Sustainable Development in Higher Education: Current Practice and Future Developments

Executive Summary

A report for The Higher Education Academy

November 2005

“The human assault on the terrestrial environment shows no signs of abating and some signs of spilling over into non-terrestrial environments. … Many are appalled by this destruction … because of what it implies for themselves, their children, their friends, other creatures, the biomass [global nature], and the planet we inhabit. This response is in many instances an ethical response. People judge that what is occurring is not merely irritating, inconvenient, disappointing, or unfortunate, but immoral, bad, wrong or evil.”

A Companion to Environmental Philosophy.

Gerald Dawe, Rolf Jucker and Stephen Martin
Executive Summary

Introduction

The UK’s new sustainable development strategy — *Securing the Future: delivering the UK sustainable development strategy* (2005) emphasises the role that education can play in both raising awareness among young people about sustainable development and giving them the skills to put sustainable development into practice. It places priority on the development of sustainability literacy as a ‘core competence’ among graduates. A similar emphasis is provided by the United Nation’s commitment to a Decade of Education for Sustainable Development 2005-2014.

The Higher Education Academy has responded by commissioning:

(i) This study, *Sustainable Development in Higher Education: Current Practice and Future Developments* and

(ii) Individual projects to be undertaken by participating Subject Centres\(^1\) (SC) to examine the status and understanding of Education for Sustainable Development (ESD) in their subject communities. These were carried out separately but their results have been incorporated into this report.

This report is the culmination of a six-month investigation into how different subject disciplines taught within the higher education system are contributing to creating sustainability literate\(^2\) graduates. By undertaking such an investigation, the Academy sought to identify good practice in approaches to teaching and curriculum development; what barriers exist in embedding sustainable development in institutional teaching and learning strategies; as well as assessing the support required for widening and deepening the embedding process.

The approach adopted throughout the research has been non-prescriptive, open and participatory.

The report is a quick assessment of the current state of ESD, not a comprehensive review. Nevertheless it represents the first interdisciplinary and integrated investigation into ESD and its implementation within Higher Education Institutions (HEIs) within the UK.

Key Findings

Teaching and learning

The research found that most of the disciplines represented by the Academy’s 24 Subject Centres are making a contribution to the sustainability literacy of their students. But it is a dynamic and changing picture with many academic staff recognising ESD as an important component of the development of their respective subjects, and by inference what is taught and how. The state of progress can be summarised as follows: substantial work in progress, a range of good practice, but overall a patchy picture with sustainable development being marginal or non-existent in some influential disciplines but increasingly higher profile in others. There is universal acknowledgement that a wide-range of skills and knowledge are required to create an action orientated sustainability literate graduate body.

Many of these skills and attributes are not easy to teach in a traditional sense, but there are a growing number of examples of new teaching orientations or approaches which support the

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\(^1\) Subject Centres deal with the main academic subjects taught within HE, from art, design and communication (ADC), through mathematics, statistics and operational research (MSOR), to psychology, social policy and social work (SWAP). They engage in a wide variety of activities to support tutors in their work.

\(^2\) 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.
development of such skills as interdisciplinary thinking and problem solving and team working. The research revealed three prevailing orientations in the teaching of sustainable development:

- Educators as role models and learners. This orientation places an emphasis on how the tutor can act as a role model for students in order to offer a credible and authoritative perspective on the realities of putting sustainability principles into practice.
- Experiential learning by reconnecting to real-life situations. This orientation focuses on real and practical life issues and actual experiences as learning situations.
- Holistic thinking. Many of the skills and knowledge for sustainable development are associated with complex, multi-layered and interconnected systems. This approach encompasses a more open-ended exploration of interdependency and transdisciplinary connections between subjects as well as including approaches to developing and honing critical thinking.

Curriculum Responses

The research survey identified a wide-range of curricula connections in response to the sustainability agenda. Several disciplines have introduced relevant themes such as climate change, biodiversity and environmental management systems. However, the overall picture is patchy with major gaps in areas such as sustainable production and consumption, eco-efficiency and national and international sustainable development policy.

