

Active Learning Approaches to Teaching Sustainability



Department of Geography

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GG5300 *Principles of Environmental Sustainability*

- One of two core courses for the MSc Sustainability and Management
- Cross-faculty, joint programme of School of Management and Geography
- Focuses on *corporate social responsibility* and *environmental governance for sustainability*
- Course met once a week for 3 hours over two academic terms (20 sessions)

Active-learning and sustainability

Active-learning means students are **actively engaged** rather than passively gathering information

Active-learning benefits the teaching of sustainability



Field trip to London



Active-learning curriculum

- **constructively aligned** (Biggs, 2003) with the learning outcomes and assessments
- encourages a **deep approach** to learning (Gibbs, 2002)
- includes both classroom and beyond classroom activities

Biggs, J. (2003) *Teaching for Quality Learning at University*. Buckingham: Open U. Press.

Gibbs, G. (1992) *Improving the Quality of Student Learning*. Bristol: Technical and Educational Services.



Active-learning examples

1. Mock negotiations
2. Interactive role-playing
3. Inclusion of different socio-cultural contexts
4. Case studies
5. Student-selected examples
6. Urban sustainability field-trip
7. Corporate site visit
8. Individual volunteer project
9. Online discussion forum



Ex. 1: mock climate change negotiations

Aim: To explore the complexities and dynamics of developing multi-national agreements on environmental issues

- Students each assigned a country and prepared to represent that country position
- Exercise was structured to simulate:
 1. multiple rounds of negotiation
 2. different levels of power
- Negotiations followed by discussion to provide students opportunity to reflect on learning



Ex. 1: Enhancing student citizenship

- One Chinese student commented:

“Last week's lesson was excellent. I would never have [had] that lecture in China. It changes people's behaviour when people [are] in [a] different position - I found it hard to take care [of] China when I represented [the] EU. It was very good and I'll never forget it.”
- Individuals challenged to think of themselves in a new way - as a global citizen rather than a citizen of a specific nation
- Easy to modify exercise for larger student numbers

Ex. 2 role-playing on multiple spatial scales

Local scale example: **Managing fish in the commons**

- Students played role of fishers in a small seaside village
- Through multiple fishing rounds where governance challenges manifested, students developed complex set of collective action rules
- Together students governed the common-pool resource to avoid over-exploitation of the resource





Ex. 3: Inclusion of different socio-cultural contexts

Internationalisation of the curriculum through student-led integration of diversity

- Student-selected themed articles
- Benefits:
 - Students could make unique contributions to guided discussions
 - Encouraged students to interrogate credibility of different sources
- A Korean student stated: “The most impressive studying experience throughout this course was that we could analyse and discuss social and environmental issues in many ways from a variety of media, such as TV and newspapers, not only from a text book.”

Ex. 4: case studies and corporate site visit

- Regular inclusion of case studies
- On-site case study at Heathrow Consolidation Centre in partnership with DHL Neutral Services
- 3000 word essay topic pertaining to on-site case study - students challenged to relate theory to real world examples
- DHL Neutral Services will review top 10 essays and has donated prize to award to top 3
- Internship programme

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Ex 5: Individual Volunteer Project

- Minimum requirement of 24 volunteer hours
- Students identify NGO related to sustainability
- 2000 word report

Sustainability students complete over 750 hours voluntary work

Thirty Royal Holloway students from the Department of Geography have completed more than 750 hours of volunteering at organisations involved in sustainability in local communities. The volunteer programme is designed to complement the 'Principles of Environmental Sustainability' course, to give students hands-on experience of sustainability in practice at a local level and to enable them to gain wider interaction with the communities.

The organisations, at which they have volunteered, range from large, nationally and internationally recognised groups, such as Oxfam and Christian Aid, to small, local charities. The students' tasks involved a range of activities such as planting trees, implementing recycling schemes, and conservation of the local environment and wildlife habitat.

The students' lecturer, Dr Mary Dengler of the Geography Department says, 'The students and the wider community greatly benefit from these volunteer projects. I've been delighted with the students' enthusiasm towards their tasks and how dedicated they have been. It's a highly rewarding and innovative method of assessment and teaching.'

Ivor Knight, a representative from Oxfam in Staines, says, 'It's fantastic that these students are giving back to the community. Life isn't just about taking, it's also about giving – and that's precisely Oxfam's philosophy. It's been great having Royal Holloway students helping Oxfam as it gives us a fresher perspective'. (From RHUL Press Release http://www.rhul.ac.uk/Messages/press/message.asp?ref_no=1698) 4/4/08



Ex. 6: Online discussion forum

Extended student learning experience beyond classroom setting

- Consistent with goal of *HEFCE strategy for e-learning*: **“to help the sector use new technology...so that it becomes a 'normal' or embedded part of their activities”** (2005:1).
- Benefits:
 - Comfortable space for non-native English speakers to contribute to discussions
 - Further practice with developing written arguments
 - Continuity between weekly sessions

Student Comments

A UK student said:

“The participatory approach to learning was definitely one of the key merits of the course.”

An overseas student said: “Before I studied this, I had absolutely no idea what problems we face in a global world. This course helped me to open my eyes and find a new direction in my life.”



A student from the 2007-2008 cohort said: “I think you set a good atmosphere in class where people feel relaxed and able to contribute. The interactive teaching methods are great for learning and I think this more modern approach should be used much more. Other lecturers should move on from the dated lecturing format which can often send people to sleep and can make subjects a little dry. You present the classes in an interesting format which I feel maximises learning potential and offers a great chance for students to participate and further their learning by asking questions and discussing topics with colleagues”.