



UNIVERSITY OF
GLOUCESTERSHIRE

at Cheltenham and Gloucester

Education for Sustainability:

A Guide for Educators on Teaching and Learning Approaches



Education for Sustainability (EfS) has the potential to enrich learning experiences and to support the development of students' professional capabilities, thereby enhancing the contribution of Higher Education (HE) towards global sustainability. The University of Gloucestershire has significant expertise in this area and aims to embed EfS approaches across its curriculum, so that innovative learning for sustainability is informed by cutting edge academic priorities and enhances graduate employability.

This briefing provides a 'hands-on' overview of EfS for all colleagues involved in the development and delivery of teaching and learning. It is designed for those familiar with sustainability education who wish to take their work to the next level, as well as those new to the field who are considering how to bring EfS into their teaching practice.

The Guide introduces the core principles of EfS and shows how they can be brought to life. It covers:

Exploring EfS: First Steps – Frameworks and Entry Points

Taking it Further: Pedagogic Approaches and Curriculum Design

Learning Journeys in EfS and Support for Innovation at the University

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What is Education for Sustainability?

Societies worldwide are facing multiple challenges which are shaping prospects for quality of life in the future. As David Orr (1994) reminds us, our educational systems have contributed to these unsustainable scenarios. EfS seeks to address this through educational change and Higher Education has a particular responsibility and role to play, by equipping learners with the capabilities they need to take on these challenges.

'Why is it that those who contribute to exploiting poor communities and the earth's ecosystems are those who have BAs, MBAs, MScs and PhDs and not the 'ignorant' poor from the South?'

(David Orr, *Earth in Mind*, 1994)

A brief history of EfS

Educational innovation for sustainable development has been seen as essential since the 1992 *Earth Summit* in Rio. At the 2002 *World Summit* in Johannesburg, representatives of both northern and southern countries restated the critical importance of education and learning to advance sustainable development goals.

EfS gained momentum through the United Nations *Decade of Education for Sustainable Development* (2005-2014) promoted via UNESCO. With the impetus from these global, political and economic forums, many governmental and regional initiatives have accelerated since 2005 to support learning for sustainability at all educational levels.

Education for Sustainability (EfS) spans all levels of formal, informal, professional and community education, using learning and change processes to help people critique and shape the decisions and social practices that influence our future as a global community. Many HE agencies and institutions have signed up to this international movement and committed to progress its aims.

EfS is ambitious in scope, as it is not simply about including new information or issues within the content of what is taught, so that people learn 'about sustainability'. It focuses instead on how we 'do' education: how we respond to sustainability imperatives by rethinking our methods, revising our courses, recasting our priorities and reorienting our communities of practice. Prominent sustainability rankings and awards in HE, such as *Universities that Count* and the People and Planet *Green League*, increasingly reward innovation underpinned by these strategic aims.

What is sustainability literacy?

The term 'sustainability literacy' is in common use in EfS and at policy level. It signals the aim of helping people to develop their knowledge and capacity to engage effectively with sustainability challenges.

Different agencies and educators have listed their preferred pedagogies and competencies associated with becoming 'sustainability literate'. There is much similarity amongst them and substantial overlap with the transferable skills and graduate attributes seen as quintessential for study at HE level.

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EfS at the University of Gloucestershire

The University's approach to sustainability

The University embraces sustainability as a concept concerned with shifting mindsets as well as changing unsustainable practices. It does not interpret the term literally, as the ability to simply maintain current scenarios. Instead its educational activities are aimed at contributing to more promising futures, underpinned by a more socially just, healthy, prosperous and biodiverse world.

(Sustainability Strategy - *Promising Futures 2009-2015*)

Our EfS work sees the core educational value of sustainability as a stimulus for questioning social priorities, structures and change. To sidestep the trap of 'paralysis by analysis', our approach supports the ethos of critical reflective thinking in HE and provides a basis for engaging with alternative scenarios to those that currently face us. This means that our EfS strategies are geared towards the development of:

- *students who are capable of envisioning alternative futures*
- *techniques for working collectively towards positive and democratic change*
- *participatory engagement to explore shared and divergent interests and needs*
- *challenges to the mindsets and priorities that drive unsustainable development*
- *graduates who understand their professional responsibilities in this area*

Sustainability is an ideal and a 'contested concept' that has global reach, embracing social justice, enhanced quality of life, improved resource efficiency and ecosystem preservation. Like other ideals and qualities, such as justice, wealth, peace, or wellbeing, the concept is widely debated and only becomes tangible in specific contexts and scenarios, or in examples of 'unsustainable' development.

