barriers (cultures, policies, budgets) may not be very different to those experienced in academic inter-disciplinary working but may be even more challenging, to the extent that they involve practitioner and academic perspectives and quite different professional identities, role demands and operational responsibilities.

As those seeking to uphold an integrative approach to sustainability can hardly avoid such boundary crossing issues and will certainly experience the tensions of seeking to bridge organisational divides, this paper focuses on that topic, providing specific reflection on the relationship between an academic champion for sustainability and the champion responsible for environmental management, in light of their experience of collaboration to secure an integrative endeavour. It is well known that environmental management in the UK, (led by environmental managers, often in the estates function of a university) has made far greater progress than curriculum change. Sterling and Scott (2008) suggest that this is in part due to legislation and financial incentives which have spurred environmental management, but not withstanding this, perhaps a further explanation might be that the work has been led by a particular professional group, operating separately and under different organisational constraints to academic colleagues. Perhaps developing and maintaining an authentic relationship between environmental champions in Estates and academic champions for ESD (although the most logical place to begin an integrative endeavour) is more challenging than appreciated. An integrative approach to sustainability will surely falter unless it capitalises on the synergy between these areas of activity?

There is very little written in the sustainability literature about the tensions involved in making such relationships work, even by those universities who claim to have developed ‘integrative’ or ‘holistic’ approaches. Perhaps integration is sometimes more reflected in how case studies are written up; a post-hoc presentation maybe, where separate activities (estates, curriculum, research, community) are audited, summarised and marketed, as more of an integrative whole than is actually the case? There are certainly very few case studies which

suggest that systemic transformation and radically new ways of working have been achieved. The reputational benefits of being seen to be a sustainable university may not only be drivers for campus greening (Savelyeva & Park 2013) but to some extent, may also influence the way case study authors present their achievements in a more positive light; to say ‘things are not quite as they seem’ and to include a more negative commentary presents some risks. However, critically evaluating what is not working and sharing with others the challenges is an important endeavour; if we are not critical then we can only blame ourselves when visions are not realised. As Selby and Kagawa warn, those involved in education for sustainability should be wary of the dangers of striking a ‘Faustian bargain’; accommodation within the system, may be “*tantamount to trimming on our worldview for short-term influence*” (Selby & Kagawa 2011).

It was a concern that the authors might be trimming on their worldviews, and a desire to engage in critical reflection to understand how a better and more congruent way forward might be achieved, that inspired this paper. The reflection reported, is set within the context of a university that has been one of the leaders in the UK in attempting to implement an integrative approach. The relationship between two champions has driven success, however despite external recognition, both have become increasingly aware of the difficulties; a number of tensions impede collaborative working, and will detract from the real vision for a sustainable university, in the sense outlined in Sterling et al. (2013).

This paper is innovative in that it deploys a reflective learning process to explore (through the lens of an academic/practitioner relationship) the difficulties of taking forward an integrative approach to sustainability, something which is rarely revealed (Velasquez et al. 2005). As the assumption behind a holistic approach to sustainable development is that collaboration is required, not just across discipline boundaries but across the academic/professional services divide, the reflection on experience will be of relevance to those seeking to develop integrative approaches and such cross-boundary relationships.

A brief account of the context is provided initially, before consideration is given to those factors which have contributed to success. Reflection on the conditions that impede collaboration and the different role tensions that have made the journey challenging are then considered.

The context

Bournemouth University (BU) is a medium-sized UK university, inaugurated in 1992, with around 17000 students, including 1,800 from non-EU countries, 650 academic staff and 800 professional and support staff. The vision for the university includes the aim of “*inspiring our students, graduates and staff to enrich the world*” and the bold statement: “*we will ensure our environmental credentials are held in high esteem*” (BU 2018).

The 2012-2018 Strategic Plan refers explicitly to “*a holistic approach to SD*” (p30), the need to “*ensure that graduates develop a global perspective and understand the need for sustainable development by seeking to embed sustainable development across the curriculum*” (p19) and the need to “*ensure BU operates an affordable, sustainable and secure estate*” (p53). The goal of implementing a holistic approach and the journey towards becoming a sustainable university (in the sense used by Sterling et al. 2013) has been driven by champions at BU with varying degrees of success, since the late nineties. The approach arose from an ambition to develop graduates as ‘global citizens who understand the need for sustainable development’ (Shiel & Bunney 2002; Shiel 2007); it was instigated by a group of champions who sought to begin a discussion about how the university might make a better contribution to a world, where globalisation and unsustainable development requires futures-thinking and a better educative response. In parallel, another group (with overlapping membership) sought to explore energy saving (developing effective measures to benchmark

progress) and environmental activity with campaigns such as ‘turn-it-off’. Early initiatives sought to engage the support of senior leaders in a change process, and to inspire students and staff to engage with an agenda that would impact upon curriculum, campus and community - an approach which is not dissimilar to the ‘4C’ model at Plymouth University (Jones et al 2010, p7) and has been taken forward by other UK universities.

Up until 2005 developments were largely piecemeal and opportunistic; beyond 2005 funding for an institutional wide project, led by an academic champion and with the support of two part-time research assistants (one with an environmental background, one with an international development background), helped drive a more strategic and integrative approach (Shiel 2007; Shiel 2011) based on the concepts of developing global citizenship and addressing sustainable development (Figure 1 is an early example of the model suggested). As part of the strategy which emerged, a range of projects were initiated in the extra-curricular sphere (an easier starting place); a holistic model was proposed as part of a Strategic Report; the knowledge, skills and dispositions of a global citizen were elaborated; ‘Curriculum Guidelines’ were established to influence curriculum change. The latter (part of the institutional quality assurance and enhancement process) require all Course Teams to address global citizenship and sustainable development at Course Design and in Course Review. In essence it was suggested that the curriculum will (among other things):

- enable students to understand the links between their own lives and those of people throughout the world;
- increase understanding of economic, social and political forces which shape life;
- develop skills, attitudes and values to enable people working together to bring about change for the ‘Common good’;
- provide the learner with the knowledge and skills to work towards a more just and sustainable world where power and resources are more equitably shared.

In 2008, as an outcome of the 2005 strategy, the Centre for Global Perspectives was established as a ‘hub’ (Petford & Shiel 2008) with the remit to work across the university to support the agenda, lead staff development to support curriculum change and implement projects to enhance activity across the institution.

