

## Developing an inclusive curriculum: a guide for lecturers



**Geography Discipline Network (GDN)**  
Higher Education Funding Council for England  
*Improving Provision for Disabled Students*

**INCLUSIVE • CURRICULUM • PROJECT**

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

The Inclusive Curriculum Project (ICP) aims to develop, disseminate and embed resources for supporting disabled students studying geography, earth and environmental sciences in higher education and to transfer the generic lessons widely to subject-based academics, educational developers, learning support staff and disability advisers. Its primary outputs include:

- the ICP Guide series - Nine complementary guides, aimed primarily at staff in geography, earth and environmental sciences, and one guide aimed at students:
  1. Issues in developing an inclusive curriculum
  2. Developing an inclusive curriculum for students with mobility impairments
  3. Developing an inclusive curriculum for visually disabled students
  4. Developing an inclusive curriculum for students with hearing impairments
  5. Developing an inclusive curriculum for a) students with mental health issues; b) students with Asperger Syndrome
  6. Developing an inclusive curriculum for students with dyslexia and hidden disabilities
  7. Developing an inclusive curriculum: a guide for heads of departments and course leaders
  8. Developing an inclusive curriculum: a guide for lecturers
  9. Developing an inclusive curriculum: a guide for departmental support staff (i.e. administrators and technicians)
  10. To a Degree: a guide for students with specific learning difficulties, long-term medical conditions or impairments
- a student survey report: 'The experience of disabled students in geography, earth and environmental sciences of teaching, learning and assessment in HE';
- a set of case studies on the experience of disabled students of teaching, learning and assessment in HE, and the experience of departments and disability advisory units of supporting the learning of disabled students.

All of these outputs are available via the GDN website at <[www2.glos.ac.uk/gdn/icp/](http://www2.glos.ac.uk/gdn/icp/)>. Both the Guide series and the survey report are also available in hard copy format via the GDN Publications Office. A complete set of the ICP Guides will be distributed in hard copy to all Higher Education institutions in England and Northern Ireland at the end of the project.

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## Developing an inclusive curriculum: a guide for lecturers

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Series edited by Michele Hills and Mick Healey  
University of Gloucestershire

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## About the author

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Phil is Project Director of the HEFCE-funded project 'DisabilityCPD: continuing professional development for staff involved in the learning and teaching of disabled students', and is lead author of the DisabilityCPD online staff development course for raising disability awareness for academic and support staff in higher education. In 2005 he was awarded a National Teaching Fellowship.



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Thanks must also go to: Kristine Mason O'Connor and Penny Gravestock, for numerous discussions about disability issues and the content of this guide; Mick Healey for allowing me to view the project from the point of view of an author; and to Michele Hills for so ably taking on the role of GDN Project Manager and showing a large degree of patience when dealing with people who should know better.



## Editors' Preface

This guide is one of a series of ten published by the Geography Discipline Network (GDN) as part of the **GDN Inclusive Curriculum Project** (ICP), a three-year initiative running from January 2003 to December 2005, funded by the Higher Education Funding Council for England's *Improving Provision for Disabled Students* programme.

The ICP Guide series is written primarily for academics, educational developers, learning support staff and disability advisors supporting disabled students studying geography, earth and environmental sciences in higher education. In addition, one guide is aimed at helping disabled students to optimise their experience of higher education. The project builds on the success of an earlier HEFCE-funded GDN disability project, *Providing Learning Support for Disabled Students Undertaking Fieldwork and Related Activities*. This project, unbeknown to us at the time, broke new ground. Adams (2002), the Director of the National Disability Team (NDT), subsequently stated that:

*'The Geography Discipline Network project was, for a variety of reasons, an extremely important project:*

- a. It was one of the first disability-funded projects that exclusively addressed issues concerned with teaching, learning and assessment.*
- b. It was led by academic staff in partnership with disability practitioners – this kind of partnership has signalled a real shift in thinking regarding disability issues.'*

The project, as is the current one, was undertaken by the Geography Discipline Network, a consortium of old and new universities based at the University of Gloucestershire, whose aim is to research, develop and disseminate good learning and teaching practices in geography and related disciplines.

At the beginning of the Inclusive Curriculum Project, we wanted to capture the student voice. Accordingly, we undertook a survey of disabled students studying geography, earth and environmental sciences in the consortium institutions (Hall & Healey, 2004). The survey was supplemented by case studies of the learning experiences of disabled students and the different ways in which departments and tutors have supported them, which are also available on the GDN website at <[www2.glos.ac.uk/gdn/icp/](http://www2.glos.ac.uk/gdn/icp/)>.

Awareness of the need to develop inclusive practices, which provide equal opportunities for disabled students in various elements of their courses, is spreading throughout Higher Education Institutions (HEIs) in the UK. This has been stimulated by the Quality Assurance Agency (QAA) *Code of Practice - Students with Disabilities*, published in 2000, and the extension of the Disability

Discrimination Act (1995) to education through the Special Educational Needs and Disability Act (2001), later incorporated into Part IV of the DDA and the Disability Discrimination Act (2005).

The ICP project focuses on the fundamental principle of inclusivity, whilst addressing the day-to-day practical realities of supporting students with a wide range of specific physical and mental difficulties. Although the series is written from a disciplinary perspective and some guide titles address particular areas of disability, the project provides guidance which offers transferable lessons for what is good practice throughout teaching and learning in higher education.

Despite using medical categories for describing impairments, we are committed to emphasising a social model to exploring disability, which examines the barriers to disabled students which society creates. The distinction between the medical and social model is important because it shifts the responsibility for improving the provision for disabled students from the individuals themselves to society, and the strategies and policies that higher education institutions and their constituent departments develop and enact. However, we support recent modifications to the social model which emphasise the reality of the lived experience of disabled people, and we are sympathetic to calls to construct a more adequate social theory of disability which recognises that everyone is impaired (Shakespeare & Watson, 2002). The focus of this series of guides is on identifying the barriers that disabled students face to participating fully in the curriculum and the ways in which institutions, departments and tutors can help to reduce or overcome them.

The GDN ICP team comprises a well established group of discipline-based academics, educational developers and disability advisors. Each guide has been written by a specialist author or team of authors, based on outline content and structure discussed by the team as a whole, and has been reviewed in detail by nominated representatives from the team. Each draft was also circulated to the whole team and a panel of external advisors for comment before final editing.

Rather than adopt an imposed standardised format across the series, each authoring team was given freedom to develop their guide in the way they felt most appropriate. This also applied to the much-exercised question of appropriate language. Editing, therefore, has been intentionally a 'light touch' process, so individual guides in the series may vary from time to time in relation to language protocols adopted. In terms of layout and presentation for both printed and web-based versions of the guides, however, the editing team has attempted to follow nationally-established accessibility guidelines as set out, for example, by the National Disability Team <[www.natdisteam.ac.uk/Accessible%20printed%20documents.doc](http://www.natdisteam.ac.uk/Accessible%20printed%20documents.doc)> and TechDis <[www.techdis.ac.uk/index.php?p=9\\_4](http://www.techdis.ac.uk/index.php?p=9_4)>.