Building on leading practice at the University

The University is recognised for its pioneering EfS work, having gained commendations in the national Green Gown awards (2007, 2008, 2009, 2010) and major academic recognition for colleagues (*National Teaching Fellowships; European Commission Marie Curie Fellowship*).

From 2010 to 2012 we are leading an ambitious EfS sector level project, *Leading Curriculum Change for Sustainability: Strategic Approaches to Quality Enhancement*, funded by the Higher Education Funding Council for England.

This project involves collaboration with five partner HE institutions and aims to bring EfS into the University's course development, review and validation processes, as well as sector quality assurance and enhancement frameworks.

For more information please visit:
<http://insight.glos.ac.uk/sustainability/hefcelgmquality>

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First steps - Frameworks and Entry Points to EfS

Being research-led, HE programmes often connect with contemporary issues facing students and their local and global communities. For EfS, exploring 'wicked problems' of the 21st century means using existing topics as entry points, linking sustainability considerations into current academic and professional studies, and creating alignment between what is taught and the way it is taught.

EfS uses familiar curriculum entry points as bridges to sustainability education, drawing on discipline-based, inter-disciplinary and trans-disciplinary approaches. Most importantly, the priority in EfS is to use engaged and participatory pedagogies in the learning process, to involve students in:

- (i) setting challenges and reframing questions on sustainability;
- (ii) making connections and understanding complexity;
- (iii) clarifying the positions and rationale behind people's actions;
- (iv) creating, considering and enacting alternative pathways for the future;
- (v) understanding professional responsibilities for sustainability.

As the HE sector grows more responsive to graduate employability concerns, there are critical links to be made between our educational activities and the sustainability challenges faced by different organisations. The university is therefore committed to the role that EfS plays in improving work-focused learning opportunities and 'real world' placement experiences for students¹.

¹Advancing Work-focused Learning Experiences for Sustainability at University of Gloucestershire (May 2011).

INDICATIVE RANGE OF CURRICULUM ENTRY POINTS INTO SUSTAINABILITY

Alternative futures
 Responses to climate change
 Cultural diversity and equality
 Human rights
 Leadership and managing change
 Citizenship, democracy, governance
 Ecosystems and ecological principles
 Corporate social responsibility
 Waste, Water, Energy
 Community resilience
 Peace, security, conflict resolution
 Millenium Development Goals
 Globalisation of trade
 Learning organisations and communities
 Social justice
 Biological diversity
 Natural resources management
 Accountability and ethics
 Cultural heritage
 Intercultural understanding
 Food security
 Health and wellbeing
 Rural and urban development
 Consumerism and ethical trade

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Taking it further - Pedagogical Approaches

In EfS it is essential that the learning process fosters the capabilities that help people to engage most effectively with sustainability concerns. Educators may not always share precise academic or political priorities, but certain pedagogical approaches are commonly found in EfS. These core EfS pedagogical principles can be used to prompt innovation in existing curricula and to inform the development of institutional strategies. They can also serve as the basis for departmental or institutional indicators for improving the quality of teaching and learning.

To support curriculum development, these principles are integrated in the University's Learning and Teaching Strategy and its Graduate Attributes. This supports our view that sustainability education should not be limited to 'bolt-on' modules outside mainstream courses, as these approaches can be disconnected from academic expertise and students' professional goals. It also enables greater alignment with related curriculum enhancement priorities, such as internationalisation and employability².