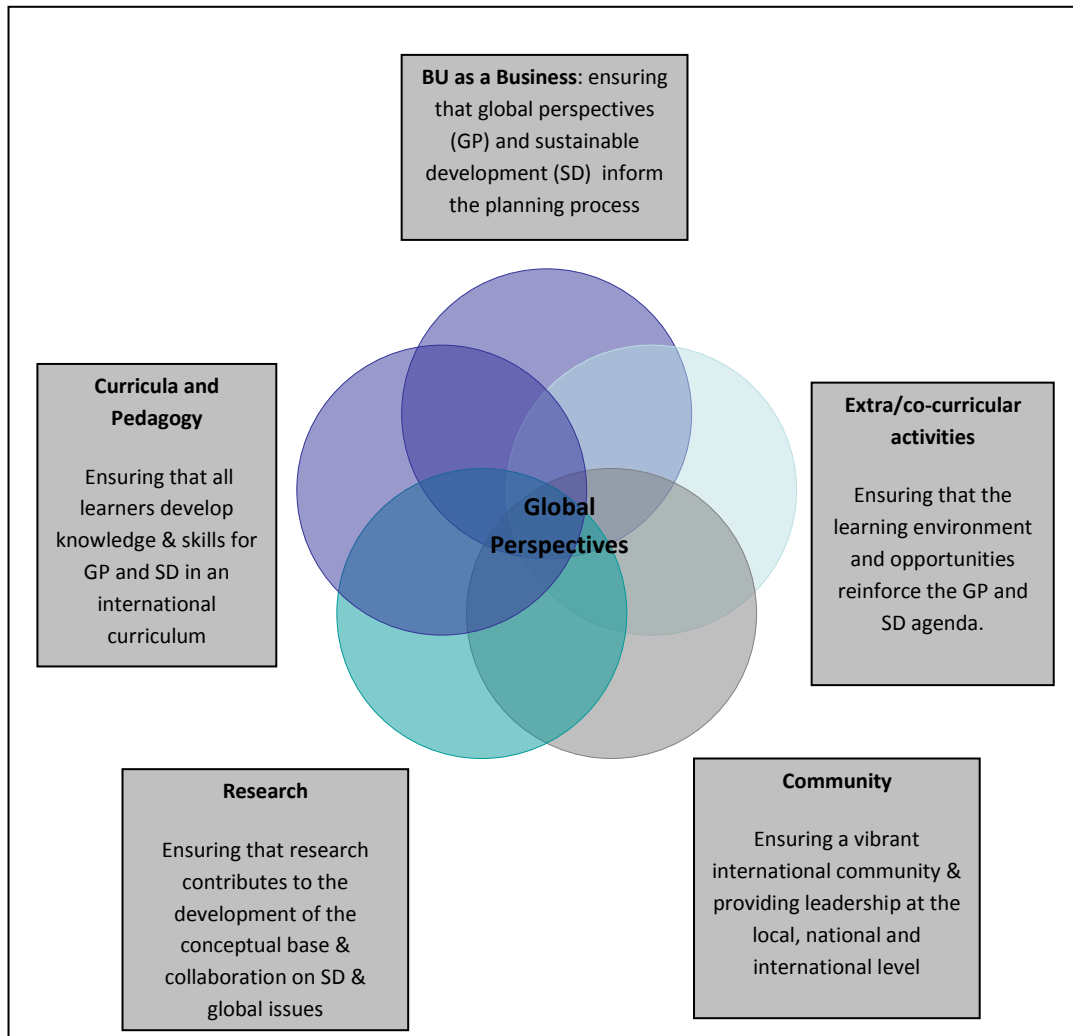


Figure 1: Global Perspectives and Sustainable Development in a Global University (Shiel & Mann 2005)

A number of these projects (securing Fairtrade status for example and leadership development for sustainability) have involved collaboration with staff in Estates; outcomes from research (students' attitudes to sustainable development, for example) have also fed back to Estates just as environmental initiatives were fed in the other direction. Reciprocity and sharing have been at the heart of collaboration.

In relation to the environmental management of the Estates, 'campus-greening' activities gained momentum with the appointment of a dedicated Environmental Officer in 2005 and an Energy Officer in 2006. Activities initially focused on three target areas: energy efficiency, travel planning, and waste management and recycling. The environmental programme has since developed considerably to include a wider range of impact areas including carbon management, water reduction, biodiversity management, sustainable construction and sustainable procurement. Significant investment has been made in carbon management projects such as a biomass heating project, voltage optimisation and building management systems. It was fortuitous that one of the first Research Assistants on the 2005 strategic project (previously referred to), went on to become the institutions Environment and Energy Manager; her success in this new role enabled greater co-ordination in taking forward sustainable development across the academic (curriculum and research) and professional service domains (estates) than might otherwise have been possible. This meant

that progress in developing environmental sustainability across the Estates proceeded in parallel (and sometimes faster) with developments in research, the curriculum, and the extra-curricular sphere.

The Environment and Energy Team now consists of 4.6 FTE (full time equivalent) staff, whereas the Centre for Global Perspectives (previously four staff), ceased to function in 2012, as the agenda became embedded across Schools - a cross-university academic function was no longer considered necessary in the light of the new Strategic Plan (BU 2018). This has made taking forward the academic aspects of global citizenship and education for sustainability more challenging, as the role of the original champion (and subsequent Director of the Centre) became re-located to a Faculty. The removal of a 'formal' function has since meant that the Environment and Energy Team has reduced access to the academic agenda; coordination of education and research for sustainability has stalled.

The institutional 'Environment Strategy Group' continues to have oversight of the environmental agenda; the Environment & Energy Manager ensured that the academic champion was included in the membership, albeit that the group primarily focuses on an Estates agenda, however over time, the education agenda has been acknowledged but not the research agenda. An academic champion on a group whose remit is 'estates' has been important in reminding the committee, that sustainable development encompasses a broader remit, something which is too easily overlooked.

Over time, an integrative approach to sustainable development (although never as fully integrated as originally conceived in 2005), has meant that BU has been perceived as one of the greener universities in the UK (with a 'first-class' award, four years in a row in the UK Green League), and as one of the early adopters of a holistic approach, where environmental concern is just one part of a broader agenda. Initiatives at BU have been rewarded by external recognition both locally and nationally, and include:

- AIBEAT Earth Charter Award – Engagement in Sustainability 2013
- EcoCampus Gold Award 2011
- Gold Sound Impact Students' Union Award
- Green Gown Awards: Transport 2005; Energy Efficiency 2004
- Finalists (nationally) in the following: Green Gown Awards – Sustainable procurement 2011; Green Gown Awards – Promoting Positive Behaviour 2011; Times Higher Education Awards – Outstanding Contribution to Sustainable development in 2007 & 2011 (both in relation to recognising an innovative and holistic approach)
- Dorset Business Awards – Environmental Excellence – 2007

On the face of it, this is something to be proud of; the attempts to develop a holistic approach to sustainable development look like they have been quite successful. So if that is the case why should two of the original champions of the approach feel the journey has been a battle and the gap between vision and reality remains? What are the tensions that have contributed to a feeling that things are not quite right; what is stopping the full vision being realised?

