

## GEOGRAPHY, EARTH AND ENVIRONMENTAL SCIENCES

### Principles of inclusive curriculum design

Anticipatory  
Flexible  
Accountable  
Collaborative  
Transparent  
Equitable

### Generic considerations

- cost and financial considerations;
- embedding student and staff well-being;
- promoting student engagement;
- use of technology to enhance learning;
- responding to different approaches to learning;
- avoiding stereotypes and celebrating diversity;
- making reasonable adjustments.

### Introduction

It is the responsibility of the every member of staff within HE to respond to the requirements of equality legislation. The basic principle that can and should be universally responded to is that **it is attitudes, barriers and other forms of discrimination within the system rather than individual characteristics or deficits that are the cause of disadvantage**. Employing an inclusive approach is underpinned by the adoption of other principles of inclusive curriculum design, summarised in the adjacent text box and discussed in the introduction section of this guide available at [www.heacademy.ac.uk/assets/documents/inclusion/disability/ICD\\_introduction.pdf](http://www.heacademy.ac.uk/assets/documents/inclusion/disability/ICD_introduction.pdf)

May and Bridger assert, in respect of developing an inclusive culture, “making a shift of such magnitude requires cultural and systemic change at both policy and practice levels” (2010: 2). In essence this change is represented by a shift in focus from responding to the ‘needs’ of individuals or specific groups of students to an approach that anticipates and plans for the *entitlements* of the evolving student population. Thus the onus is on institutions and subject communities to change and adapt their policies and practice rather than expect this of individual or specific groups of students.

There are many generic considerations of inclusive curriculum design, summarised in the adjacent text box, which are discussed in the introduction section. The focus of this section is on subject-specific considerations for those in those subjects aligned to geography, earth and environmental sciences. Here examples of innovation and effective practice are provided to demonstrate that effective practice for one group can and should be effective practice for all. The examples, resources and ideas included in this and other subject guides have come from the sector. They were obtained directly in response to a general request made to the sector during 2010, from a review of the HEA Subject Centres or from recommendations made by colleagues teaching in the specific subject.

Where there are examples in other subject guides that may be particularly relevant or worth reviewing for further adaptation these are flagged. However, notably inspiration and ideas for curriculum design can come from many sources, therefore reading strategies employed and ideas in other subject areas can be a useful source of new ideas.

## **Inclusive curriculum design: subject-specific considerations**

### Raising awareness about the curriculum

Research conducted with school students suggests a “lack of understanding of the relevance of the Geography, Earth and Environmental Sciences (GEES) discipline to their daily lives” and that most school students had a limited awareness of careers GEES graduates pursue (King, 2007: 39). A response to this is to integrate outreach work with schools and colleges into the curriculum. For example, GEES students could work with school students to plan, undertake, and present the findings of fieldwork or other experiments, or design learning activities that could be implemented in schools. Benefits can include:

- raising the awareness of potential applicants about GEES subjects and potential career options;
- providing opportunities for students to develop a range of skills, such as communicating with diverse audiences and relating their learning to non-specialists that will be useful for their own careers.

*Learning about the prior educational experiences of our students has been illuminating, challenging many of our views that the standard of our intake was slipping. Repositioning our viewpoint to see our incoming students as the, often highly successful, products of a teaching and learning environment with different approaches and expectations to our own, has allowed academics to move from a ‘blame’ stance to one where it is possible to identify practical solutions to guide students through the transition to more independent, open ended and deeper learning. (Maguire et al., 2008: 34)*

There can be a mismatch between staff perceptions of pre-entry qualifications and the reality of the experience, skills and knowledge that entrants bring with them to GEES programmes (Maguire et al., 2008). Regularly revisiting the syllabus and assessment strategies of pre-entry qualifications will better enable curriculum designers to anticipate changes in the knowledge and skills students acquire pre-entry (Pointon, 2008).

The University of Ulster ran a number of workshops for staff teaching first-year students where they compared the content and assessment tasks of A-level qualifications (the most common entry qualification for GEES students). This was augmented by surveying students taking first-year GEES modules. The ‘most revealing’ findings for participants were:

- “understanding why students are so unconcerned about failing at the first attempt;
- understanding why surface learning prevails;

- recognising that it is unrealistic to expect students to start off as independent learners;
- the disparity between the ways they have been assessed previously compared with HE practice;
- the lack of scope for developing literacy skills, e.g. essay writing, within the pre-HE curriculum;
- understanding why students struggle in ‘getting’ what we are looking for in assignments” (Maguire et al., 2008: 34).