EDUCATION FOR SUSTAINABILITY: FIVE ESSENTIAL PEDAGOGICAL PRINCIPLES	
Futures thinking	Futures thinking engages people in imagining preferred visions for the future. It involves the exploration of assumptions and of meaningful understandings and interpretations of sustainable development. This process of envisioning futures leads people to take ownership and responsibility for more sustainable futures.
Critical and creative thinking	Critical and creative thinking enables people to explore new ways of thinking and acting, make informed decisions, and create alternatives to present choices. It involves reflecting on how people interrelate with one other, understanding cultural differences and creating alternative ways to live together.
Participation and participatory learning	The engagement of people is needed to build sustainable futures collectively. Engaging diverse stakeholders and communities is essential, as they value and include differing knowledge systems and perspectives. The process of participation is also important for creating ownership and empowerment.
Systematic thinking	Thinking systemically is essential to sustainable development, as piecemeal approaches have proved not to work - instead resolving one issue while creating other problems. Sustainable development requires approaches which go beyond analysis in terms of 'problem-solving' and/or 'cause-effect'.
Partnerships	Partnerships are a motivating force towards change. They empower people and groups to take action, to take part in decision-making processes and to build capacity for sustainable development. Intercultural and multi-sectoral partnerships in particular are often highlighted as critical in EfS approaches.
SOURCE: These five components are reflected in the IUCN publication prepared for use worldwide during the UNESCO <i>Decade of Education for Sustainable Development</i> from 2005-2014. See: Tilbury, D & Wortman, D (2004) <i>Engaging People in Sustainability</i> , IUCN - The World Conservation Union, Gland, Switzerland.	

²Recent research by the HE Academy and National Union of Students found that for 80% of 5,763 students, growing interest in sustainability education is closely linked to their expectations of the skills needed by future employers (HEA/NUS 2011, *First-year attitudes towards, and skills in, Sustainable Development*).

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Taking it further - Curriculum Design

To embed EfS involves tailoring core principles to suit different subject areas, levels of study, and methods for delivering courses. This invites individuals and teaching teams to consider how and where sustainability questions best relate to their expertise and existing offerings - and to devise the most suitable pathways to include EfS approaches.

In order to equip graduates with the capabilities they will need in their working lives beyond HE, it is important that curriculum development in EfS takes account of the sustainability requirements of employers and professional bodies, as well as the expectations and ambitions of students.

EXAMPLES OF CURRICULUM INNOVATION PATHWAYS FOR EfS AT THE UNIVERSITY	
Fully embedded at programme level	<i>Landscape Architecture</i> - conceptual framework developed for UG and PG levels, including technical essentials, the professional profile and learning aims linked to EfS, which informs the balance of content, assessment activities and pedagogic approaches.
Embedding across one level of study	<i>Business Management</i> - thematic attention to sustainability across Level 1 through the introduction of team-based learning activities and project work focused on sustainability in practice, delivered by all tutors and using <i>Dragon's Den</i> assessments.
Educational projects linked to programmes	<i>Sports Development</i> - outreach projects can engage directly with sustainability via development and community issues, as in the <i>Sport Malawi</i> project that links into existing programmes through credit-bearing placement and assessment activities.
Specialist options at module level	<i>English Language</i> - embedding into academic sub-fields can help to target attention within existing curricula, as in the Green Gown 'highly commended' module <i>Language and Ecology</i> , exploring sustainability questions through discourse analysis.

Creating Connections between EfS, Employability and Professional Practice

Recent studies have underlined the need to align EfS with efforts to improve graduate employability and to increase the relevance and application of HE studies to workplace realities. Sustainability becomes most meaningful in practice and soundings from employers show the need to help students to i) understand the complexity of sustainability and ii) apply their knowledge to specific issues and industry contexts.

Among professional bodies, engagement with sustainability is also growing, including moves to establish formal requirements for professional practice and regulation. This presents opportunities for dialogue with agencies involved in the planning and assurance of professional education, many of whom are seeking leadership and collaboration from HE on this agenda, in order to develop suitable responses and criteria.