Method

A critical inquiry methodology, participative action research and cooperative inquiry have supported the development of a holistic approach at BU (Shiel 2013), which with the aim to mobilise change and action, falls under the umbrella of 'new paradigm research' (Reason & Rowan 1981) in that:

“It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to

people, and more generally the flourishing of individual persons and their communities” (Reason & Bradbury 2001, p1).

However the purpose of this paper is not to reflect on the overall change methodology, nor to present a case study of BU which glowingly describes success, but to contribute to an emerging dialogue (see Sharp 2002 and also Sterling et al. 2013) about what has been working, what is making further change difficult, what else needs to happen that might accelerate progress. The overall aim is to address the questions posed in the previous section and to understand what lessons might be drawn which others might find useful.

In a journey that has sometimes been more about action with little time for reflection, what seemed important was to create space for the change agents to individually and collaboratively engage in reflection, share realities, concerns and feelings, and find ways to integrate academic and practitioner knowledge to contribute to future capacity building (White 2013).

Boud, Keogh, and Walker (1985, p3) refer to reflection as “*a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciation.*” The reflective process is normally triggered by an experience and the need to resolve and clarify an issue (Boyd & Fayles 1983; Steinaker & Bell 1979). Experiential learning theorists generally agree that reflection then moves through a number of stages (see Moon 2000, p28 for a summary table) towards processing new ideas, resolution, transformation and possible action.

In order to develop a sense of the current situation, and out of a desire to formulate possible actions to progress the agenda (if not achieve emancipatory outcomes), the change agents decided to adopt a more formalised approach to ‘reflection-on-action’ (Schön 1983, 1987). Two formal periods of reflection were scheduled where both participants (the academic champion and the environment champion) were able to focus on the questions set, raise concerns (personal and organisational), and explore emotions. The explicit purpose of reflection at the first meeting was to consider at a local level, what factors have supported progress, what constitute hurdles, and how might greater synergy be achieved in the future? Systematic reflection (on personal experience and that of others) begins with clarification of the issues and moves towards developing new insights through interpretation (Moon 2000). An outcome of the first meeting was the need for a template that each individual could take away and populate later with further reflection to enable sense-making. At the second meeting the purpose was to discuss and review the template, share perspectives of the barriers and the different role tensions that make working together challenging, and to begin to formulate possible courses of action; a third meeting formalised conclusions.

In between meetings, reflection was on-going and communication continued via e-mail and telephone conversation.

The next section will present the outcomes from the reflective process and offer analysis and discussion of those factors which have contributed to a successful collaboration between the environmental management and academic endeavour, and those which serve to block progress.

| | Personal | Organisational | External |
|---|---|--|--|
| Factors which have contributed to change and success | <ul style="list-style-type: none"> ○ Background of working together in Centre ○ Common interests at start; shared frustrations ○ Shared Values – ecological concern, social justice ○ Shared Vision – Holistic Approach to SD ○ Passion for shared projects: Leadership for SD, Fairtrade, raising awareness of students & staff; campaigning ○ Support when things are challenging ○ Complementary knowledge and skills ○ Proud of others achievements / academic mentor ○ Ability to resolve differences through communication ○ Friendship has endured ○ Access to different knowledge ○ Open and honest communication | <ul style="list-style-type: none"> ○ Senior Management Support – but this is transient ○ Board level buy-in/engagement – particularly around carbon ○ The right words in Vision, values and strategy ○ Different opportunities to influence: Member of Estates SMT; Member of Faculty and ESEC ○ Oversight of Estates development proposals - sign off of plans ○ EET membership on design teams ○ Access to Chief Operating Officer - quarterly meeting ○ Annual presentation to Board (Carbon) ○ Access to Professoriate, Education Committees, Research Committees | <ul style="list-style-type: none"> ○ Rio +20 ○ UN Decade of ESD ○ Role of HEFCE & HEA ○ Funding Opportunities e.g. LGMF ○ External Recognition including awards ○ People & Planet Green League ○ Government policy/lead |
| Factors which have detracted; potential hurdles | <ul style="list-style-type: none"> ○ Ownership/Boundaries ○ Different pressures/organisational demands ○ Communication breakdowns ○ Different ways of dealing with stress ○ Gender? | <ul style="list-style-type: none"> ○ Changes in leadership: Loss of senior champions (Director of EIS, former DVC, changing priorities of Director of Estates) ○ Lack of sustainability capability at senior level ○ Lack of highly visible authentic leadership for SD ○ New line managers (different management styles) ○ Gender issue: UET all men; Estates – male dominated & adversarial BUT skills required for sustainability tend to be more female ○ Failure of academic staff to acknowledge professional services staff as knowledgeable practitioners. ○ Lack of willingness of academics in some areas to engage when their expertise would be useful to Estates. ○ Inability to influence the curriculum from within Estates, especially since the loss of the CGP. ○ Competing priorities: Student experience/Financial Sustainability/Estates development ○ Conflicting values ○ Focus on Estates Development above all other Estates Functions ○ Lack of stable long term strategy of estates development - goal posts keep moving ○ Committee burden ○ Immediacy of operational role requirements | <ul style="list-style-type: none"> ○ Neo-liberalism ○ Lack of interest in Rio+20; ineffectiveness of DESD ○ Lack of strong lead from HEFCE/departure of champion/loss of steering group. ○ Uncertainty over capital funding ○ Changes to CRC removed reputational element ○ Removal of cap on student numbers ○ Less emphasis on SD in sector ○ Change of government & weakening of priority |

Figure 2: Framework for reflection

Outcomes from the reflective process and discussion

Dewey (1933) suggests that reflection can be uncomfortable, is related to emotions and involves exploring doubt and uncertainty; all those things were evident at the first meeting where anger, frustrations, and general weariness made it difficult to begin to formulate more practical outcomes. It would have been easy at that point to simply give up, rather than find a way beyond a flood of negativity. Structuring discussion around ‘critical incidents’, for example, ‘I felt like this when ...’ and reviewing those things that had caused frustrations (‘when you did this...’) but trying to use neutral language helped to create a more positive discussion. It also helped to focus on those qualities that the other admired and areas, where collaboration had worked very well (‘I have appreciated the benefits of you acting as a coach..’; ‘admired your tenacity in leading change..’) before re-visiting issues from the past that had been more difficult to make sense of (when one was recognised for work but not the other). Open and honest conversation, on current personal circumstances and organisational constraints, contributed to move the discussion beyond emotions to a more analytical perspective. Agreement of a framework to take away and populate with reflection was also a useful outcome to move reflection further.

At the end of the first meeting it was much easier to see where working together had been highly effective; that bringing together an academic perspective with a practitioner had yielded huge benefits but that organisational constraints did not support those who wish to transcend boundaries.

