

EDUCATION FOR SUSTAINABLE DEVELOPMENT: USING THE UNESCO FRAMEWORK TO EMBED ESD IN A STUDENT LEARNING AND LIVING EXPERIENCE

Peter Hopkinson, Peter Hughes & Geoff Layer describe the implementation of, successes of, and lessons learnt from the Ecoversity initiative, a pilot programme at the University of Bradford that aims to integrate education for sustainable development into both the formal curriculum in all areas of study and the informal curriculum of life on campus.

Introduction

In November 2005 the University of Bradford launched the Ecoversity initiative which committed it to developing a practical demonstration of ‘sustainable development’ across the entire institution covering the built campus, curriculum, community engagement and the organisational culture. The Ecoversity project has the vision of ‘creating a culture of learning and living within a model of sustainable development’. The practical realisation of this vision is both challenging and complex. In this paper we describe, synthesise and critically reflect on the processes of:

1. Shaping academic policy and curriculum review around the United Nations Educational, Scientific and Cultural Organisation’s (UNESCO) education for sustainable development framework;
2. Engaging academic staff and students around education for sustainable development during the first 18 month start-up phase of the Ecoversity programme.

Our approach seeks to use the UNESCO framework as a way of creating space for discussion and building links between disconnected areas of academic policy and discourse. At Bradford, as in many higher education institutions (HEIs), we have academic curriculum initiatives and targets focused on education for sustainable development (ESD), diversity, internationalism, and widening student experience through participation and faith. These distinct areas have their own individual agendas but it is clear

that they are also interconnected. Our starting proposition is that ESD offers scope to join up some of these distinct areas without diluting their individual discourses. This paper describes the early stages of development in this process including some initial reflections and conclusions.

ESD and higher education

The connections between higher education (HE) and sustainable development (SD) are varied and include campus environmental management (Shriberg, 2002), curriculum developments (Muijen, 2004), community engagement (UNEP, 2006) and the development of global citizenship (Parker, Wade & Atkinson, 2004). Until recently these different strands of HE and SD remained largely separate with distinct academic and practitioner clans. Recent national HE conferences on ESD (Bradford), sustainability practice (Kingston) and global citizenship (Bournemouth) have demonstrated that there is a growing cross-referencing between the different areas and number of clear and recognisable points of connection. The challenge at an institutional level is bringing these different strands together in ways that are meaningful and valued by the different partners.

Ecoversity

Ecoversity is a strategic initiative launched by the university in November 2005 as a response to a number of factors including the physical condition and appearance of the estate and student dissatisfaction with some of the facilities and services. The university was influenced by the Higher Education Funding Council for England's (HEFCE) *Sustainable Development in Higher Education: consultation on a support strategy and action plan* (HEFCE, 2005), which raised questions such as 'what might sustainable development mean for a university like Bradford?' and 'could sustainability provide a means of linking a number of issues and challenges facing the university in a way that would foster new, positive and creative action?'

The Ecoversity vision was articulated under four overarching objectives:

1. Working towards sustainable education: shaping a more sustainable future by engaging students and propagating the skills and knowledge needed in the pursuit of sustainable development;
2. Working towards a healthy environment: protecting the environment by minimising our resource use and emissions whilst also enhancing the surrounding environment;

3. Working towards a thriving economy: creating affordable accommodation and an attractive environment to improve our recruitment and retention of students and staff to bring greater prosperity to the university, city and region;
4. Working towards social well-being: creating a greener, safer environment in which our students, staff and the local community can live, study and be active.

The first year of Ecoversity was strongly characterised by a period of estates planning and a programme of new building and refurbishment, which tended to reinforce the idea that Ecoversity was indeed largely about the estate, physical environments and local issues. In this period and, subsequently, the ESD objective moved to the fore allowing the debate about sustainability to open up and broaden both the Ecoversity vision and actions to encompass the learning and living experience of students across the institution and within the international and development aspects of sustainable development. This debate was driven by the Pro-Vice Chancellor for Learning and Teaching and the Director of Education for Sustainable Development, and supported by a cross-institutional ESD project group.