The survey identified three categories of response to ESD by subject disciplines:

1. Subject disciplines\(^3\) that have adopted a major process of embedding ESD curricula into undergraduate and post-graduate programmes. Examples include Engineering and Materials subjects which are dealing with the day to day realities of industrial processes, English with its strong tradition of ‘eco-literacy’ and Geography, Earth and Environmental Sciences.

2. Subject disciplines that have made some limited progress in embedding ESD into their curricular although acknowledging that these disciplines have some significant curricular content opportunities to do so. Examples include Biosciences, Economics, Hospitality, Leisure, Sport and Tourism, Philosophy and Religious Studies.

3. Subject Centres that have an interest in ESD, but have found it much more difficult to embed ESD widely or deeply into their curricula. Examples include Information and Computer Sciences and Mathematics, Statistics and Operational Research, Performing Arts and Psychology.

Best practice examples elicited from the survey can be characterized in two specific ways:

1. Those subjects which were extending the boundaries of their discipline to include other unrelated disciplines e.g. sciences and humanities.

2. Those subjects which have a close and continuing association with their institution’s environmental processes and practices.

Barriers and Solutions to Embedding ESD

The research revealed four major barriers to the successful embedding of ESD into many of the subject disciplines in HE:

\(^3\) Within this report, Subject Centres were mostly consulted via Focus Groups which also included several subject practitioners (representatives of disciplines) as well as the Subject Centre manager. Occasionally Subject Centre managers were consulted directly. In general the terms Subject Centre and subject discipline refer to such groupings and the terms are used interchangeably. For more detail see Appendices 6 and 7.
1. Overcrowded curriculum.
2. Perceived irrelevance by academic staff.
3. Limited staff awareness and expertise.
4. Limited institutional drive and commitment.

At one extreme the arts and humanities identified the largest number of barriers, whereas sociology, the built environment and environmental sciences identified relatively few. For example, performing arts subjects identified at least ten barriers, ranging from awkward fit with the subject area to lack of staff expertise, irrelevance, financial restrictions and limited institutional commitment. English, with nine barriers, were particularly concerned with the difficulty in translating ecological concepts into literary theoretical concepts. Other subject areas raised the issue of sustainable development having limited academic rigour and problems with internal validation and accreditation systems.

Solutions

Subject Centres identified a number of solutions to the barriers identified shown below.

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<th>Barrier</th>
<th>Solution</th>
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<td>Crowded curriculum</td>
<td>Create space through a rigorous review of existing curricula</td>
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<tr>
<td>Irrelevance</td>
<td>Development of credible teaching materials which are fully contextualised and relevant to each subject area</td>
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<tr>
<td>Limited staff awareness and expertise</td>
<td>Significant investment in staff development and capacity building</td>
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<tr>
<td>Limited institutional commitment</td>
<td>Develop a credible business case for HE institutions, setting out triple bottom line benefits. Review and amend institutional mission and policy statements</td>
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Report Conclusions

This report sets out the current state of progress on embedding ESD in many of the subject disciplines taught within the higher education sector. It also identifies some of the barriers and their resolution. The significance of this report is that it is a reflection of the views of practitioners in the disciplines that make up the HE sector in the UK. Whilst the progress might appear patchy and limited in some important disciplines this research provides evidence of the strong underlying support for more action in support of the embedding process. To this end the report recommends that the Academy and its Subject Centres should strengthen the development of ESD in the following ways:

1. Support and funding should be provided to promote the development of ESD across all subject disciplines in HE, including the dissemination of good practice.
2. Action research should be commissioned to explore the connections between ESD and employability.
3. Action research should be commissioned into whether career opportunities and choices of HE graduates are being influenced by the SD agenda.
4. A stakeholder group should be established comprising employers, professional bodies and graduate careers to identify creative ways of implementing and supporting
the integration of ESD to teaching, learning and the curriculum. The group should be tasked to develop a persuasive business case for creating sustainable universities.

Education for sustainable development is an emerging imperative. It represents a major shift in the way students are taught and learn within the higher education sector. It requires a broader and more flexible approach to the development and teaching of academic disciplines. Much of this change is in line with what graduates will need in an increasingly complex work environment. This is the challenge that the Academy and the Subject Centres it supports should address.