The project was undertaken in consultation with the Higher Education Academy Subject Centre for Geography Earth and Environmental Sciences (GEES). It has the strong support of the main professional associations and representatives of Heads of Department in the geography, earth and environmental sciences sector:

- the Royal Geographical Society with the Institute of British Geographers (RGS-IBG)
- the Geological Society (GeoSoc)
- the Conference of Heads of Department in Geography in Higher Education Institutions (CHDGHE)
- the Committee of Heads of Environmental Sciences (CHES)
- the Institution of Environmental Sciences (IES)
- the Committee of Heads of University Geoscience Departments (CHUGD).

We would like to thank the many individuals who have contributed to the ICP project and to making this series of guides possible. In particular, we recommend to our readers the stalwarts of the Geography Discipline Network project team, many of whom have over many years uncomplainingly devoted more of their time than we could reasonably expect to producing high quality materials and sound advice. We would also like to acknowledge the project Advisory Panel, the National Disability Team and the numerous colleagues who helped to keep the project on track and provided additional resources when necessary.

The net outcome of recent quality assurance and legislative changes is that HEIs need to treat disability issues in a more structured and transparent way. In particular, we may expect to see a relative shift of emphasis from issues of recruitment and physical access to issues of parity of the learning experience that disabled students receive. The implication of this shift is that disability issues 'cannot remain closed within a student services arena but must become part of the mainstream learning and teaching debate' (Adams & Brown, 2000, p.8). But there is an opportunity here as well as a challenge. As we become more sensitive to the diversity of student needs, we can adjust how we teach and facilitate learning in ways which will benefit all our students.

Michele Hills and Mick Healey

University of Gloucestershire  
October 2005

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Available at: <[www2.glos.ac.uk/gdn/icp/survey.htm](http://www2.glos.ac.uk/gdn/icp/survey.htm)>.

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## Part A: Context

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# 1 Introduction

## 1.1 Who is this guide for?

This guide is aimed primarily at lecturers in geography, earth and environmental sciences (GEES), but it is anticipated that the guide will also be useful for lecturers in other disciplines. Regardless of whether you are at the start of your lecturing career, or have been an experienced lecturer for a number of years, there should be some information in this guide which will allow you to reflect upon your current practice.

## 1.2 Aim of the guide

As a lecturer, you have a vital role in ensuring that all students have access to the curriculum. The aim of this guide is to provide a prompt for you to think about the way in which you design and deliver your curriculum. You may have already been provided with some information about designing inclusive curricula, possibly from the disability / equal opportunities unit or the staff and educational development unit in your institution. This information may have offered some tips about ways to assist students with particular impairments, for example, dyslexia or mobility impairments; however, despite these useful tips, there are several issues and comments which are consistently raised in disability-related workshops and seminars and in the press. This guide aims to address some of these issues whilst considering a framework for designing an inclusive curriculum, based on the model of constructive alignment.

Throughout the guide, boxes have been used to provide relevant information to emphasise aspects of the text, including questions to prompt reflection, raising issues / queries, and to allow the student voice to be recognised. The boxes are identified as follows:

Solid border	Numbered boxes, referred to in the text
Shaded box	'Stand-alone' boxes
<i>i</i>	General information
✓	Activity
“ ”	Student quote
?	Questions / prompts to consider



### Frequently made comments

(Note that the aim of addressing these comments is not to focus on the negative aspects of disability, but to consider some of the genuine feelings and concerns that some lecturers may have relating to the design and development of inclusive curricula.)

## 2 Setting the context

Figures from the Higher Education Statistics Agency (HESA) (Table 1) show that there were 37,700 first year UK-domiciled undergraduate students (i.e. students who are normally resident in the UK, including the Channel Islands and Isle of Man, but not including international students who lived outside of the UK prior to higher education studies) who had disclosed a disability or impairment in the 2003-04 academic year, which equates to 5.6% of the total first year UK undergraduate student population (NDT, 2005). Notwithstanding the general increase in student numbers over the past decade due to the expansion of higher education, the proportion of disabled students has been increasing; for example, in 1994-95 the equivalent number of disabled students was 14,034 (3.1% of the student population (HESA, no date). This increase might, in part, be due to a gradual change in culture whereby disabled students feel that they are able to disclose information about their impairments without it affecting their chances of obtaining a place on a particular course, and also to the increasing awareness of disability issues in higher education.

It should be noted that the actual number of disabled students will be greater than the figures presented in Table 1, taking into account those students who do not disclose or who disclose during their time in higher education.

**Table 1:** Percentage of first year UK-domiciled undergraduate students in higher education, who have disclosed an impairment, based on the categories as defined by the Universities and Colleges Admissions Service (UCAS). Figures provided by the National Disability Team, based on HESA statistics (NDT, 2005).

	2003-04	2002-03	2001-02	2000-01	GEES <sup>1</sup>
Total percentage of students known to have a disability	5.6	5.2	5.0	4.4	5.2
Total number of students (n)	37,700	34,595	32,165	25,955	453
Dyslexia	41.5	40.5	37.2	34.8	43.0
An unseen disability <sup>2</sup>	18.9	19.7	23.3	25.8	31.9
Other disability <sup>3</sup>	12.3	13.8	12.5	13.4	11.6
Multiple disabilities	9.0	7.1	7.5	6.8	2.7

	2003-04	2002-03	2001-02	2000-01	GEES <sup>1</sup>
Deaf/ Hearing impairment	5.6	5.8	6.4	6.5	4.7
Wheelchair user/ Mobility difficulties	4.4	4.8	5.0	4.9	2.3
Mental health difficulties	5.2	5.0	4.5	4.2	1.8
Blind/ Partially sighted	2.8	2.9	3.4	3.2	1.9
Personal care support	0.2	0.3	0.3	0.3	0.1

- <sup>1</sup> GEES data from information provided by the Learning & Teaching Support Network (LTSN) on disabled students in higher education in 2000, based on HESA statistics.
- <sup>2</sup> For example, epilepsy, diabetes, asthma. Note that the decrease in this category is matched by an increase in 'dyslexia'; it is possible that some students with dyslexia previously classed themselves as having an unseen disability.
- <sup>3</sup> From 2003-04, this category includes students with Autistic Spectrum Disorder.

These figures appear positive in that it is clear that more disabled students believe they are able to continue their studies into higher education; however, a study by the Disability Rights Commission (DRC, 2003) found that 30% of disabled students felt that they were prevented from entering higher education for a reason that related to their disability / impairment. There is clearly more that can, and should, be done to encourage disabled students to continue their studies.