Embedding ESD in the Bradford student learning and living experience

It would be disingenuous to claim that the early development of ESD under Ecoversity at Bradford was guided by a grand master plan or followed a linear, sequential process in which the vision was followed by a strategy leading to funding and subsequent action. Reflection on the period since January 2006 makes it clear that we moved in all these areas simultaneously or in parallel and, as we worked out the vision and strategy, we explored a number of funding streams for ESD projects. Internal support was strongly influenced by the ability to draw on evidence and experience from an internally funded ESD curriculum review project. In 2006, we also commissioned and drew upon several HEA subject-centred ESD grants in history, classics and archaeology, biosciences and geography, and environmental and earth sciences subject. We used our in-house expertise and activities to make real progress on the ground while also developing student engagement with ESD outside of the curriculum through a range of student activities that built on existing student support structures. Our multi-strand approach therefore included top-down policy developments, locally-led bottom-up initiatives and pilots and side-on engagement with external groups and bodies.

a) Formal academic policy

In January 2006, an ESD task group was established to debate and develop an approach to ESD that drew on group members' experiences and recognition of the contextual factors described above. A key outcome from this process resolved that Bradford's approach to education for sustainable development would be informed by three important considerations:

1. The varied definitions of sustainable development and education for sustainable development are the source of considerable academic debate. Acknowledging and accepting the contested nature of these terms may be a means of accommodating different approaches (including critical perspectives) between and within academic subject communities;
2. The terms sustainable education, sustainable development in the curriculum and education for sustainable development do not necessarily mean the same thing. Over the past few years, ESD has become the preferred term of the Higher Education Academy in defining the links between SD and the curriculum. On this basis it appeared to be an appropriate term to use in relation to the University of Bradford;
3. Previous attempts to 'green the curriculum' at a national level have had limited and short-lived success outside of the mainstream disciplines of environmental sciences, geography and built environment. There are many reasons for this which have been widely debated (Sterling & Scott, 2007) and it is important that lessons from these prior experiences are learnt. In particular we have noted that:
 - The development of a rigid core curriculum risks being seen as irrelevant to students' main discipline of study, hence;
 - It is wise to build on linkages to SD from within existing disciplines and programmes whilst maintaining relationships to a wider set of values about what SD means;
 - The theory about sustainable practice is more effectively learnt if an organisation can be seen to practice what it preaches, for example, through participative policy making.

These considerations were taken up as guiding principles at the formal start of the Ecoversity ESD project in August 2006. This project was mandated to:

- Develop a formal, institutional academic policy for ESD;
- Develop and implement an approach to ESD curriculum

- development for all curriculum and all students;
- Create a programme of activity for widespread student engagement around ESD and Ecoversity.

During 2006, discussions were held to identify what type of framework or definition of ESD would have the greatest meaning and offer the broadest scope for developing academic and student interest and enthusiasm. It was felt that many definitions such as Brundtland were too narrow and overused, requiring a new framework which nurtures critical perspectives and supports decentred, locally meaningful and subject-specific development. The framework should also include core values, a strong global and international dimension and incorporation of the notion of sustainability as a living experience.

After considerable debate, Ecoversity drew upon the UNESCO definition which regards ESD as ‘a process of learning about how to make decisions about the long-term future of the economy, ecology and equity of all communities and about capacity building for future-oriented thinking’. The wider UNESCO framework (REF) also seemed to offer some particular advantages and shared similar values to the Ecoversity ESD objectives, namely:

1. ESD should help students learn how to make decisions about the future. Bradford’s position should be that we want our students (and staff) not just to know about sustainable development (SD), but to be able to practice it, influence it and shape it, both now and in their future lives. ESD therefore requires us to think about how our students develop knowledge, skills and values, and the *process* of education itself;
2. The UNESCO view of SD stresses the importance of the lived experience in terms of learning about and practicing SD. In this sense, the approach is consistent with Bradford’s objective of using the transformation of the estate to help students and staff engage with the meaning of SD and the difference that this approach can make to the running of all organisations;
3. The definition is also explicit in stressing that SD is not just about environmental or resource issues, but more broadly about social and economic wellbeing, community involvement and international understanding and responsibility. In this respect, the UNESCO statements are likely to provide a more comfortable ideological home for many academic areas of the institution such as the Department of Peace Studies, Bradford Centre for International Development, Centre for Community Engagement and the School of Health;