At the second meeting, the focus was largely on considering the organisational constraints but also, given that the change agents were both dealing with personal frustration some attention was focused on developing personal coping strategies in a context of organisational change. The populated framework was developed further see Figure 2; it was agreed that the categories made sufficient sense to form the structure for further reflection and discussion. Finally, discussion focused on the outcomes of the reflective process (see Moon 2000), which might simply be resolution (accepting the status quo), empowerment and transformation (which might be personal and/or include a way forward to challenge the organisational context) and/or practical actions.

The discussion that follows elaborates further on the categories deployed within the framework. As this is the outcome of reflection the first person (singular and plural) may be used where appropriate.

Personal

It is undoubted that much of the success of an integrative approach at Bournemouth has been down to the personal nature of the relationship between the change agents, and the personal qualities which have enabled not only the relationship to sustain but progress to be made, sometimes in adverse contexts. This concurs with Bartlett & Chase (2004) who highlight the importance of personal relationships and perseverance in taking forward sustainability and Acevedo et.al. (2012, p390) who suggest that, in their institution “*personal attitude toward collaboration was a key factor.*” But it is also worth reinforcing a point made by Moore et al (2005) which stands as a reminder to all champions of this agenda that although “*energy and commitment are high but so is the danger of burn-out*” (Moore et al. 2005). It seems critically important that champions find ways to retain their vision, and sustain energy and commitment while at the same time sustaining self. Developing relationships between champions fulfils a personal support function and serves to sustain tenacity; scheduling time to reflect on the relationship and the challenges is important. Further, as Sharp (2002) reminds “*the practice of reflection, humility and reciprocity are essential in maintaining positive relationships*” when seeking to institutionalise sustainability.

The most critical factor to the success of our collaboration has been the ability to maintain a friendship, in contexts where at different times it has seemed as if we have been pitched against each other; where one or the other has been lauded by the organisation; where one might have had access to more interesting opportunities and one might have been overburdened with organisational demands and; both, at different times might have felt that the other was accruing more benefits. Both at different times have also questioned the rationality of the organisation, so a useful reminder is that: rationality within universities is a myth which inhibits systemic transformation and that “*the reality of organizational irrationality*” (Sharp 2002, p136) is a prevalent form of stress for staff.

A stressful journey as change agents and champions has been supported by working quite often outside of the formal system, building trust and networks (many externally) and support structures. At the base of collaboration have been shared values and beliefs: a common vision of a sustainable university; a belief that education needs to play a leading role in contributing to a better world and; a passionate concern for the environment and social justice. Essentially, ‘starting on the same page’ has been a big advantage to collaboration; reminding ourselves that we are still on the same page (and not delusional), while seeking to take that vision into different parts of the university has sustained collaboration. The same message but coming from different voices with access to different forums and participation in different networks has built momentum for change.

The benefits of different knowledge bases and different understandings of the academic and professional domains of a university have also been important factors. At times academic knowledge (particularly theoretical arguments but also familiarity with academic drivers) has been useful to engage academics, to persuade leaders, and to demonstrate the broader links between sustainable development and other academic institutional drivers, for example, internationalisation and employability (Shiel et al. 2005). At other times practitioner knowledge has been useful in anchoring what at times might be an idealist or theoretical perspective, in the realities of organisational life. Practitioner knowledge has also brought to the fore hard evidence in relation to environmental performance indicators, the legislative drivers, and the experience gained from working in an estates function that is largely male-dominated.

Complementary styles of working (but different personality types) and different strengths in leading change have also played an important role and allowed one, or other to come to the fore in different situations, with different audiences. Both champions might be described as ‘activists’ (a strength for leading a change agenda and a danger within a university context) and as a consequence both are used to campaigning and speaking out; both have been able to utilise these skills in different contexts, where ‘being professional’ requires drawing on particular styles and deploying different professional repertoires.

The only barriers that were considered under ‘personal’ arose from an honest consideration of feelings in relation to one or two critical incidents, for example, where a senior leader attributed all success down to the environment team and chose not to recognise the academic contribution. Although anyone championing sustainable development will realise that no one person (or single part of the organisation) can own the agenda, and what is actually a mark of success is when everyone owns it, we are all human. It is only natural to feel some anxiety when collaborative contribution is ignored. University environments too frequently create situations which pitch individuals and different functional areas in competition with each other, which poses challenges for collaborative relationships; finding ways to collectively celebrate achievements and avoiding the danger of competing, are important to progress a change agenda which involves an integrative approach. Always speaking positively of the other’s work and achievements, particularly in wider audiences is also helpful where it contributes towards a ‘pygmalion effect’ (Rosenthal & Jacobson 1968).

Finally at a personal level, there is something to be considered relating to gender. Both champions felt that being female had been an advantage and a constraint; there was a natural affinity for inclusive ways of working, collaboration and participatory approaches but this was at odds (particularly in relation to estates management) with a culture of autocracy, and at times, macho-management. On occasion, a male dominated culture, characterised by an adversarial approach, had been exhausting to challenge; sometimes being female meant that 'voice' seemed less significant. Although sex differences in leadership styles is an area of research that is contested, there is some evidence to suggest that women tend to favour a more democratic and participative style and use less an autocratic or directive style (Eagly & Johnson 1990) than men. In a later study (Eagly & Johannesen-Schmidt 2001, p791) results showed that women "*exceeded men on three transformational scales: the attributes version of idealized influence, inspirational motivation, and individualized consideration.*" They are also more likely to positively reward performance.

While our reflection on gender was not conclusive it seemed an important issue to highlight, as it merits further research. As much of the literature on leadership for sustainable development suggests that what is required is challenging "*patriarchal thinking*" (Doppelt 2010) and developing more participatory ways of working (Marshall et al. 2011), then perhaps the role of gender in relation to leading sustainability initiatives merits exploration.

Organisational

Unfortunately most of the negatives that arose during the process of reflection fell under the organisational heading. It was also reflection on this category and in particular the history of organisational constraints, which more strongly tapped the emotive aspects of reflective learning (for example, anger and frustration).

The organisational constraints which have detracted both from the holistic approach, and the joint endeavour that underpinned it, have been constant and varied. Most critical have been changes in leadership, particularly the loss of senior champions, changing coalitions and transient leadership support, and lack of sustainability capacity (knowledge and awareness) at a senior level. Sharp (2002, p129) refers to the "*complexity of the environmental imperative*"; a shared frustration for the change agents, has been the failure of university leadership to fully appreciate the immediacy or complexity of this imperative. Despite the collaborative working of the two champions and several projects, including one to enhance leadership understanding of sustainable development and to enable them to consider role-modelling leadership for sustainable development (Shiel 2013), leaders are still guilty of several of Doppelt's "*sustainability blunders*" (Doppelt 2010 p49-54), particularly "*patriarchal thinking that leads to a false sense of security*" and a "*siloes approach to environmental and socio-economic issues*", the latter being a mechanistic approach where organisational structures inhibit collaboration. Developing and sustaining the 'awareness' of sustainability which Ballard (2005) suggests must include not just the nature and urgency of the issues but also an awareness of how worldviews (on both sustainability and leadership) impede change, has been an impossible task. A context where senior leaders have so many other pressing concerns has not helped but staff turnover has also meant that key staff, who were supportive of the original approach, are no longer within the organisation. Changes in personnel at the most senior level have contributed to a "*failure to institutionalise sustainability*" (Doppelt 2010, p54).