A joint study by the National Disability Team and Skill: National Bureau for Students with Disabilities (NDT & Skill, 2004) found three influencing factors which impacted upon a disabled student's aspiration and transition to higher education:

1. The availability and quality of **information**.

Disabled students are not always able to obtain the information they require, either from schools / colleges or higher education institutions, in order to make an informed judgement about their future. One particular piece of information which is lacking is the difference between the teaching and learning strategies used in schools / colleges and those used in higher education. (This issue is addressed by the student guide in this series; Clark *et al.*, 2006.) Other areas of information which disabled students need include:

- a) knowledge of the resources available from the higher education institution and other organisations, including an understanding of the funding opportunities and the Disabled Students' Allowances (DSA);
- b) understanding of the assessment arrangements;
- c) appreciation of what is required, on a personal level, for full participation in higher education;
- d) the appropriateness of the courses on offer;
- e) knowledge of other issues such as extra-curricular activities, transport and accommodation issues.

2. The **skills** of the student or staff.

Some students do not have, and are not given the opportunity to develop, the skills required to undertake studies in higher education, for example study skills, independent living skills and social skills. The report recognises that, whilst these skills are required by all students entering higher education, disabled students may have to use these skills to a greater, and perhaps more intense, degree.

The report highlighted that more could be done to raise staff awareness of disability issues, but in addition to this it is important that such disability awareness training is also available to non-disabled students in higher education.

3. The availability of **provision** for disabled students.

Four main areas of provision were highlighted by the report as being important for student transition into higher education:

- a) practical (e.g. adapted accommodation, appropriate physical access such as ramps and lifts);
- b) procedural (e.g. reasonable adjustments such as lecturers providing notes in accessible formats);
- c) personal (e.g. any personal assistance required such as note-takers and personal carers);
- d) financial (e.g. Disabled Students' Allowances).

Addressing some, or all, of the influencing factors above will hopefully encourage more disabled students, who are capable of studying for a degree, to enter higher education and not be put off for a reason which relates to their impairment(s).

# 3 An introduction to the Disability Discrimination Act

Detailed information about the relevant legislation is contained within the overview guide to this series (Healey *et al.*, 2006); however, it is useful to include an introduction to the Disability Discrimination Act (DDA) in this guide, in order to highlight some of the aspects which are of direct relevance to lecturers in designing and implementing an inclusive curriculum.

Under the DDA, a person does not have to be registered as disabled in order to be protected by the Act. The DDA (1995) states that a person has a disability:

if he [*sic*] has a physical or mental impairment which has a substantial and long-term adverse effect on his ability to carry out day-to-day activities.

'Long-term' is taken to mean an impairment which has lasted, or is likely to last, 12 months or more, or where recurrent conditions will continue beyond 12 months.

The definition includes:

- a) physical impairments;
- b) mental health difficulties;
- c) learning difficulties (e.g. dyslexia);
- d) sensory impairments;
- e) severe disfigurements;
- f) progressive conditions\*;
- g) conditions which have a substantial cumulative effect (e.g. pain or fatigue);
- h) people who have a history of impairments but who have recovered (e.g. someone with a mental health difficulty).

(Skill, 2004)

\* In the DDA (1995), people with progressive conditions were covered by the Act at the point at which the conditions had 'some effect'. This Act has been amended, and under the DDA (2005), progressive conditions such as cancer, HIV and multiple sclerosis are covered from the time the condition is diagnosed.

### 3.1 What does the DDA cover?

The different parts of the DDA are as follows:

Part I	Disability
Part II	Employment
Part III	Discrimination in other areas (goods, facilities, services and premises)
Part IV	Education (2001)
Part V	Public Transport
Part VI	Disability Rights Commission
Part VII	Supplemental
Part VIII	Miscellaneous

Part IV of the DDA, which is concerned with Education and which was amended by the Special Educational Needs and Disability Act (SENDA) in 2001, covers **all student services**, such as:

- a) teaching;
- b) curriculum design;
- c) examinations and assessment;
- d) field trips;
- e) work placements and study abroad;
- f) research degrees;
- g) short courses and training courses;
- h) flexible and distributed learning (including distance learning and e-learning);
- i) learning facilities (e.g. teaching rooms, laboratories, darkrooms, etc.);
- j) learning equipment (e.g. handouts, laboratory equipment, computing facilities);
- k) libraries;
- l) information technology (including an institution's intranet or internet site);
- m) careers advice, training and resources;
- n) job references;
- o) graduation / award ceremonies;
- p) leisure and recreation facilities;

- q) physical environment;
- r) chaplaincies and prayer areas;
- s) health services;
- t) catering facilities;
- u) childcare facilities;
- v) residential accommodation.

(Skill, 2004)

It is important to emphasise that this list covers far more than just ramps and access to buildings. There is anecdotal evidence from Australia, where legislation similar to the DDA has been in place for about a decade longer than in the UK, that the majority of court cases where the judgement went against the institution were directly related to learning and teaching issues (Adams & Brown, 2001). This is backed up by UK-based studies (e.g. Fuller *et al.*, 2004; Hall & Healey, 2004) which have highlighted that lectures and assessment provide two of the main barriers to learning. (It should be noted that the majority of disabled students involved in these studies are students with dyslexia; however, as this is the largest group of disabled students in higher education – see Table 1 – it is reasonable to assume that these barriers will be common to most higher education institutions.) Lectures will not only be a barrier for students with dyslexia, as they may create difficulties for students with a number of impairments such as: vision impairment; deafness; chronic fatigue syndrome; manual dexterity difficulties. Box 1 shows some of the more common difficulties experienced by disabled students during lectures, which will be discussed further in Part B.

***i***

**Box 1: Possible difficulties faced by disabled students in lectures**

Disabled students may have difficulty with the following:

1. Taking notes.
  - It may not be possible for some disabled students to take notes whilst listening or concentrating on what the lecturer is saying (e.g. students with dyslexia, vision impairment, deafness).

2. Concentrating.
  - A student on medication, e.g. for a mental health difficulty, may find it hard to concentrate. Also, signing / lip-reading is a tiring process for Deaf students, which may reduce the time during which the student can concentrate effectively.
3. Writing for relatively long periods, without a break.
  - Students with mobility / dexterity impairments may become quickly fatigued when making continuous notes. Breaks are also required for sign language interpreters.
4. Lip-reading.
  - A lecturer may obscure their lips through: wearing a beard; covering their mouth with their hands; standing in front of a window, thereby casting their face in shadow; dimming the room lights in order to display a presentation. Optimum conditions are required for effective lip-reading, as only about 30% of words can be read on the lip (Wareham *et al.*, 2006).
5. Finding appropriate times to eat meals / take medication.
  - Lectures may be scheduled at times when it is necessary for some students to take medication, or be required to have something to eat. It is common practice not to allow the consumption of food or drink in lecture rooms, which may create a problem for these students.
6. Seeing / hearing instructions.
  - Poor lighting or excessive background noise (e.g. a lecture room near to a major road) may make it difficult for some disabled students (e.g. blind or deaf) to see or hear important instructions.