4. The university has a distinctive student profile. Nearly half of our first year and foundation students are from minority ethnic groups, and nearly half come from low income groups. Nearly 45% of our students live at home, the vast majority in the parental home. 22% of our students are from outside of the UK, drawn from more than 100 countries, mostly in the global South. Finding ways to link students' diversity of background and experience to developments around curriculum and the student learning experience offers a creative opportunity for the institution and Ecoversity.

Academic debate about the UNESCO framework was developed through a further round of meetings which produced a largely positive response. Many academics had taken Ecoversity and ESD to be a rather narrow environmental and ecological perspective and were surprised and academically interested in the breadth of the framework which allowed them to find clear points of connection in relation to their teaching and learning within their own diverse disciplines (see Table 1 for more detail). The UNESCO framework was subsequently adopted as academic policy and as a core principle of the Institutional Teaching, Learning and Assessment Strategy in February 2007.

b) Curriculum review and development

In parallel with the development of the academic policy paper, a pilot curriculum review project was internally funded to identify and refine options for how education for sustainable development could be defined, and curriculum models through which it could be delivered, within the context of the Ecoversity project.

A methodology based on interviews and document reviews of four individual degree programmes (pharmacy, midwifery, civil engineering and business administration) was developed toward an initial assessment of SD and ESD content and reference against the UNESCO definition of ESD. In addition the websites of the main external professional or accrediting bodies for each programme were examined for reference to sustainable development or education for sustainable development. These findings were then discussed with staff and students from each programme who were then asked to assess themselves. A report was produced highlighting the extent and nature of SD and ESD coverage, and the opportunities for development.

Interestingly many of those interviewed during this process *initially* associated SD with environment. However, by using the UNESCO definition both staff and students were able to articulate linkages between

environmental, social and economic dimensions of ESD, including international and development issues. Table 1 provides an illustration of the topics and themes identified within the four programmes.

This pilot project demonstrated that all four programmes have clear linkages to ESD and international development issues but are often not made explicit or clearly recognised. However the UNESCO framework and review process creates an opportunity for creative conversation around ESD that might not otherwise be possible. Moreover, students and staff appear to highly value the broader social, economic and global context of their discipline which sometimes becomes submerged by other pressures and commitments.

Table 1- Linkages between individual degree programmes and ESD

<i>Subject</i>	<i>No. of modules with explicit reference to SD/ESD</i>	<i>Examples of social, economic and global contexts included within modules</i>
<i>Pharmacy</i> (200 students entering in 2006)	0	Affordability of drugs in third world; Treatment practices of and for different ethnic communities and cultures; Alternative treatments e.g. homeopathy and herbal medicine; Socially responsible science.
<i>Midwifery</i> (30 students entering in 2006)	0	Ethics of child birth and care; Cultural diversity, poverty; Community access to health care, etc; Natural versus technological child birth; Breast feeding versus bottle and disposable nappies.

<p><i>Civil engineering</i> (100 students entering in 2006)</p>	<p>11</p>	<p>Environmental systems; Green design; Corporate strategy and engineering; Renewable energy; Transportation systems; Environmental law and policy.</p>
<p><i>Business administration</i> (250 students entering in 2006)</p>	<p>7</p>	<p>International business development; Business ethics; Corporate social responsibility; Macro environment for business; International tourism; Strategic management; Business and society; Sustainable operations management.</p>

c) Student experience: informal curriculum

The student experience at most universities typically has a limited and fragmented connection to the values, ideals and practical aspects of living, studying or working in a sustainable way. This is reflected in the limited attention to sustainability in campus buildings and infrastructure, in curricula outside of very specific disciplines and in the culture and management of an institution. For many higher education students, sustainability may at best be reflected in access to recycling bins, a few cycle stands and – outside of mainstream geography or environmental subjects – an elective module on sustainable development or related aspects of development or global citizenship. In many cases their experiences are of an institution which appears to be actively working against some of the key ideas of sustainability (over-heated rooms, unnecessary waste and poor non-car transport provision) and lacks explicit cross- or inter-cultural learning opportunities. In extreme cases, student groups are segregated on the basis of ethnicity, culture or faith.