Perpetual change is a feature of higher education but one which is felt more sharply when new senior appointments brings their own particular interests (sometimes rejecting all that has gone before) and wish to lead innovations that enhance reputations. Unfortunately, sustainability, environmental management, or ESD, may be insufficiently 'sexy' to maintain

the support of senior champions; leaving a legacy of campus expansion, or a higher position in a league table might hold greater allure for personal career development. It is therefore critically important that change agents do not depend on the support of just one or two senior staff; endorsement from the entire senior team must be visible and authentic. It is also important that when the corporate strategy and subsequent policies are drafted, that change agents go in to over-drive to influence, and to ensure that commitment is set in stone. This requires change agents to be fully engaged with the process of strategy development (through appropriate committees), using the full range of influencing and negotiating skills to ensure that the right words appear in the vision, values, strategy and policies; finding diplomatic ways to suggest better alternatives is critical. It does not necessarily mean that what is implemented will be quite as anticipated, but at least it makes the agenda harder to ignore; some action will be taken forward. Our success at influencing at this level (getting the right words into documents), has been greater than our success with implementation, which has at times been blocked by university structures.

University structures have certainly tended to create a binary divide between 'academics' and 'professional services' staff; those who find themselves working in a 'third space' (Whitechurch 2012) face challenges and may experience dissonance. A particular frustration within the environmental management function has been the perceived failure of many academics to acknowledge professional services colleagues as practitioners and engage collaboratively with them. Whilst the shared endeavour of the two key change agents has had many benefits, it has not been possible to replicate this across the university and collaboration on sustainability across the academic and non-academic domains has been limited in scope as a result. In part this may be down to the instrumental orientation of many academics with an attitude towards professional services which is largely to ignore them, or involves 'you are there to give me what I need but don't tell me how to do my job'.

The 'gender issue' was considered earlier but its impact was felt at the organisational level, particularly with reference to the male dominated culture of estates but also in relation to an entirely male senior university executive team. The issue was not fully unpicked except to acknowledge that gendered ways of working might either enhance or detract from a broader approach to sustainable development; patriarchal approaches impede sustainability (Doppelt 2010).

Consideration of the culture of Estates then led to reflection on different academic and professional services cultures, expectations, resources and budget constraints. Although all employees within BU are on a single pay spine, there is a clear structural and cultural divide between academic and professional services staff. The academic champion has more freedom from bureaucratic demands but no resources; the environment manager is overwhelmed by committee attendance, reporting and day-to-day operational issues but has some budgetary control. The academic faced teaching and research demands and increasing pressure to secure funding; the environment manager faced greater pressure to secure KPIs and manage an expanded team (the latter had been a critical factor in promoting change, albeit primarily on the Estates-related agenda). The dis-investment on the academic side (the removal of the Centre as a 'hub') had served to under-mine the educational work, which although promised to continue, has not been picked up by other parts of the organisation. It has also (intentionally or not) given out a strong signal that sustainability is the remit of Estates. In a culture where professional services/administrative staff are perceived as secondary to the educational endeavour, there has been a tendency for academics to disengage with an agenda that is owned by practitioners as a consequence.

Other organisational factors have contributed to positive change and shared successes, most notably the change agents have made good use of their different opportunities to influence across the academic and professional services domains, particularly through

committee structures. For example, the academic change agent is a member of a Faculty, has access to the Professoriate, and sits on groups such as the Education & Student Experience Committee and the Research and Knowledge Exchange Committee. It was this ability to work through the committee structures that ensured that the original vision was endorsed by Senate in 2000. The Environment & Energy Officer has access to the Board, can raise issues at a quarterly meeting with the Chief Operating Officer and is a member of Estates senior management team; her team has membership on every Estates Development project design team and sign off of plans. However, working separately in different organisational spheres has resulted in change but not always resulted in a joined up approach. As Sharp (2002, p130) notes, “*the complexity of the organisation itself, compounded by the complexity of the environmental imperative, thwarts most attempts to gain organisational agreement on goals, alternatives and solution programs*”, particularly across traditional academic and non-academic boundaries. That said, the high profile of sustainability in the BU Vision & Values and Strategic Plan, coupled with genuine engagement at board level (albeit primarily on carbon), should be considered important ‘wins’ at a strategic level which have been jointly achieved.

There has also been a long history of collaborative project successes, including a HEFCE ‘Leadership for Sustainable Development’ project, the EcoCampus Gold Award, and Fairtrade University Status, as well as a comprehensive portfolio of projects within the environmental programme, some of which have been high profile. But as Sharp notes we should differentiate between project success and institutional transformation (Sharp, 2002, p130). There is a risk that an unintended consequence of success at project level is that senior staff become complacent, believing change is ‘in hand’, and this in itself can become an organisational barrier to genuine transformational change.

This raises the question of how to overcome such complacency and how to challenge those organisational factors which impede progress. An integrative approach to sustainability would undoubtedly work better within an inclusive and appreciative culture which values professional services and academics as part of a team. The culture would need to embrace a collaborative ethos, with high levels of connectivity and communication; budget allocation and reward systems would need rethinking to inspire more integrative ways of working and to engender collegiality between the operational and academics parts of the system; structures would need to allow for accountability but be sufficiently flexible to facilitate systemic change.

External factors

Finally reflection moved to consider external factors. At various times the external context has represented either a fair or foul wind to the progress of the institutional change agenda. Reflection began with a consideration of neo-liberalism and the corporatisation of HE, with the focus on action plans, competition, growth targets and KPIs (key performance indicators). Undoubtedly, there is a tendency for education for sustainability to “*become an instrument of a managerialist culture*” (Blewitt 2013, p52); the challenge is to contest the system (economic policies based on growth) and to ensure that an audit/commodity/KPI culture does not limit what might be achieved.

In relation to the sustainability agenda, between 2005 and 2010, the external context was a driver for change in many UK universities, including BU; and working in partnership, the change agents were able to capitalise on external developments to increase momentum internally.

The UK sustainable development strategy, ‘Securing the Future: Delivering UK sustainable development strategy’ (2005) set out the government’s goals on sustainable development. In response to this, the Higher Education Funding Council for England

(HEFCE) published its own strategy Sustainable development in Higher Education (HEFCE 2005b) following consultation with the sector (HEFCE 2005a), setting out HEFCE's approach. A further update was published in 2009 (HEFCE 2009) along with a consultation on challenging carbon reduction targets for the sector, sufficient to ensure satisfactory progress towards national government targets to reduce carbon emissions by 80 per cent by 2050 and at least 34 per cent by 2020 (against 1990 levels).

