



6 | In the following four articles practitioners describe the different ways they have incorporated ESD into their curricula, ranging from developing a stand-alone module implemented across an institution to making ESD an integral part of bioscience courses.

The Challenge of Embedding Sustainability in the HE Curriculum

The term sustainability is used with increasing regularity within the Higher Education (HE) community. Most visibly, this translates into more recycling bins around campus, energy efficient buildings and green travel policies. But there is also a deeper, gradual move towards Education for Sustainable Development (ESD) through efforts to embed sustainability across the curriculum. This process is explicitly encouraged by HEFCE in its sustainability strategy, which advocates the development of 'curricula, pedagogy and extra-curricular activities that enable students to develop the values, skills and knowledge to contribute to sustainable development' (HEFCE, 2005). However, despite strategic support for including sustainability in the curriculum, physical campus changes have proved more achievable than pedagogic reforms and the ESD agenda has not gone unchallenged. Some within the sector remain sceptical about the relevance of sustainability to all disciplines, and reject the need for a wholesale change in pedagogic approach to accommodate ESD.

Nonetheless, there are a number of alternative pedagogies which have been used successfully in HE for teaching about sustainability, including role plays and simulations; group discussions and debates; critical incidents and case studies; problem-based learning; and fieldwork. There is also increasing evidence to suggest that 'in general, good sustainable development pedagogy is often simply good pedagogy' (HEFCE, 2008). In research undertaken at the University of Plymouth, over 50% of the lecturers surveyed (in an online questionnaire) identified a distinct pedagogy or set of pedagogies for ESD. Respondents suggested the controversial nature of sustainability issues called for discursive pedagogies and reflected upon the need to model a more egalitarian, student centred approach to learning which fitted with the inclusive, democratic nature of sustainability.

In-depth interviews enabled a deeper understanding of how these pedagogies were put into practice. A marine science lecturer described how he used role plays to encourage students to gain a deep understanding of another person's perspective and to empathise with others. In this scenario, one group represented the fishing industry and the other conservationists, and a vote at the end of the session decided which side had presented the most convincing arguments. This approach may enable students to reach a broader understanding of the issue; however, there are obvious difficulties in managing role play, particularly with large groups.

Discussions were another popular approach to teaching about sustainability, sometimes as part of first year tutorials, where small groups are more commonplace. Discussions are frequently advocated for teaching controversial issues; owing to the belief they reduce the possibility of tutor bias (although

research suggests this is not always the case!). They potentially allow a range of perspectives to be aired, but they can also be confrontational and difficult to control. Structured questions to scaffold students' learning are helpful, as are explicit instructions about the purpose of the discussion and clear ground rules. Without such support, many students – accustomed to the transmissive nature of much of their HE experience – may be uncertain how to respond.

From the research at Plymouth, and elsewhere, it is clear that the pedagogies identified as appropriate for ESD are more interactive and student-centred than the traditional lecture format. To be most effective, they require plentiful planning time, and relatively small student groups. Thus a tension can arise between the aspirational and what might actually be feasible in many HE contexts. A pragmatic approach is perhaps to consider sustainability as an add-on to the formal curriculum, as another 'skill-set' to be acquired, or competency to be reached. This may help achieve the government's ambition to produce graduates with the skills to support sustainable development (DfES, 2003), but it seems hardly likely to produce a generation who are able to think critically about the problems facing the world's environment and population. Undoubtedly, incorporating sustainability pedagogies in all disciplines provides a substantial challenge to the traditional world of HE, but is it not possible that all staff would benefit from considering alternative teaching methods, focusing more on the student as a co-creator of knowledge rather than a passive absorber of information – whether their motivation is sustainability or not?

References

.....
DfES (2003) *White Paper Twenty-First Century Skills: Realising our Potential. Individuals, employers, nation, HM Treasury*: DTI.
HEFCE (2005) *Sustainable development in higher education: Strategic statement and action plan*.
HEFCE (2008) *Strategic review of sustainable development in higher education in England*.

Further Reading

.....
Jones, P., Selby, D. and Sterling, S. (2010) *Sustainability Education: Perspectives and Practice Across Higher Education*. Earthscan Ltd

Debby Cotton and Jennie Winter
University of Plymouth
D.Cotton@plymouth.ac.uk
jennie.winter@plymouth.ac.uk