### 3.2 What is classed as discrimination?

Discrimination under the DDA occurs:

1. If a disabled student is treated less favourably, when compared with a non-disabled student, for a reason which relates to their impairment / disability.

2. If there is a failure to make reasonable adjustments so that a disabled student is not placed at a substantial disadvantage compared with their peers.

**! The implementation of reasonable adjustments means that I will have to lower academic standards for disabled students**

This should not be the case. Not only is this an issue for staff but it is also an issue for disabled students, who do not want a 'sub-standard' educational experience.

Maintaining academic standards is one of the main issues to be considered when making reasonable adjustments, and is particularly important when it comes to assessment. Other points to consider are:

1. financial resources available to the institution;
2. grants or loans likely to be available to disabled students, e.g. Disabled Students' Allowances (i.e. is the adjustment something that could be, or is being, paid from the Disabled Students' Allowances?);
3. cost of implementing a particular adjustment (although it should be noted that many adjustments do not require excessive costs);
4. practicality of implementing a particular adjustment;
5. extent to which aids or services will otherwise be provided to disabled students;
6. health and safety requirements (see Section 9.5);
7. interests of other people, including other students (i.e. would the adjustment result in a significant disadvantage for other students?).

(DRC, 2002a)

Much of the discussion about maintaining academic standards relates to the core requirements of the course, and the intended learning outcomes and assessment criteria. These are discussed in more detail in Section 6.

The DDA (1995) states that it is an institution's responsibility to ensure that any reasonable adjustments are **anticipatory** to disabled students generally, and not just to individuals (DRC, 2002a), i.e. it is not acceptable to wait until a disabled student enrolls on a course and to then put into place specific adjustments for this student alone.

**! I can't be expected to anticipate all disabilities / impairments**

Anticipatory duty should not be interpreted to mean that your current practice must be completely accessible to any and all impairments at all times, for example, by having to convert all your handouts into Braille just in case a blind student enrolls on your course / module. The important issue to consider is flexibility. If you find that you have a blind student in your class who does require materials in Braille, the anticipatory action means that it should be easy to convert relevant documents and materials into this format within an appropriate timeframe. Generally this means having material available in electronic format, but it may also require changes to the way in which some electronic documents are saved. For example, converting Microsoft PowerPoint presentations into other formats, such as Braille, may be easier if the presentation is saved as a rich text format (rtf) file (option 'Outline / RTF' in the 'Save as...' drop down menu).

The DDA (2005) places a stronger emphasis on this anticipatory duty for institutional processes as a whole, requiring institutions to publish a Disability Equality Scheme and to report on the progress of this scheme on an annual basis to show how issues of disability and inclusiveness are being addressed.

# 4 Removing the disability

This guide has been written using the social model of disability as its basis (see Box 2), whilst acknowledging that there are aspects of the medical model which affect disabled students' everyday experience (for a discussion of this issue see Healey *et al.*, 2006). What this guide does not do is address issues relating to specific impairments, as these issues are covered in detail by the other guides in this series. It should not be necessary to have this detailed knowledge in order to design and develop inclusive curricula; however, there may be occasions when it is necessary to find out more about a particular impairment in order to determine whether a proposed adjustment is appropriate, and the other guides provide an excellent starting point for such research.

## *i* **Box 2: Models of disability**

The **medical model of disability** tends to individualise the problems experienced by disabled people and sees them as subjects for treatment or cure. This model does not consider a person's intelligence or potential for achievement, but emphasises what a disabled person can and cannot do, both physically and mentally.

The **social model of disability** shifts the focus from what is 'wrong' with an individual, to the attitudes and structures of society, i.e. disability is a social state and not a medical condition. This model focuses on the barriers created by society and the ways in which these can be removed / reduced.

(For a graphical representation of 'The Disabled Student' versus 'The Disabling University', see Milsom *et al.*, 2006.)

In common with the other guides in this series, the term 'disabled student' will be used instead of 'student with disabilities', to emphasise that some students are being disabled by the processes and procedures currently in place in higher education.

In terms of developing inclusive curricula, what may need to be emphasised is a change in the conceptualisation of disability, i.e. one that is based predominantly on the social model rather than considering new and innovative teaching, learning and assessment strategies. Indeed, many of the examples suggested for developing an inclusive curriculum (Part B) are not new, they are simply

examples of effective teaching practice. This leads to the oft-used comment that developing an inclusive curriculum will benefit all, not just disabled, students. This is reinforced by the fact that comments about teaching and learning situations which have been made by disabled students could, in fact, have been made by any student (see Box 3). In developing an inclusive curriculum which considers the needs of disabled students, you may find that you have improved opportunities for other students, such as those with a temporary 'disability', for example, students who are pregnant or who have an injury such as a broken limb, and those for whom English is not their first language (this may arise from consideration of Deaf students whose first language may be British Sign Language).

✓ **Box 3: Barriers to learning**

The following are quotes from disabled and non-disabled students in response to the question 'Are there any barriers to learning that you have experienced?'. Try to identify which quotes were made by disabled students and which were made by non-disabled students.

1. I have had difficulty with understanding what is expected of me for some assignments and even when I asked the lecturers it wasn't any clearer at all.
2. I have had one assignment back - the lecturer's comments were written in such appalling handwriting I was not able to read it. This is not useful... we have to word process our work so it's easy to read.
3. Lecturers tend to remove notes from the overhead before I get time to finish copying.
4. Sometimes lecturers don't explain fully some of the jargon that they use.
5. In some of the rooms it has been difficult to hear staff.
6. I can sometimes have too much information to take in.
7. Three hour lectures without a break.
8. I just find reading and writing assignments very hard, it seems to take me longer than everyone else. I have to try very hard!
9. Some lecturing staff put comments on work that I would find it hard to improve on. For example, "grammar and comprehension need improving".

10. It makes it quite difficult when notes for lectures are not on the server prior to a lecture. It is far easier to make notes on the handout.
11. Sometimes lecturers' accents can get in the way of understanding the subject.
12. Participation in a seminar when understanding of material is required within a time constraint, for example research papers given during seminars with the expectation of discussing it in detail during the same seminar.
13. Ambiguous questions are asked, hindering the process of completing the tasks because it takes time understanding what is required.
14. I am slow at writing and written exams are not to my benefit.

Quotes from research undertaken by Professor Mary Fuller, Dr Andrew Bradley and Professor Mick Healey, University of Gloucestershire, and funded by the Economic and Social Research Council and the Teaching Quality Enhancement Fund.