The publication of the Carbon reduction target & strategy for higher education in England (HEFCE, 2010) was also an important trigger, confirming a sector level carbon reduction target in line with UK targets, a requirement for institutions to set their own targets for 'scope 1 and 2 emissions', and introduced a link between capital funding and carbon management performance through the Capital Investment Framework (second iteration).

External Funding opportunities followed, including those available through the Leadership Governance & Management Fund, and the HEFCE/Salix Revolving Green Fund. BU was successful in achieving funds through both and implementing change, with collaboration between the champions on the former, and an Estates lead, on the latter. External recognition, including awards, raised the profile of the collaborative work.

Legislative drivers included the introduction of the Carbon Reduction Commitment, which would require large energy consuming organisations to buy carbon allowances annually, based on consumption, to cover their carbon emissions. The revenue was to be recycled by government, based on organisational performance on carbon reduction during the year, benchmarked against other participating organisations, resulting in a potential financial and a reputational impact. Carbon management had become something that universities must do, rather than something they should do.

The People and Planet Green League, launched in 2007, has also been a critical driver in raising the profile of sustainable development with senior staff, with high profile rankings published in the Times Higher Education Supplement initially and later the Guardian. As McGowan noted when he presented People & Planet with a British Environment & Media Award for Best Campaign in 2007, "*the green league succeeded in dragging environmental issues in from the fringes and making them a central concern for many Vice Chancellors*" (McGowan, 2007). However, questions around education and learning were not included in the Green League until 2011.

Whilst the external context raised the visibility of sustainability across the higher education sector, it has also served to advantage campus greening as a high priority with senior staff. An unintended consequence of this may actually have been to disadvantage curriculum developments, as the focus gradually shifted from the holistic approach that collaboration had secured within BU, to a more compliance and reputation orientated focus. Even within campus greening activity, it has resulted in the subordination of some areas of the broader environmental programme, and led to a position where carbon has become the key focus of senior leaders (at Director level, and above).

Consideration was also given to the Decade for Education for Sustainable Development, Rio+20, and the work of the UK Higher Education Academy (HEA) in sustainability. It was felt that while these things had been of impact for the change agents (and the academic champion had been to Rio and participated in the HEA's Green Academy), there had been limited impact on the organisational context. Unfortunately the 'decade' came and went; few within the organisation noticed its passing. The HEA's Green Academy had been very helpful for participating institutions but their wider sustainability work had had less impact. Individual researchers had engaged with Rio+20, but the wider community were less concerned.

In May 2010, the Conservative Liberal Democrat coalition came to power in the UK, claiming that they would be the 'greenest government ever' (Cameron, 2010), however, this

has yet to be realised. Perhaps the first indication of changing government priorities was the decision to dissolve the Sustainable Development Commission in the same year. Changes to the Carbon Reduction Commitment Scheme aimed at simplification took away both the reputational (league table) and financial (recycling of funds) drivers for carbon reduction. An evaluation of progress towards the government's pledge in year one showed that real progress had been made in just six of 77 policy areas considered (Porrirt, 2011). Some of the initial momentum provided by HEFCE has also since diminished, particularly since the departure of the Senior Policy Advisor for Sustainability (who was not replaced) and the disbandment of the Sustainable Development steering group. HEFCE's engagement has become far less visible as a consequence. The link between performance on carbon reduction and capital funding has become less impactful, as the capital funding pot has diminished and left uncertainty over future capital funding.

This changing context, along with the organisational changes detailed above, resulted in the change agents being increasingly pulled in divergent directions, and defending ground that had been considered safe.

At the time of writing, there are signs of the external context shifting once more. In the 2013 grant funding letter to HEFCE (DBIS 2013), Government recognised the good progress higher education has made on sustainable development and called for further action "*to build on the achievements of universities*" and requested the development of a new sustainable development framework, which HEFCE is currently consulting on. It remains to be seen whether this will have sufficient teeth to effect real transformational change. At the same time, the Government announcement to remove the undergraduate student numbers cap from 2015, has resulted in plans to accelerate the most significant period of estates development the University has ever seen. The impacts remain to be seen.

Outcomes

Engaging in a more formal process of reflection yields some therapeutic benefits for change agents and champions of sustainability. It was interesting to note that during the process (and before the second formal meeting) both champions became more positive in outlook and had moved from an acceptance of the status quo (organisational barriers) towards developing approaches for challenging institutional hurdles. At the time of the second meeting, it was acknowledged that without actually being aware of a change, both had re-engaged with seeking to influence others and to reinvigorate the agenda through committee structures. Both had developed personal longer term plans and strategies for coping with a difficult organisational context.

In terms of developing collaborative actions (outcomes from reflection) it was acknowledged that while little can be done to shift the external context, internally it was important to reinforce for university leaders that the agenda had slowed pace: the Environment and Energy Manager felt that it was difficult to achieve a wider agenda and "*true ecological citizenship*" (Savelyeva & Park 2013, p190) from within Estates, where the organisational culture had placed too strong an emphasis on carbon and compliance; the academic champion felt that apart from her contribution to the Environment Strategy Group in particular, and other committees where she continued to raise the profile of sustainable development, it was more difficult to engage within the institution and easier to lead developments within the external community. As positive action for change, both agreed to seek opportunities to highlight to senior leaders:

- The importance of an inter-disciplinary unit, or function that brings together students and staff but which also serves as an interface between the academic and professional service divides. Such a unit would facilitate cross-institutional

working, lead on staff development, but also play an instigative role in developing projects and campus-based activities. Further consideration needs to be given to 'third space' (Whitechurch 2012) working.

- To reflect back the detrimental effects of an over-emphasis on carbon which eclipsed other concerns.
- The challenges of leading on sustainable development from within the Estates function which impedes neutrality.
- The need for visible and authentic leadership, and in particular stronger senior leadership of the educative agenda.
- The need for mid-level leaders to follow through on implementation, to "*ensure that graduates develop a global perspective and understand the need for sustainable development by seeking to embed sustainable development across the curriculum*" (BU Vision & Values p19).

Both agreed to collaborate on organising further cross-university staff development sessions to encourage other champions. Both agreed to continue working within the system but to be more challenging of worldviews and ways of working, which compromise the radical potential of sustainable development.

Conclusion

This paper has presented the outcomes of reflection of two change agents (one academic, one practitioner), who have worked together for almost ten years, to develop synergy through an integrative approach to sustainable development. The reflective account has been presented in a spirit of inquiry, with suggestions made as to where the tensions lie, in developing an integrative approach to sustainable development. Although a limited piece of research in the context of the experience in one institution, it is hoped that consideration of what has contributed to success and what has hindered, under the categories of personal, organisational and external factors, will resonate with others.

