

Introduction

Greener by Degrees?

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This book represents the outcome of a staff development exercise with multiple purposes. It aimed to identify innovative examples of education for sustainable development (ESD) in the University of Gloucestershire's curriculum, to provide a forum for ESD practitioners to exchange and discuss their approaches and experiences and to disseminate good practice through the capturing it in these pages. But it also provided opportunity to celebrate almost two decades of activity in this realm, and perhaps to inspire others to include experiments in ESD learning in their own tuition.

Teaching about, and for, sustainability and sustainable development, has a long history in the University. Courses focussing explicitly on 'environmental issues' were being delivered in the late 1970s and possibly before, and the move to a wider conception of 'sustainability' happened earlier here than in many comparable UK institutions. This was encouraged by a supportive and collegial environment, early prosecution of agendas to improve the quality of life nationally by those in senior management positions in the University, and some keen and interested academic staff. By the late 1980s the institution (then Cheltenham and Gloucester College of Higher Education) was explicitly developing undergraduate and postgraduate courses focussing on resource use and human-environment interactions, environmental planning and sustainable landscape design. Research and teaching in these areas flourished.

By 1995, the College had become involved in the national seminar series managed on behalf of the Department of the Environment by Forum for the Future, entitled *Taking Responsibility: Promoting Sustainable Practice through Higher Education Curricula* (see for example Roberts 1995). By 1997 it was identified as a national 'Trailblazer' in terms of a raft of sustainability initiatives including embedding sustainability concepts into the formal curriculum for all students, and by 2005 it had become the first English university to achieve BS ISO14001 Environmental Management System for the whole of its activity, including its approach to teaching students, possibly the largest 'impact' any Higher Educational Institution

can have on the future of the planet. There were of course setbacks along the way, reversals of policy towards and changes in circumstances which required adjustments of emphasis or shifts in modes of operation. This book therefore epitomises a stage in a learning cycle: a continuing process of experience, reflection, conceptualisation, and action, as Kolb (1984) describes.

Motherhood, apple pie and sustainable development

The most frequently quoted 'definition' of sustainable development is as much aspirational as definitional:

Humanity has the ability to make development sustainable - to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs.

(World Commission on Environment and Development 1987: 8-9)

There are significant questions implicit in the terms in which the definition is framed. What are the legitimate needs of the present - and of the future? Where there is scientific uncertainty, how can the balance of welfare between present and future generations be judged? And, most fundamentally, where is the evidence that humanity has the ability to achieve sustainable development?

In the twenty years since the Brundtland definition was published the sustainable development paradigm has been widely endorsed internationally in the private, public and voluntary sectors, and not least by institutions of higher education. It can be argued that the imprecision of the concept has aided this process (Robinson 2004). As phrased by Brundtland, sustainable development is a logical imperative. The alternatives are either unsustainable development (i.e. development which may or may not meet the needs of the present but will compromise the ability of future generations to meet their own needs) or no development at all. For politicians seeking votes from an electorate a rhetorical adoption of sustainable development, combined with an absence of policies which might be perceived to diminish consumer choice or quality of life, must seem an attractive manifesto stance. The ubiquity of strategies, policies and programmes to achieve sustainable development is therefore no more

surprising than the failure, to date, of most of these to reverse global trends towards increasing unsustainability (see Roberts (2007) for example case studies).

At the beginning of the twenty-first century sustainable development is the new 'motherhood and apple pie' and at the time of writing there seems little prospect that the importance of the concept will in any way diminish over the coming decades. The Toyne Report (Department for Education 1993), took its lead very much from the environmentally focussed response by the Major government to the Rio Summit and Agenda 21 which resulted in the first UK sustainable development strategy a year later (Department of the Environment, 1994). Revisions of the strategy by the Labour Government, most recently in 2005 (HM Government 2005), have incorporated a much greater social dimension, and more recently the Higher Education Funding Council for England (HEFCE) published a sustainable development strategy for the English HE sector (HEFCE 2006). Thus, higher education institutions (HEIs) have been formulating and implementing responses to the evolving sustainable development agenda for more than a decade. But is there substance to these sustainability initiatives? In particular, is there agreement about the aims and purposes of ESD and, if there is, is there evidence that these are being achieved?

Defining sustainable development

The Higher Education Funding Council for England's Sustainable Development Strategy identifies four areas of potential contribution to sustainable development by HE institutions:

- Role as educators
- Generation and transfer of knowledge
- Leadership of, and influence upon, local, national and international networks
- Business strategy and operations

(HEFCE 2005)

The same document (2005: para. 40-42) notes the resistance of English HEIs to its proposed definition and working model of sustainable development and the diverse range of objections raised. In a survey of UK Higher Education Academy Subject Centres (Dawe *et al.* 2005) six out of ten mentioned 'confusion over what needs to be taught' as an actual or

possible barrier to the integration of ESD in their disciplinary areas. Despite there being no consensus on a working definition of sustainability, some Subject Centres saw this as an asset for the intra-disciplinary pedagogy of sustainable development. Leaving precise definitions open to interpretation gave useful pedagogic opportunities for both staff and students to explore and contest different models.

However, for educators seeking to integrate sustainable development into curricula the problem of definition is real. If, as one model of sustainable development suggests, sustainable development is concerned with the maintenance and enhancement of five types of capital (Porritt 2006), a simplistic response would be that almost everything that a twenty-first century university does could be classed as sustainable development (Box 1).