Central to ESD and the informal curriculum at Bradford are three ideas:

1. Effective and deep learning about sustainability cannot be confined to an individual programme or degree but has to take place across the entire student experience;
2. The campus, wider community and institutional culture are crucial elements in supporting and exemplifying sustainability in practice as a living experience. In this sense, the campus and the institutional culture are key educational tools and learning environments;
3. The student population is itself a learning resource which provides a direct and immediate range of learning opportunities and experiences around ethnicity, faith, living experience and global culture. At Bradford a large part of our ESD activity seeks to focus on the social characteristics of a diverse student body and the implications that this has for ESD.

It follows from this that as much effort needs to be placed on the informal curriculum as the formal curriculum and that each needs to form a seamless, integrated whole.

The informal curriculum model at Bradford is under development through a number of project activities including a student ambassador project, volunteering programmes, student internships and a green living programme. As examples of the informal curriculum we will focus on the ambassador and volunteering projects.

The Ecoversity ambassador project is a direct transfer of similar schemes operating at a number of United States universities over several years. This peer-to-peer education model employs a number of students (recruited on a competitive basis) on a weekly basis as sustainability or environmental leaders for the student body. These students then typically work with natural cohorts of peers (often dorm or halls of residence based) to promote and drive campaigns, competitions, events and actions in support of sustainability. This approach aims to bring SD to life within student living and socialising environments. The ambassador team's recruitment process aims to reflect the diversity of the student body, and reach a wide range of students. Under the guidance of a full time faculty member, who is appointed to develop facilitation and leadership skills, and address issues such as resourcing, and health and safety, the students are encouraged to decide for themselves how to integrate SD into their academic experiences. The model is essentially a practical education process in which students learn by doing. The programme assists their autonomy by allowing them to

work without assessment or the pressure of attaining credits or qualifications. Rather students are granted the autonomy to select, direct and manage their own projects within a broad framework of ESD.

The first pilot phase of the project, delivered between February and May 2007, generated a number of student-led projects, including an institution-wide consultation around student accommodation to identify the needs and wants of diverse student groups (for example in respect to their year groups, nationality and ethnicity) which were fed into plans for a new student village.

This first phase of the project was moderately successful, despite being constrained by a number of factors which have since been reviewed and used to re-design the full project phase which started in October 2007. A significant outcome of the pilot was how it revealed very different perceptions formed about the university and the varied experiences and needs that such a diverse set of students have on campus. It also showed the extent to which students were already tapped into debates and action around global development and ESD, which was a strong motivating factor in their applying to become an ambassador. The ambassador project therefore forms one important initiative for building, linking and expanding an ESD/global development student network on campus.

Student societies, clubs and events are central to the experience of many students whilst at university and they are motivated by a range of factors in undertaking voluntary activities. Some societies, clubs, events and voluntary opportunities have an explicit or implicit ESD or global development focus or potential. These activities offer a natural meeting point for students from diverse backgrounds and strongly influence the 'student experience'. Another student volunteering project, UCAN, currently provides structured volunteering opportunities for around 1,000 students, mostly in local community activities supporting community groups, projects and schools.

We are currently working with UCAN to develop more explicit volunteering activities around ESD in support of both Ecoversity and SD in the local community which itself is strongly multi-cultural and characterised by large areas of poverty and deprivation. Through such activity our aim is to bring together a diverse student group to develop cross-cultural collaboration in the context of a multi-cultural community itself characterised by diversity and immersed in strong links to the global south through ties to countries such as Pakistan and Bangladesh. We aim therefore to connect an internal university student group focused on ESD and global development with broader ESD and international development initiatives on campus and in the local community. The Tree House Café, which is run largely by student

volunteers (since 1984), is already a wonderful working example of how such a grouping can come together locally. It is an educational resource for global issues, peace and non-violence initiatives and a base for community support and activity, while offering up Fairtrade and vegetarian food. This initiative long pre-dates Ecoversity but is an excellent testament to student initiative and cross-cultural education.