Answer: D = disabled student, ND = non-disabled student

1 – ND; 2 – ND; 3 – D; 4 – D; 5 – ND; 6 – ND; 7 – ND; 8 – ND; 9 – D; 10 – ND; 11 – ND; 12 – D; 13 – ND; 14 – ND.

It is hoped that this guide will allow you to reflect upon your teaching, learning and assessment practices and to consider ways in which barriers / disabilities to learning can be removed so that, in terms of accessing the curriculum, disabled students become ... students.

Part B: Framework for developing an  
inclusive curriculum

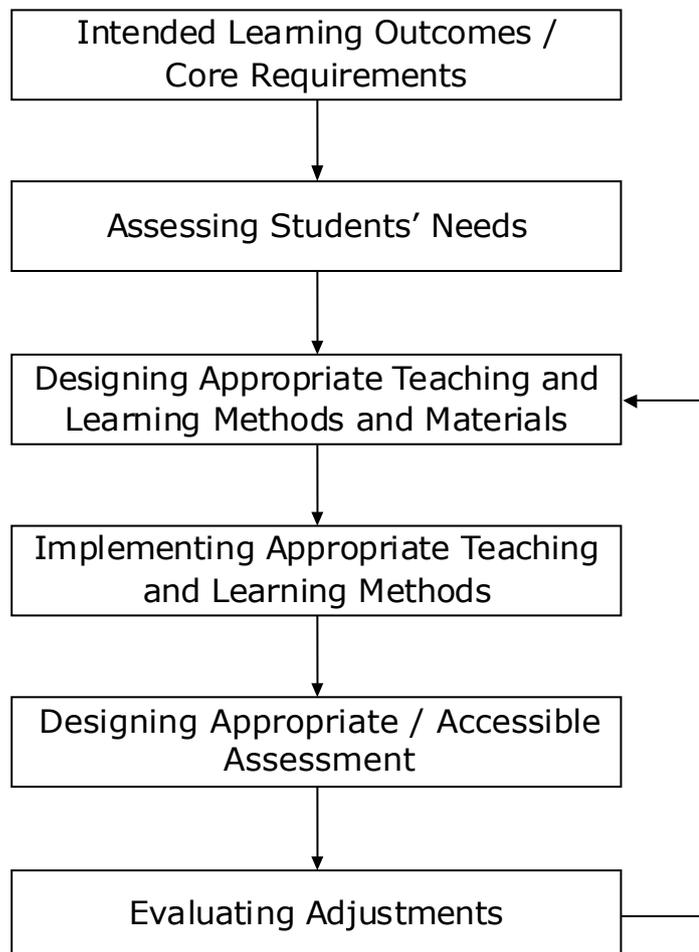
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# 5 An example framework

The following framework (Figure 1) is based on the curriculum model devised by D'Andrea (2003). While it is acknowledged that an outcomes-based curriculum may not be accepted, or approved of, by all lecturers, it is used in this context as a basis of considering the core requirements of a course / module. Only by considering these requirements will it be possible to determine a benchmark for maintaining academic standards for a particular activity, and therefore to consider what adaptations may or may not be appropriate for disabled students.

**Figure 1:** Framework for developing an inclusive curriculum



## 6 Intended learning outcomes / core requirements

Whether or not you agree with an outcomes-based model for developing curricula, it is important to establish the core requirements of the course / module that you are teaching. The Teachability project (Teachability, 2000) devised a set of questions to assist staff in determining these requirements and for considering how accessible they may be for disabled students (see Box 4).

### ✓ **Box 4: Teachability audit**

The overriding question to consider is:

**What are the core requirements of the subject that you teach?**

Consider this for one of your courses / modules and address the following questions:

1. How accessible is the curriculum for students with a range of impairments?
2. How might the curriculum be made more accessible for students with a range of impairments?
3. What steps would need to be taken to implement the ways identified to enhance access to the curriculum?
4. What barriers are there to achieving the changes you have identified and what can be done about them?
5. How can the ways in which the curriculum is particularly accessible or inaccessible be made known to potential students with a range of impairments?

Once you have determined the core requirements / intended learning outcomes, it will be possible to devise appropriate strategies for disabled students to address these requirements.

#### **Example:**

One of the practical skills required for earth sciences, which is present in the Earth Sciences, Environmental Sciences and Environmental

Studies subject benchmark statement (QAA, 2000), is for a student to be able to identify a rock, mineral or fossil. As a lecturer in earth sciences, you may decide that this should be one of your learning outcomes for an introductory earth sciences course; however, what if a student who enrolled on your course had a severe vision impairment which made it very difficult, or even impossible, to see enough detail in the specimen to be able to identify it?

What you may decide is that the core requirement of your course is not to be able to **see** the specimen, but to be able to make an identification, possibly **based on a description** of that specimen. In this situation it would be possible for other students to describe a particular specimen to the disabled student, who could then make an identification based on this description. One potential outcome of this is that the standard of students' specimen descriptions may improve, as the disabled student would be interrogating students for more specific and detailed information in order to make a reasonable identification.

# 7

## Assessing students' needs

Whereas the setting of intended learning outcomes / core requirements could be thought of as a one-off process, the remaining sections consider parts of the curriculum design process that should be revisited each time the course / module takes place. It is possible that no particular changes will be required, but with each new intake of students it is important to ensure that you are being as inclusive as possible.

Your institution will have its own mechanisms for alerting you to the presence of disabled students who intend to participate in your course, and this information should include some detail about the necessary reasonable adjustments to be put in place. A growing number of institutions are moving away from providing information about specific impairments and concentrate on the adjustments to be implemented. For example, depending upon the severity of the impairment, a scribe / amanuensis may be an appropriate adjustment for students with dyslexia, Deaf students and blind students; there is no need for you to know about the specific impairments, simply the fact that at least one scribe may be present in your teaching sessions. The advantage of this method is that it is harder to make (inaccurate) assumptions about the adjustments that need to be made; for example, assuming that a blind student will need all course documentation and handouts transcribed into Braille. The potential disadvantage, however, is that it is easy to concentrate solely on the specific adjustments identified by your institution, which may mask other adjustments which could be implemented.

“ ”

‘One lecturer made assumptions and gave me a lot of stuff that was in very very large print. I mean very large print. She was speaking slowly to me and making copies of the overheads that were enormous. I had all this paper and after the lecture I said “Excuse me I don’t understand why you have given me all this large print stuff”.

“Well, you need it” she said.