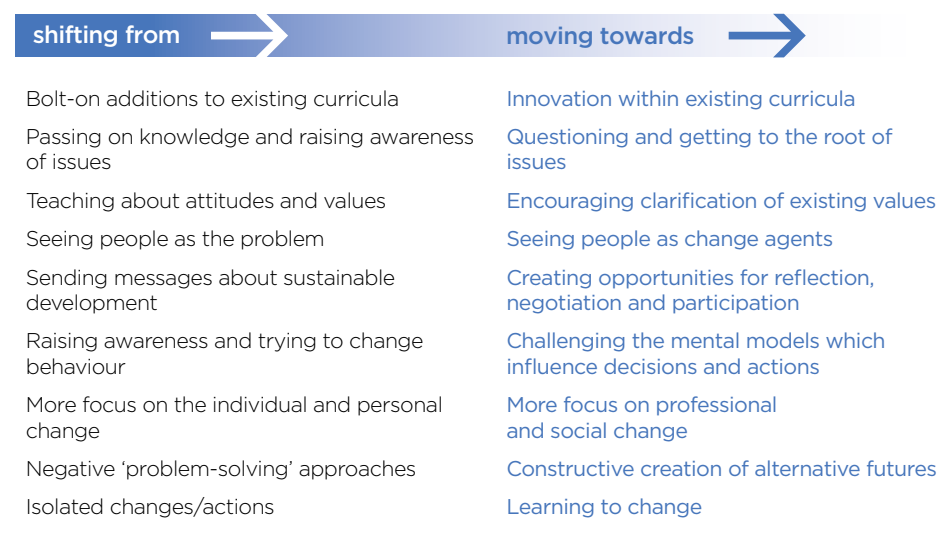
SOURCES: HE Academy/NUS (2011), BITC/EDF Energy (2010); Institute of Public Policy Research (2009); ARUP (2007) - see the companion briefing *Education for Sustainability: a Guide for Managers on Needs and Opportunities*.

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Learning journeys in EfS

EfS approaches are targeted towards supporting innovation in academic practice, so that both learners and educators are equipped to create alternative and more sustainable futures. This enhancement impulse is best understood in terms of the learning transitions envisaged in EfS:



³Diagram from: Tilbury & Cooke (2005) *A National Review of Environmental Education and its Contribution to Sustainability in Australia: Frameworks for Sustainability*. Canberra: Australian Government Department of the Environment and Heritage and Australian Research Institute in Education for Sustainability, pp 16-21.

In summary - the University's approach to curriculum change in EfS means:

- Not interpreting sustainability literally - seeing it *as a process and learning experience* to improve quality of life and contribute to more positive futures for all
- Maintaining a *critical learning discourse* about sustainability thinking and action
- Developing *diverse tactics and an inclusive approach* to support colleagues in embedding EfS in their courses and subject areas
- Using pedagogies that *develop student capabilities* to respond to sustainability agendas
- Drawing out links with *employability and internationalisation* as well as other strategic priorities that influence educational practice

GUIDANCE AND INFORMATION

University Sustainability Strategy *Promising Futures 2009-2015*:

<http://insight.glos.ac.uk/sustainability/Pages/SustainabilityStrategy.aspx>

Education for Sustainability at the University:

<http://insight.glos.ac.uk/sustainability/Education/Pages/default.aspx>

Education for Sustainability Guides:

<http://insight.glos.ac.uk/sustainability/Education/Pages/EducationforSustainabilityGuides.aspx>

University Teaching and Learning Strategy: <http://insight.glos.ac.uk/tli/Pages/default.aspx>

UN Decade of Education for Sustainable Development: www.desd.org

SUPPORT FOR ACADEMIC STAFF

The university has developed a range of enhancement approaches and resources to support colleagues in taking Efs forward within existing programmes and through wider academic development processes:

- **EFS SUBJECT GUIDES** - geared to specific subject groups, showing shared points of focus with Efs, links with QAA subject benchmarks, and indicative course aims and learning outcomes.
- **STAFF DEVELOPMENT WORKSHOPS** - dedicated support sessions can be arranged for teams wishing to develop integrated Efs approaches across programmes of study.
- **EFS PLANNING TOOLS** - simple curriculum enhancement planners are available for individual subject areas, to help identify and plan ways to introduce Efs in existing curricula.
- **GOOD PRACTICE RESOURCES** - development of electronic and library holdings, with links to a range of generic and subject-specific toolkits, projects and exemplars in the field of Efs.
- **EFS GUIDE FOR MANAGERS** - companion briefing to this Efs Guide for Educators, providing context and rationale for Efs in HE, including the interests and needs of students and employers.

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