Discussion and conclusions

The development and emergence of the University of Bradford's ESD initiatives are the outcome of a happy synergy between institutional responses to a sector-wide strategic interest in SD and existing local expertise in stimulating student learning in SD. This illustrates how a top-down initiative stimulated by a national and international sustainable development process can ultimately create the political opportunity and imperative for a major organisation like a university to commit to sustainable development.

At a grassroots level, lecturers and students have been engaged with learning about sustainable development since (and before) the term existed, albeit focused within 'core' subjects like development studies, environmental science and geography. At Bradford there has been a strong tradition of development education (e.g. Bradford Centre for International Development) and environmental education (e.g. Department of Geography and Environmental Science) with little crossover between the sectors.

For the Ecoversity ESD project, the university adopted the UNESCO framework for ESD as a guide for academic development. This overarching framework has proven, in the early stages of curriculum development, to be extremely helpful in identifying and validating an ESD-relevant and recognisable context for a wide range of current academic teaching and learning. It has also facilitated open and interesting conversations about future opportunities for curriculum development. The framework is especially useful in ensuring that ESD is not seen as an environmental initiative. It ensures that debates and conversations are opened up around the local and the global, theory and action, and the process of education itself, whilst offering ample reference to scientific, technical, ethical and managerial concepts to draw in the diverse body of academic disciplines within any university.

ESD should not only 'value the richness brought to learning by the diversity of cultures, backgrounds, opinions and ideas' (Forum for the Future, 2004:56), but also be *guided by* the diversity of the learners and teachers engaged in the process. A diverse student body presents a challenge to ESD, but also an opportunity for students to learn from each other about different

world views, value systems and priorities for sustainable development.

The context in which the Ecoversity initiative at Bradford operates means that debates around issues such as poverty, equality, health, religion and environmental quality are often directly relevant and meaningful to the daily lives of students both on campus and in the immediate communities where they live. Thus both the formal and informal curricula are integrated into the immediate reality of students' everyday living in ways that are not forced or irrelevant.

For this reason the Higher Education Academy ESD programme, which is based on the UNESCO framework and involves academic staff working within their subjects and disciplines, has proved to be a more effective methodology for staff and students alike rather than either an isolated 'top-down' approach or externally imposed alternatives. Top-down frameworks are useful, however, in providing overall coherence to localised developments and demonstrating top level leadership and support for the process of development. The sector is littered with many examples of bottom-up approaches to curriculum development and environmental action which after a period of initial success are not sustained through either dependence on key personnel who move on or because they fail to gain the groundswell of support needed for large-scale policy change.

The ESD programme at Bradford has been running for less than a year and the challenge to deliver on the ESD objective is considerable. A timetable for the roll-out of the curriculum review and ESD action plans at school level has been developed. Academic secondments are currently being recruited to lead academic school developments over the next three years and a new post to expand, lead and co-ordinate the informal curriculum has been filled. In terms of assessment, the impact of the curriculum work on students and staff in terms of process, learning and outcomes will be evaluated through a longitudinal research project led by a dedicated senior educational researcher and action researcher.

The Ecoversity aim of embedding ESD in the student learning and living experience will require the institution and the ESD project to develop an agreed roadmap for the development and delivery goals and to create the capacity to learn and adapt from experience through time. Any ambitious programme for change faces challenges and unexpected barriers. However, we have been able to navigate some of the early barriers and build confidence and support for the ESD project at an institutional level. This has been achieved by running and evaluating pilots, communicating their outcomes, developing business plans, identifying funding, leveraging internal and external support, opening conversations around processes and underlying values, and seeking to keep internal academics and students informed and

engaged in the process. As we move into the next critical 12 month phase of delivery, we will attempt to expand and consolidate the early achievements and the lessons learnt.

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