In terms of lessons to be drawn from the paper, the first would be to emphasise the importance of honest and critical reflection on those factors that impede integrative approaches to sustainability; sharing the difficulties is as important as show-casing success. The authors would also stress the value of more formal engagement with the process of reflection; reflective learning is at the heart of a change agenda and integral to institutionalising sustainability, where progress is challenging. There is always a danger that a focus on actions, drives out space for deeper engagement with reflection.

A good starting place for an integrative approach is to develop a positive relationship between the champion leading environmental management in estates and the academic champion leading sustainable development more broadly within an institution. The authors suggest that the personal relationship developed and shared vision and values, has been a significant factor in contributing to a joined up approach for sustainable development. The perspectives from the operational and academic domains (when brought together) offer an enriched and broader context for developing shared understandings; working collaboratively enables access to different forums, enhances the ability to tackle conflicting and challenging agendas as a team, and offers the opportunity to make a genuine impact. Such collaborations also provide mutual support which encourages perseverance. However, such relationships need to be established and maintained in contexts which place individuals in competition for status and resources; individuals need to be robust and devise ways to reduce anxieties and work around organisational constraints. Maintaining a collaborative front is critical to success; personal qualities and shared values are helpful at the outset but unless relationships

are nurtured, collaboration may not be sustained. Another key lesson is the importance of finding ways to bridge the binary divide, created by University structures which contribute to 'silo' mentalities; such structures present a challenge to collaboration across the academic and professional services spheres.

The success of the approach at BU has been rewarded by external recognition but it is suggested that organisational factors are serving to inhibit further change, particularly where university leaders fail to fully grasp the implications and urgency of sustainable development; the synergy created by working across organisational boundaries is not always recognised by university leadership; university structures create barriers and sub-cultures which are difficult to transcend and which lead to competing agendas. A critical lesson is to ensure that external project success does not result in complacency; an acceptance of the status and too much tolerance of organisational hurdles will not serve the sustainability agenda in the long-term. Champions need to continually reinforce the agenda with senior leaders and highlight the impact of organisational barriers.

Finally, we concur with Sharp (2002, p133) who suggests: "*that transformation will only come about when a large number of people set up different priorities in both the large and small arenas of the university, establishing new routines and structures, despite local conflicts and set-backs.*" This paper has emerged in a context of set-backs and local conflicts, however engaging formally with the process of critical reflection has enabled the change agents to become more optimistic; the determination to persevere and to champion better ways of working has increased. However, whether the subsequent efforts of champions will lead to "*a reworking of the design and operation of institutional reward systems*" and an "*appropriate linkage between the operational and academic functions of the university*" (Sharp 2002, p78) remains doubtful.

Looking to the future, champions for sustainability have to challenge the system; they need to be cautious of the bargains they strike to secure a place at the table (Selby and Kagawa, 2011). Compromise may secure some change but a lack of criticality, and projects which deny the true values and radical roots behind the agenda, may not only lead to personal dissonance but may also mean that a university's contribution to sustainability remains unrealised. Future research needs to contribute to a more critical account of the barriers and how these were overcome, so that change agents may learn more fully from others' experiences.

References

- Acevedo, B., Bonner, C., Johnson, S. and Malevicius, R. (2012). "Students' [passionate] engagement with processes of greening the campus". In Leal Filho, W. (Ed). "*Sustainable Development at Universities: New Horizons*". Peter Lang Scientific Publishers, Frankfurt, 374-383.
- Ballard, D., (2005). "Using learning processes to promote change for sustainable development". *Action Research*, 3 (2), 135-156.
- Bartlett, P. & Chase, G. (2004). *Sustainability on Campus: Stories and Strategies for Change*, MIT Press, Cambridge, MA.
- Blewitt, J. (2013). "EfS : contesting the market model of higher education". In: S. Sterling, L. Maxey, & H. Luna (Eds). *The Sustainable University*. Routledge, Abingdon (UK), 71-86.
- Boud, D., Keogh, R. & Walker, D. (1985). *Reflection : turning experience into learning*. Kogan Page, London.
- Boyd, E. M. & Fayles, A. W. (1983). "Reflective Learning: key to learning from experience". *Journal of Humanistic Psychology*, 23, 2, 99-117.

- BU 2018 *Bournemouth University Strategic Plan*. <http://strategicplan.bournemouth.ac.uk/>
 Accessed February 2014.
- Cameron, D. (2010). Speech given by the Prime Minister at the Department of Energy and Climate Change, 14 May 2010. <https://www.gov.uk/government/speeches/pms-speech-at-decc>. Accessed March 2014, 19-53.
- DBIS (Department for Business, Innovation & Skills). (2013). Higher Education Funding 2013-2014 Letter. Available at:
<http://www.hefce.ac.uk/media/hefce/content/whatwedo/fundingandinvestment/fundinginstitutions/annualfundingallocations/grantletter/HEFCE%20Grant%20Letter%202013%20-%20Tim%20Melville-Ross.pdf> Accessed March 2014.
- Dewey, J. (1933). *How we think*, D C Heath and Co, Boston, MA.
- Doppelt, B. (2010). *Leading Change Towards Sustainability*. Greenleaf Publishing, Sheffield.
- Eagly, A. H., & Johnson, B. T. (1990). "Gender and leadership style: A meta-analysis". *Psychological bulletin*, 108(2), 233-256.
- Eagly, A. H., & Johannesen-Schmidt, M. C. (2001). "The leadership styles of women and men". *Journal of social issues*, 57(4), 781-797.
- Haigh, M. (2005). "Greening the university curriculum: appraising an international movement", *Journal of Geography in Higher Education*, 29 (1), pp. 31-48.
- HEFCE. (2005a). *Sustainable Development in Higher Education: Consultation on a Support Strategy and Action Plan*. Higher Education Funding Council for England, Bristol.
- HEFCE. (2005b). *Sustainable Development in Higher Education: Strategic Statement and Action Plan*. Higher Education Funding Council for England, Bristol.
- HEFCE. (2009). *Sustainable development in higher education: 2008 update to strategic statement and action plan*. Higher Education Funding Council for England, Bristol.
- HEFCE. (2010). *Carbon reduction target & strategy for Higher Education in England*. Higher Education Funding Council for England, Bristol.
- Holley, K.A. (2009). "Understanding interdisciplinary challenges and opportunities in higher education". *ASHE Higher Education Report 2009*, 35, 1-131.
- Jones, P., Selby, D., and Sterling, S. (Eds). (2010). *Sustainability Education: Perspectives and Practice across Higher Education*. Earthscan, London.
- Leal Filho, W. (2010). "Teaching sustainable development at university level: Current trends and future needs". *Journal of Baltic Science Education*, 9, 4, 273-284.
- Marshall, J., Coleman, G., and Reason, P. (Eds). (2011). *Leadership for Sustainability: An Action Research Approach*. Greenleaf Publishing, Sheffield.
- McGowan, A. (2007) presentation at British Environment & Media Awards. Available at http://peopleandplanet.org/bema_award_2007 . Accessed March 2014.
- Moon, J, A. (2000). *Reflection in Learning & Professional Development: Theory and Practice*. Kogan Page, London.
- Moore, J, Pagani, F., Quayle, M., Robinson, J., Sawada, B., Spiegelman, G., VanWynsberghe, R. (2005). "Recreating the university from within: Collaborative reflections on the University of British Columbia's engagement with sustainability". *International Journal of Sustainability in Higher Education*. Vol. 6 (1) 65-80.
- Petford, N., and Shiel, C., (2008). "A holistic approach to the 'globalisation' agenda at Bournemouth University: the role of senior management". In: Shiel, C., and Mckenzie, A. (Eds). *The Global University: the role of Senior Managers*. BU/DEA, London, 20-25.
- Porritt, J. (2011). "*The Greenest Government Ever*": *One year on*, Friends of the Earth. http://www.foe.co.uk/sites/default/files/downloads/greenest_gvt_ever.pdf. Accessed March 2014.
- Reason, P., and Bradbury, H. (Eds.). (2001). *Handbook of Action Research: Participative inquiry and practice*. Sage, London.