The questions raised in Box 1 are not entirely serious but they act as a warning against the loose use of terms such as 'environmental sustainability', 'social sustainability' and 'economic sustainability'. The lesson of Brundtland, and of any sensible reading of the five capitals model, is that *each* of the five capitals must be sustained as a minimum requirement of sustainable development. The growth of manufacturing and financial capital is not sustainable if it is at the cost of critical natural capital. The conservation of natural capital, such as tropical forests, must be managed so that the human and social capital of indigenous peoples is similarly protected.

So ESD is not a sub-set of environmental education and environmental education is not a sub-set of ESD. Dawe *et al.* suggest the key learning outcome of ESD should be a set of sustainability literacy skills:

Sustainability literacy is about learning how human actions affect the immediate and long-term future of the economy and ecology of our communities. It is concerned with how we can learn to live and work on a planet whose resources are finite.

(Dawe *et al.* 2005: Executive summary f.n.)

It can be argued that emphasis here on economy and ecology is very far from Brundtland's focus on social justice, especially the needs of (poor)

Box 1 - Education for sustainable development (ESD) and the five capitals model

Natural capital is the ability of the environment to produce goods or services. Universities which teach and research in the areas of geography, environmental science, land-use planning, agriculture and others are contributing to increasing knowledge about the nature of natural capital, the mechanisms by which it is being depleted and the ways in which current deleterious trends can be arrested or reversed. Pedagogy in these disciplines is often identified as ESD. So is ESD just another name for environmental education?

Human capital relates to the capacity of individuals to meet the needs of themselves, their families and society more broadly. Education has an obvious role in increasing this capacity. So is all education ESD?

Social capital consists of formal and informal networks and institutions which meet human needs and enhance quality of life. It is evident that universities are a form of social capital. Widening participation and social inclusion initiatives strengthen this aspect of universities' mission. So is ESD a question of degree? Do more inclusive institutions contribute more to social capital than their exclusive counterparts?

Manufactured capital produces manufactured goods. Universities contribute to the maintenance and enhancement of this form of capital in disciplines as diverse as business studies, engineering and physics. Most physics departments would not claim to be offering ESD. Are they wrong?

Financial capital is the invested money which represents the value of the other forms of capital. So universities contribute to the growth of financial capital through the contributions identified above, as well as through research and teaching in the realm of economic science and related disciplines. So is mainstream economics a branch of ESD?

people and their quality of life. However, the skills focus in this definition is a useful one. If ESD is to make a difference in the world it has to be about developing skills for action, albeit underpinned by knowledge. Indeed, for many commentators (e.g. Dawe *et al.* 2005; Porritt 2005; Scott and Gough 2003; Blewitt 2006), life-long learning, grounded in real-life experience, is an integral part of the sustainable development trajectory. The formal curriculum in schools and colleges has a role in supporting and extending the experiential learning that comes from living in the world and dealing with its complexities. But it is the impact of lifestyle changes which really counts, not the intellectual and conceptual transformations which underpin these.

So how can we recognise ESD? What are the elements which distinguish it from the mainstream in higher education? The workshop which produced this book brought together ESD practitioners working in a range of disciplines at the University of Gloucestershire to share their conceptions of ESD, its place in the curriculum, its value to students and the extent to which ESD was making a difference in the academy and in the world. The initial analysis above demonstrates that that ESD will be characterised by an inter-disciplinary context and a breadth of vision which is unusual in most HE curricula. However, it was also hypothesised that an active learning approach to the curriculum can provide both the context and the vision. The next section explores why this might be so.

Active learning and ESD

The Gloucestershire approach to active learning is set out in Box 2. Other chapters in this volume (for example, Swansborough *et al.* q.v.) explore the overlap between this approach and the skills usually associated with ESD. It is evident from the ESD literature (e.g. Blewitt 2006; Dawe *et al.* 2005; Scott and Gough 2003) that many of the characteristics of ESD are also components of active learning. Citizenship; links between theory and reality; reflection leading to transformation; involvement of outside partners in HE curricula; inclusivity: these are key themes for ESD and for active learning.

Box 2 – Distinctive features of the Gloucestershire approach to Active Learning

- *Linking the thinking, doing and reflecting*
- *Innovative ways of linking the theory and practice*
- *Embedding active learning in all teaching*
- *Innovative methods for developing blended learning*
- *Active involvement of external agencies*
- *Creative ways of assessing active learning*
- *Underpinning practices by pedagogic research*
- *Involvement nationally and internationally*
- *Maintaining inclusivity*
- *Making learning enjoyable for everyone.*

University of Gloucestershire (2004)

The Sustainability Swapshop

The University's Centre for Active Learning (CeAL) and Sustainable Development Committee jointly convened this meeting in January 2007. Colleagues from across the University were invited to attend. The 'entry ticket' was a case study in ESD to share with peers, written to a template similar to the one used to structure most chapters in sections 1 and 2 of this volume. Twenty-three colleagues attended, with others sending apologies and promises of case studies to follow.

The day started with a short presentation setting out the history of ESD at the University and its predecessor, Cheltenham and Gloucester College of Higher Education, identifying current policies within the institution relevant to ESD, and opening up some of the definitional questions developed above. Colleagues were then invited to draft (anonymously) their own definition of ESD and post this on the wall before breaking into groups to hear short presentations of case studies and use these to develop further the definitions. Over lunch, the definitions were reviewed and commented

upon and the meeting then broke into new groups to exchange case study ideas for a second time.

In a final plenary the following definition of ESD emerged. It is offered here, not as the official 'Gloucestershire' definition, but rather as an indicator of how some of the contributors to this volume would characterise their ESD practice. It thus informs the chapters which follow.

The Gloucestershire approach to ESD is to develop in students an understanding of the nature of society and its relationship with the environment, together with the capabilities and potential to promote justice in the distribution of economic, social and environmental assets, now and for the future.

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