This knowledge was then used to inform curriculum design to make it more responsive to the skills, attributes and expectations students bring with them to GEES programmes. An output of this type of activity would be a summary of the main qualifications taken by entrants with content details, assessment strategy and other information that can guide the curriculum design process and be used to brief staff involved in delivery so that different expectations can be clearly highlighted to students.

See English, and Medicine, Dentistry and Veterinary Medicine (MEDEV) subject guides for examples that could be adapted for use in developing outreach activities.

### Inclusive integration of technology into the GEES curriculum

An inclusive approach to integrating technology into the curriculum will be informed by:

- an awareness of the variable access students have to hardware and software both personally and via the institution;
- information about the technical skills they have acquired pre-entry and during the programme;
- knowledge about students’ preferred learning approaches and currently used strategies;
- an appreciation of the attitudes and enthusiasm for engaging with technology that students use.

(Adapted from Knight, 2006)

The University of Exeter surveyed all first- and returning second-year Geography students about their use of and attitudes to technology. The survey provided data about the access students had to personal technologies (such as MP3 players and mobile phones) that could inform curriculum design. The Geography students were keen to embrace technology in their learning and a key message was that they wanted more flexible access to teaching and learning materials that could be personalised and used away from formal teaching sessions (Knight, 2006). Regularly checking with students what access they have to technologies (e.g. through surveys) may help to

identify potential barriers to inclusion, for example restricted access to certain types of technology such as smart phones.

The 'IMPALA 2' project conducted by the Universities of Leicester, Nottingham, Leeds, Sussex, Gloucestershire and Kingston considered the role podcasting could play in the GEES subjects. Drawing on the wider research literature a number of strategies that could be adopted to benefit all students were outlined:

- supporting fieldwork: providing audio or video instructions and guides, production of podcasts for assessment;
- improving learner engagement and motivation: student produced digital stories; providing additional material to encourage students to broaden their study such as wider reading suggestions;
- fostering collaborative learning: as a way of including a range of perspectives such as interviews with different stakeholders;
- offering flexibility and learner control: podcasts can be viewed where and when and at a pace students prefer;
- providing effective feedback: as an alternative or accompaniment to written feedback.

IMPALA 2 identified eight pedagogical approaches for using podcasts to support student learning:

1. podcasted lectures;
2. podcasted students' presentations and discussion;
3. video podcasts to provide lecture summaries;
4. video podcasts to support software teaching and learning;
5. video podcasts on field techniques and equipment use;
6. video podcasts to provide a field guide;
7. podcasts to provide additional information about the subject;
8. student-created digital stories (Nie, 2008: 57).

The Business, Management, Accountancy and Finance, and Medicine, Dentistry and Veterinary Medicine (MEDEV) subject guides provide examples of how technology has been used to diversify teaching methods.

### Developing inclusive practical, laboratory and fieldwork

Practical, laboratory and fieldwork are integral elements of many Geography, Earth and Environmental Science programmes. The Geography Discipline Network's *Inclusive Curriculum Project* (2006) and *Learning Support for Disabled Students Undertaking Fieldwork and Related Activities* guides (2004) provide strategies and examples from case studies of ideas that could be incorporated at the curriculum design stage to enhance the learning experience of all students.

The website includes ten guides, one covering general inclusive curriculum design issues, one offering advice for students and three covering curriculum design from the perspective of individuals – lecturer, head of department, and support worker. The remaining five guides provide tailored guidance on meeting the entitlements of disabled students with particular impairments, such as mobility, hearing or visual impairments, mental health and dyslexia or hidden disabilities. All ten guides consider the inclusive design issues associated with learning outcomes, teaching and learning activities, assessment and evaluation for different aspects of the GEES curriculum. The guides include questions and suggestions for how a more inclusive approach can be adopted and applied to other subjects (Geography Discipline Network, 2006)

[www2.glos.ac.uk/gdn/icp](http://www2.glos.ac.uk/gdn/icp)

To complement the guides there are 28 case studies that present solutions to specific issues and illustrate how strategies sometimes developed in response to particular students can then be integrated in future designs of the module to the benefit of all students. For example:

*Case study 23: Provision of virtual access to a self-directed field trail for mobility-impaired students resulted in the development of materials which all students could use in the future to support revision of the specific site and provide a comparison site that might be used to facilitate the design of new assessment tasks.*

(Geography Discipline Network – Case Studies  
[www2.glos.ac.uk/gdn/icp/caselist.htm](http://www2.glos.ac.uk/gdn/icp/caselist.htm))

The Bioscience, History, Classics and Archaeology, and Physical Sciences subject guides of this report provide examples that could be adapted for use on GEES programmes.