I’d never met her before and she had never met me, but she knew I had MS. She must have read up about it and read up about every symptom, one of which can be failing eyesight. But what she had

done was assumed that I had all of it, the whole lot.' (Student with multiple sclerosis)

(SWANDS, 2002)

Overall, **the best way to design an inclusive curriculum is to assume that you will have some students participating in your course who have not disclosed an impairment.** From the HESA figures presented in Table 1 you can make a reasonable estimate of some of the more likely impairments that might be present, although may not be disclosed. This will ensure that you are being as anticipatory as possible and does not stop you from also addressing the individual requirements of students who have already disclosed, and for whom effective strategies may be in place for removing potential barriers in terms of teaching, learning and assessment. When addressing these individual adjustments, it is important to discuss the proposals with the individual student concerned.

### **! I'm worried about saying the wrong thing to a disabled student**

It should be noted that the language relating to disability issues is constantly changing (e.g. 'disabled people' versus 'people with disabilities') and that there is not always consensus about the 'correct' terminology between different groups of disabled people.

Most importantly, when talking to disabled students there is no need to emphasise aspects of a particular activity which cannot be done. In general, a discussion about what can be done and the particular requirements, or specific strategies, that can be put in place will provide enough information to consider ways of developing an inclusive educational experience without having to talk about a student's impairment and how it affects their work or day-to-day activities.

Although you should try to avoid using analogies such as 'deaf as a post' or 'blind as a bat', there is no need to feel embarrassed if you say something which has an apparent bearing on a student's impairment, e.g. asking a blind student 'Did you watch the programme about earthquakes last night?'. Blind students commonly talk about 'watching' programmes in the same way that a wheelchair user might talk about 'walking' to a lecture (Milsom et al., 2006). The following are some points to consider when communicating and working with disabled students.

1. Talk directly to a disabled student, rather than through a companion or sign language interpreter.
2. Do not make assumptions about a student's ability (e.g. do not assume that a Deaf student is able to lip-read).
3. Wheelchairs should not be considered as a confining burden for students with mobility impairments (i.e. students are not 'wheelchair-bound', they are 'wheelchair users').
4. Do not assume that a disabled student requires your assistance (e.g. pushing a wheelchair or directing a blind student). Such assistance can be offered, but wait until this has been accepted before helping.
5. Speak normally to disabled students; there is no need to raise your voice. (Shouting distorts your lip movements and makes it harder for Deaf students who are trying to lip-read.)
6. Provide important instructions both orally and visually.
7. Do not be tempted to finish sentences for students with speech impairments.
8. If you have not understood what a student has said to you, ask them to repeat it rather than making an assumption about what they have said.
9. Avoid talking about a student's impairment or specific requirements in front of other students; the disabled student may wish for this information to remain confidential.
10. Remember that some disabled students (e.g. with Autistic Spectrum Disorders or Asperger Syndrome) may have trouble interpreting body language, and may be uncomfortable receiving direct eye contact. They may also be uncomfortable making direct physical contact (e.g. shaking hands).
11. When talking with a wheelchair user, try to sit down to be at their level or stand back a bit to reduce neck strain. If it is not possible to sit down, ask them if they would like you to crouch, as this can sometimes appear patronising.

(For further advice see: Barking & Dagenham Council, 2001; Leach & Birnie, 2006; Waterfield, West & Chalkley, 2006; Institute for the Advancement of University Learning, no date; Milsom *et al.*, 2006; Shepherd, 2006; Wareham *et al.*, 2006.)

In addition to assessing the needs of the students that you know about, either from personal experience or from the institutional records, you should aim to encourage other students to disclose any further requirements that they may have. This could be through course documentation and / or announcements made at key points in your course (e.g. at the start of the course, and associated with any assignment deadlines or the onset of the examination period), giving students the opportunity to see you in private to discuss any additional requirements that they may have in order to participate to their full ability.

If a student does disclose a disability / impairment to you, it is important that you know the procedure for reporting this to the appropriate staff within your institution. Under the terms of the DDA, once a student has disclosed information about a disability / impairment to any member of staff then the **institution as a whole** is deemed to be aware of this disclosure and the student is therefore given immediate protection under the DDA. (The exception is where this disclosure has been made in confidence to a counsellor or medical practitioner.) This information must therefore be passed to the relevant people as quickly as possible, so that appropriate support can be provided. It is strongly advised that you do not discuss details about what adjustments you think may, or may not, be possible, as this discussion should take place between the student and a qualified member of staff such as a disability adviser or equal opportunities coordinator. It is also important to remember that such a disclosure is covered by the Data Protection Act as 'sensitive personal data' and that the student has the right to know who this information will be forwarded to. The students also have the right to insist that the information remains confidential, although SDT & Simpson (no date) advise against requests for strict confidentiality and recommend that the information is confidential in the sense that it is not passed on to anyone without good reason, and that, ideally, a member of staff should be able to discuss the disclosure with their superior or an appropriate member of staff. If a student does not want the information to be widely known, they have to accept that they cannot expect specific adjustments in addition to any anticipatory practices already implemented by the institution. It is advisable to have some form of written statement confirming what has been agreed with the student.

**! Surely a student's disclosure cannot remain confidential if it relates to an issue of health and safety?**

The issue of confidentiality in relation to health and safety is a particularly sensitive one. There may be occasions where a disabled student discloses an impairment, and requests that this information is not passed to other staff and students; however, the student's

impairment(s) may have an impact on health and safety whilst participating in, for example, laboratory practicals or fieldwork activities.

It is important that risk assessments are available for these activities, and it may be necessary for a disability adviser to discuss the issue with relevant members of staff, without disclosing the identity of the disabled student, in order to determine the extent of the potential risk. If it is felt that there is a sufficient health and safety risk, this information cannot remain confidential. For example, a student with epilepsy may disclose this information to a disability adviser, but requests that this remains confidential. If the epilepsy has been successfully controlled by medication, consideration of the relevant risk assessments may indicate that there is little risk and that the information can remain confidential; however, if the epilepsy is not controlled, there may be a health and safety risk (e.g. use of chemicals in a laboratory) and the information would not be able to remain entirely confidential, despite the student's wishes. In this situation, it would be important to discuss with the student the reasons for having to pass on the information, and to ensure that this is only disclosed to staff on a need-to-know basis.

# 8 Designing appropriate teaching and learning methods and materials

## 8.1 Teaching and learning methods

There are a number of guidance and audit tools available (e.g. Conroy, no date; SWANDS, 2002; Teachability, 2000) which provide questions to allow you to reflect upon your curriculum plans, or which can be used at an early stage to think through some of the issues involved in developing an inclusive curriculum. Even if you do not use these materials to complete a full audit of your curricula, the questions posed in each of these sources provide a useful method of reflecting upon the accessibility and inclusivity of your teaching, learning and assessment strategies.

The SWANDS guidance and audit tool (SWANDS, 2002) poses questions relating to different stages and aspects of curriculum design, for example 'Course development, programme planning, approval and review', 'Lectures, seminars and tutorials' etc. (see Box 5), whilst the audit tool developed by Gerard Conroy (Conroy, no date) separates the curriculum audit into three phases:

- Phase 1: Departmental overview.
- Phase 2: Degree course team overview.
- Phase 3: Individual module lecturer.