- Reason, P., and Rowan, J. (Eds.). (1981). *Human Inquiry: A Sourcebook of New Paradigm Research*. Wiley, Chichester.
- Richter, D. M., and Paretto, M. C. (2009). "Identifying barriers to and outcomes of interdisciplinarity in the engineering classroom". *European Journal of Engineering Education*, 34 (1), 29-45.
- Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectations and pupil's intellectual development*. Holt, Rinehart and Winston, New York.
- Savelyeva, T. & Park, J. (2013). "Complexity of Campus Sustainability Discourse". In: Leal Filho (Ed). *Sustainable Development at Universities: New Horizons*. Peter Lang, Frankfurt, 183-192.
- Schön, D. (1983). *The reflective practitioner: How professionals think in action*. Basic Books, New York.
- Schön, D. (1987). *Educating the Reflective practitioner: Toward a new design for teaching and learning in the professions*. Jossey Bass, San Francisco.
- Selby, D. & Kagawa, F. (2011). "Development Education and Education for Sustainable Development: Are They Striking a Faustian Bargain?". *Policy and Practice: A Development Education Review*, 12, Spring, 15-31.
- Sharp, L. (2002). "Green campuses: the road from little victories to systemic transformation". *International Journal of Sustainability in Higher Education*, 3 (2), 128-45.
- Shiel, C. (2007). "Developing and embedding global perspectives across the university". In: Marshall, S. (Ed). *Strategic Leadership of Change in Higher Education*. Routledge, London and New York, 158-173.
- Shiel, C. (2011). "Are we there yet?". In: Shiel, C., (Ed). *Global Vision, Local Action: Education for Sustainable Development and Global Citizenship*, Proceedings 4th International Conference. Bournemouth University, Bournemouth, 13-41.
- Shiel, C. (2013). *Developing global perspectives: global citizenship and sustainable development within higher education*. PhD Thesis (PhD). Bournemouth University, School of Applied Sciences, Bournemouth.
- Shiel, C., and Bunney, A., (2002). *Global responsibility and sustainable development: tailoring the concepts to business programmes*. Paper presented at the 1st Annual Teaching and Learning Conference, Bristol.
- Shiel, C., and Mann, S., 2005. *A Global Perspective at Bournemouth University: Education for Global Citizens and Sustainable Development. Internal Strategic Report*. Bournemouth University, Bournemouth.
- Shiel, C., Williams, A., and Mann, S., (2005). "Global Perspectives and Sustainable Development in the Curriculum: Enhanced Employability, More Thoughtful Society?". Paper presented at the Enhancing Graduate Employability: The roles of learning, teaching, research and knowledge transfer. *Proceedings of the Bournemouth University Learning and Teaching Conference*, Bournemouth, Bournemouth University.
- Steinaker, N. and Bell, R. (1979). *The Experiential Taxonomy: A new approach to teaching and learning*, Academic Press, New York.
- Sterling, S., Maxey, L., and Luna, H. (Eds). (2013). *The Sustainable University: Progress and prospects*. Earthscan/Routledge, London and New York.
- Sterling, S., and Scott, W., (2008). "Higher Education and ESD in England: A critical commentary on recent initiatives". *Environmental Education Research*, 14 (4), 386-398.
- Velazquez, L., Munguia, N., & Sanchez, M. (2005). "Deterring sustainability in higher education institutions: An appraisal of the factors which influence sustainability in higher education institutions". *International Journal of Sustainability in Higher Education*, 6(4), 383-391.

- Wade, B.H. and Stone, J.H. (2010). "Overcoming disciplinary and institutional barriers: An interdisciplinary course in economic and sociological perspectives on health issues". *Journal of Economic Education*, 41, 71-84.
- Wals, A. E. J., and Blewitt, J., (2010). "Third-wave Sustainability in Higher Education: Some (Inter)national Trends and Developments". In: Jones, P., Selby, D., and Sterling, S. (Eds). *Sustainability: Perspectives and Practice Across Higher Education*. Earthscan, London, 55-74.
- Wals, A. & Corcoran, P. B. (2006). "Sustainability as an outcome of transformative learning". In: J. Holmberg & B. E. Samuelsson.(Eds). *Drivers and barriers for implementing sustainable development in higher education*. UNESCO, Paris, 103-108.
- Whitchurch, C. (2012). *Reconstructing Identities in Higher Education: The Rise of Third Space Professionals*. Routledge, New York.
- White, R., M., (2013). "Sustainability research: a novel mode of knowledge generation to explore alternative ways for people and planet". In: Sterling, S., Maxey, L., and Luna, H. (Eds). *The Sustainable University: Progress and prospects*. Routledge/Earthscan, London & New York, 168-191.
- Whitfield, J. (2008) "An indifference to boundaries". *Nature* 2008, 451, 872-873, Available online: <http://www.nature.com/news/2008/080220/full/451872a.html> . Accessed on 27 January 2014

Biographical note

Chris Shiel is an Associate Professor in the Faculty of Applied Sciences, the former Director of the Centre for Global Perspectives and a Leadership Foundation Fellow. Her doctorate 'Developing global perspectives and sustainable development within Higher Education' represents a summary of her work as a champion for institutional change. She has led ESD within the UK for fifteen years.

Amanda Williams is Environment & Energy Manager at Bournemouth University, with a background in geography, she has worked in environmental management for ten years in higher education and is a full member of the Institute of Environmental Management & Assessment. Her previous role was Research Assistant – Education for Sustainable Development.