7 Steps to: Embedding Sustainability into Student Learning

Overview

The world is facing many interrelated issues including financial instability, social and economic inequity, threats to food and energy security, increased health risks, climate change, shrinking biodiversity and declining water and fossil fuel resources. This has led to increasing support for ‘sustainable development’: development that recognises the interlinked nature of society, economy and environment and that can ‘meet the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED, 1987). This involves changes in the way we develop more sustainable ways of living and working, and Education for Sustainable Development (ESD) can help to facilitate this. Research into ESD suggests that it demands more than just giving students information, it is about providing opportunities to work collaboratively, to appreciate multiple perspectives, to be reflective, to think critically and creatively, and act constructively. HEFCE (2009:21) suggests that in order to do this the sector must ‘develop curricula and pedagogy that will give students the skills and knowledge to live and work sustainably’.

There are lots of good reasons to get involved with ESD. HEFCE’s (2009) Sustainable Development Strategy states that the ‘greatest contribution HE can make to sustainable development is to enable students to acquire the skills and knowledge that allow them to make a lasting difference. What they are taught is therefore critical’. This claim is supported by the Quality Assurance Agency (2014) who for the first time published guidance for HE providers about ESD, identifying learning outcomes, and forms of teaching, learning and assessment, that can enhance sustainability literacy in graduates. These developments are paralleled by increasing awareness of sustainability issues by students and employers, with both groups calling for a greater presence of sustainability in HE curricula.

Sustainability is an important strength at Plymouth University which is widely considered to be one of the top sustainability institutions in the UK. Our commitment to sustainability is evidenced through our tricameral approach to embedding sustainability across teaching and learning, research and operations. Read the Plymouth University Sustainability (PU, 2013a) and Teaching and Learning strategies (PU, 2013b) to find out more.

1. Understand the principles of sustainability and education for sustainability

‘ESD is about the kinds of education, teaching and learning required if we are concerned about ensuring social, economic and ecological wellbeing, now and into the future. It helps people to cope with, manage and shape social and ecological conditions characterised by change, uncertainty, risk and complexity’ (Sterling, 2012). Because of the complex nature of sustainability issues, ESD is often interdisciplinary, holistic, values-driven, and locally relevant. It is characterised by critical thinking and problem solving. A useful first step is to familiarise yourself with the key principles of sustainability and ESD (e.g. Jones et al, 2010; Stibbe, 2009; and Murray, 2011). Reflect on what sustainability means to you and discuss with colleagues. Alternatively undertake an online introduction to sustainability and ESD, for example the ‘Introduction to Sustainability’ (Winter, 2012).

2. Identify key sustainability issues

ESD is trans-disciplinary so every subject has something to contribute. For example, corporate responsibility in business, understanding the relationships between law, values, morals and (inter) national obligations in law, environmental health in health disciplines and the science of climate change in chemistry. For guidance on how specific disciplines link to sustainability check out the ‘Future Fit Framework’ (Sterling, 2012). A useful starting point is to think about the key issues in your discipline and how they might be linked with sustainability themes; decide what more you would like to do; and identify what support you will need. Plymouth offers support for curriculum change through the Centre for Sustainable Futures and there are a number of helpful online resources, for example the Higher Education Academy’s ESD pages

3. Develop sustainability literacy and competencies

There have been debates about what sort of knowledge, skills and attitudes are useful in supporting more sustainable ways of living and working and this is relevant to both educators and students. For example, Parkin et al (2004) suggest that individuals should have sufficient knowledge and skills to decide and act in ways that favour sustainable development and be able to recognise and reward other people’s decisions and actions that favour it. The United Nations (2011) ECE resource ‘Learning for the Future’ outlines educator competencies in ESD and Dawe et al (2006) suggest a framework for ‘sustainability literacy’ which includes problem solving using systemic approaches, making critical judgements on authentic issues and working collaboratively and in interdisciplinary teams. These attributes can be encouraged through both what is taught and how material is taught.

4. Enhance teaching through sustainability pedagogies

The complex nature of sustainability issues invite approaches to teaching and learning which involve student-centred and interactive enquiry-based approaches (Cotton and Winter, 2010). These include participatory and inclusive learning processes, trans-disciplinary collaborations, experiential learning and the use of local environment and community as learning resources. Sustainability pedagogies include role play, simulations, stimulus activities, debates, reflexive accounts, personal development planning and problem-based learning. Consider material you already deliver and explore how making changes to its delivery might enhance sustainability skills in students. There are a number of online resources to help you do this including the TKI website (no date) and Bessant’s (no date) report on using problem based learning for ESD.

5. Use the campus as a learning resource

Universities can be excellent examples of organisations working towards greater sustainability. Using university business, facilities and campus as teaching resources can help to raise the profile of sustainability issues and enhance student learning. Reflect critically with students on what sustainability issues the university is addressing and use campus facilities and operations as case studies, for example with respect to the university’s stance on biodiversity, travel, and food. Hopkinson et al (2008) suggest that campus buildings can be used to teach sustainability principles in design and operations and The Centre for Green Schools suggest how to do this in Architecture. There have also been a number of successful Green Dragon’s Den competitions used to foster innovation and solutions in this field. Other examples include using university environmental performance data in the teaching of statistics or considering the procurement policies and practices of the institution as a case study for sustainable procurement in Business. There is also growing support for more joined up strategies to promote and link campus sustainability issues and the curriculum through the concept of ‘Living Laboratory’. Perhaps these ideas may help you to create your own links.

6. Link the curriculum and informal learning

Link informal learning to the formal curriculum through designing co-curricular activities which bridge the formal and informal spheres (Winter et al, 2012). ‘Students as Partners’ is an important agenda at Plymouth University and our students are encouraged to be informed active citizens who engage with the university and local communities. It is therefore useful to see subject content with initiatives run by the Student Union, like their Environment and Sustainability Forum or through their societies. Other opportunities are present through work-based learning and independent study modules, as well as knowledge transfer schemes, internships and the Plymouth Award. Have a look at Elliott’s (2007) example in Geography: is there potential to adapt these ideas to your own work?

7. Become part of Plymouth University’s sustainability community

Use your own developing expertise in this area to engage and help others by becoming part of the network of Sustainability Education Developers (SEDs) in your disciplinary area and contribute to Plymouth’s reputation for excellence in sustainability. To keep abreast of wider ESD developments visit the UNESCO Global Action Plan site and sign up to the EAUC Sustainability in Higher Education Developers (SHED-SHARE) group.

For more information and support, contact CSF at csf@plymouth.ac.uk.