The questions and prompts within each of the phases allow reflection upon all aspects of teaching, learning and assessment and are not exclusively directed to the needs of disabled students. Instead, they consider general teaching, learning and assessment issues, which strengthens the rationale for use of the audit tool by course teams and individual lecturers.

### ? **Box 5: Sample audit questions**

Examples of the questions relating to different aspects of curriculum design are as follows:

Course development, programme planning, approval and review

1. Is there a system in place in the department to provide information in alternative formats?
2. What is the procedure for ensuring that anticipatory 'reasonable adjustments' will be made to make the broad curriculum

accessible, through the development, approval and review of courses / programmes?

3. What procedures have been adopted to ensure that all staff involved in course / programme development, approval, review and delivery are aware of their responsibilities under the DDA?
4. Do approval panels include a disability specialist to address issues of DDA compliance?
5. Has the course team demonstrated that the learning, teaching and support elements of programmes / courses are accessible to disabled students?
6. In particular has consideration been given to the accessibility of:
  - preparing documents for printing, visual display and electronic submission;
  - lectures, seminars and tutorials;
  - fieldwork;
  - laboratory, workshops and other practice-based environments;
  - placement learning;
  - assessments?

### **Lectures, seminars and tutorials**

1. What is the overall procedure for ensuring that the delivery of lectures and seminars / tutorials is flexible and versatile to meet the individual needs of disabled students with a range of impairments?
2. By what method do staff become aware of the implications of a particular impairment on an individual student's teaching and learning needs, and in particular, the 'reasonable adjustments' required for lectures and seminars?
3. Is the course documentation made available in advance of lectures / seminars and has a systematic approach been taken to make it available in an accessible format for a range of impairments?
4. If some of the teaching and learning methods you traditionally employ are not accessible to disabled students, do you provide appropriate alternative means for these students to participate?

5. Do you facilitate discussions to ensure all students have equal opportunities to participate effectively?
6. When setting assignments, do you identify the barriers some students may face with specific tasks and take this into account by considering adjustments while maintaining academic standards?

(from SWANDS, 2002; Conroy, no date)

In terms of designing appropriate teaching and learning methods, one of the main points to consider is reducing student anxiety. This will be beneficial for all students, but particularly those with mental health difficulties (Leach & Birnie, 2006). If the course is one which is early in the students' higher education experience, then it may be appropriate to explain what is required of the student in particular situations, i.e. what you are expecting from them during a seminar, or how much work you expect students to do outside the contact sessions.

The issue of reducing anxiety may not be too onerous for some teaching and learning situations, e.g. lectures, but for others such as fieldwork or laboratory practicals, or methods which the students may not have encountered such as online discussion bulletins, the amount of additional information required may be more substantive (see Box 6).

***i* Box 6: Ideas for reducing anxiety**

**Fieldwork**

1. Provide as much material in advance as possible, for example:
  - a) detailed travel plans, including the length of the journey, opportunities for toilet and rest stops, availability of shops and cash points;
  - b) information about the accommodation, e.g. number of rooms, number of beds in each room, bathroom facilities, cooking facilities etc. (photographs are very useful if available);
  - c) detailed information about the tasks to be undertaken during the field trip and what the students will be expected to do at each location.

(see also Leach & Birnie, 2006; Gravestock & Healey, 2002)

**Laboratory practicals**

2. Allow students to have a look around the laboratory in advance of the first practical session. This is invaluable for students with a vision impairment and wheelchair users, but is also beneficial for students who are worried about carrying out laboratory work in a new environment.
3. Find out whether assistive technology is required for students, e.g. talking thermometers, hand grips, vibrating timers, Braille labels etc. (see Box 7).

**Online discussion bulletins**

4. Allow the students access to an online environment prior to the start of the course, to allow familiarisation with the layout and navigation (particularly important for students using screen readers).
5. Set up an anonymous area within the discussion forum where students can practise sending messages. If this is an area to which all students have access, it should be made clear that messages posted in this area will be deleted on a regular basis.

As this guide is aimed primarily at staff teaching geography, earth and environmental science subjects, it is appropriate to consider some questions relating to the development and design of laboratory practicals (Box 7) and fieldwork (Box 8).

**Box 7: Questions to consider when designing laboratory practicals**

Have you:

1. Identified the core requirements of the laboratory practical work?
  - This can aid identification of possible modifications.
2. Considered what adaptive technology could be used?
  - For example, talking thermometers, hand-steady adaptations, grippers, use of computer simulation. Details about such equipment is available from the TechDis Technology Database <[www.techdis.ac.uk/index.php?p=3\\_1](http://www.techdis.ac.uk/index.php?p=3_1)>. The database can be searched by impairment and / or

teaching and learning situation (e.g. blind, laboratory practicals), but it should be noted that professional guidance should be sought before purchasing specific items of assistive technology, to ensure that they will be appropriate for the student. It may be possible to fund some items of assistive technology from the Disabled Students' Allowances.

3. Discussed the practical and general issues with the student prior to the classes?
  - Students will be able to share previous experiences and these may help in determining the degree of support required to undertake practical work.
4. Formulated and discussed evacuation plans that include disabled students?
  - These should be reviewed on a regular basis and should consider the needs of all disabled students.
5. Distributed experiment / laboratory protocols in advance?
  - This will allow the student to anticipate possible difficulties and is good practice for students with dyslexia. Make sure that new technical vocabulary is also provided in advance.
6. Distributed a copy of the safety rules to all students, and posted additional copies in the laboratory?
  - Posting information at different heights around the laboratory ensures that all users have access to this information.
7. Considered whether the students could work in pairs or groups?
  - Disabled students may not be able to do all the individual practical tasks, but this does not make them 'non-scientists'.
8. Got at least one adapted workbench in your laboratory?
  - Students with mobility impairments may need to have a workbench that can be adjusted for height.

(Adapted from: Barrier-free Education, no date; Cowork, 2001; Doyle & Robson, 2002; Gravestock, 2006; Institute for the Advancement of University Learning, no date; Jones, 2002; Kucera, 1993; Teachability, 2000)

**? Box 8: Questions to consider when designing fieldwork activities**

1. What degree of flexibility is possible in designing / delivering the fieldwork to ensure / support an inclusive curriculum, particularly in relation to assessed activities?
  - Consider whether disabled students could be assessed on some aspects of the fieldwork and demonstrate other intended learning objectives through other methods.
2. Is the funding and resource allocation sufficient to ensure that fieldwork elements are accessible to all students?
  - It may be necessary to allow for medical / non-medical helpers to accompany disabled students. It is also worth finding out whether some parts of the Disabled Students' Allowances would be able to fund part of the provision for fieldwork.
3. How does the department inform potential applicants or current students about the approach taken to render fieldwork accessible for all its students?
  - This information should be available in a number of formats, and through a number of routes, i.e. brochures, webpages, department / course guides etc.
4. How can the information about fieldwork made available to students be improved to better empower them?
  - It may be appropriate for disabled students to have an opportunity to feed into discussions regarding the activities to be carried out on fieldwork, and to comment on their accessibility.
5. How are these aspects of the fieldwork curriculum monitored and the 'results' fed back into the fieldwork curriculum?
  - It is important that evaluations of adjustments take into account the experiences of non-disabled and disabled students.
6. What strategies can be put in place in case something unexpected happens?
  - Such strategies should be part of the risk assessment

for the fieldwork, but it is useful to revisit these in order to address specific strategies for any disabled students who may be present.

(From Healey *et al.*, 2001; Healey *et al.*, 2006; SWANDS, 2002)

“ ”

‘I knew I would have to struggle – and try not to hold up others, e.g. do not drink for 18 hours before, so loo no problem.’ (Student with complex, multiple disability)

‘Sometimes I suffer panic attacks – these would affect my fieldwork.’ (Student with mental health difficulty)

(Hall & Healey, 2004)

## 8.2 Materials

Along with the design of the specific teaching and learning methods which comprise your curriculum, it is also important to consider the design of any additional materials and documents which will be developed to support the methods and strategies identified as appropriate for an inclusive curriculum.

When preparing documents and handouts, the following points should be noted:

- a) Provide materials in electronic format, as these are most easily converted to alternative formats.
- b) Use clear language and short paragraphs.
- c) Ensure that there is a reasonable space between each paragraph.
- d) Use left justification (i.e. straight left edge, but not a straight right edge). Full justification adjusts the spaces between words and letters to ensure alignment on both sides; this can make text harder to read for a student with dyslexia.
- e) Use a reasonable point size (e.g. 12 point).
- f) For some students a sans serif font (e.g. Arial, Helvetica, Verdana) is easier to read than a serif one (e.g. Times New Roman). Providing an electronic copy of the document means that the student can change the text to their preferred font.

- g) Use bulleted lists. If these are long, consider whether it is worth using numbers instead of bullets so that you can refer students to 'point 6' rather than the '6th bullet point'.
- h) Use styles in Word, for headings, normal text, table of contents etc., to organise your document. The use of such headings can save a lot of subsequent work when documents are converted into alternative formats. For example, when converting Word documents into portable document format (pdf) files, an automatic table of content can be generated based on the heading styles assigned to the document; this is also true for Word documents converted into accessible webpages using software packages such as CourseGenie.
- i) Do not use large amounts of continuous upper text characters, as this can be difficult to read.
- j) Use bold for emphasising words or sentences, in preference to italics or underlining which can make the words appear to 'flow' together.
- k) Do not use more than two different fonts within one document.
- l) Provide glossaries where appropriate.
- m) If appropriate, provide handouts on coloured paper (see below).

“ ”

'Economics asked me if there was a certain colour that helped! They were great. They use coloured paper.'

Teachability (2000)

!

### **I can't print out all my handouts on coloured paper because it would cost too much**

Some disabled students, particularly students with Meares Irlen Syndrome which is often associated with dyslexia (Waterfield *et al.*, 2006), find it easier to read text on coloured paper, as this reduces the glare which can be caused by black print on white paper. Provided that there is a high contrast between the colour of the text and the colour of the paper, this can be an effective way of making handouts accessible to some disabled students.

The exact colour of the paper required for optimum reading capacity will vary from student to student. The general consensus is to use

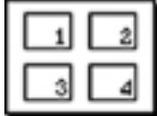
buff-coloured paper, as this appears to be acceptable to the greatest number of students; however, mass copying of handouts onto coloured paper can be more expensive than onto white paper. Also, it is important to remember that not all students will benefit from blanket adjustments such as this. Printing handouts onto coloured paper may be an appropriate reasonable adjustment for some disabled students, but there may be other students who either require tinted glasses or who use a coloured overlay for reading. For these students the use of coloured paper may reduce the effect of their glasses or overlays.

An appropriate compromise may be to ask students at the start of a course / module whether they have any special requirements, which could include having handouts on coloured paper. Some students may not wish their peers to know about their impairment and may request that the coloured version of the handout is either provided in advance, or at an agreed time outside of the lecture room. By asking this question, you are addressing the requirements of the students who prefer handouts on coloured paper, but are not making assumptions about an impairment (e.g. that all students with dyslexia need coloured paper) or introducing an additional barrier for some students because of well-meaning intentions.

Similar points to those noted above also apply to the production of presentation documents (e.g. PowerPoint presentations, overhead transparencies), with the addition of the following:

- a) Convert presentations to accessible formats, for example PowerPoint presentations to rich text format.
- b) Use a minimum size of 24 point of a sans serif font (e.g. Arial, Helvetica, Verdana), as these fonts are generally easier to read from a computer or when projected onto a screen.
- c) When preparing a presentation, consider the '666' rule (i.e. no more than: 6 words per line; 6 lines per slide; and no more than 6 text-based slides before the students either have to engage in an activity or look at something different such as a graphic-based slide or image) (e.g. Westland, no date).
- d) Include space, particularly between lines. Don't feel that you have to fill each slide with text.
- e) Ensure a good contrast between the background colour and the text, and consider that, in general, a dark background and light text is better for dark rooms, and vice versa.

- f) Avoid overlaying text onto backgrounds with patterns or images.
- g) If producing handouts direct from an electronic presentation (e.g. Microsoft PowerPoint), consider whether it would be appropriate to change the Page Setup to landscape orientation with four slides per page. The advantage is that this makes the images of each slide larger. The disadvantage is that this does not include the lines for making notes at the side of each slide; however, there is ample room for students to add annotations in the margins if they wish to do so.

For example,  rather than .

- h) Consider whether text / slide transitions created in electronic presentation software packages are really necessary. If so, try to limit the number of transitions styles used in a single presentation.

(Lists derived from Gravestock, 2006; University of Gloucestershire, 2004)

# 9 Implementing appropriate teaching and learning methods

It is all very well to consider accessibility issues when designing teaching and learning methods, but unless these considerations are continued at the implementation stage, the work will be wasted. For instance, you may have conducted an accessibility audit of your course, part of which involves the use of external speakers to give lectures; if these external speakers are not aware of accessibility issues, the sessions that they facilitate could be inaccessible to a range of students. It is therefore important that all members of the teaching team, and to a growing extent all students, are aware of these issues.

The following sections contain suggestions regarding accessibility issues relating to specific teaching and learning methods. They have been written on the basis that any materials produced will follow the guidelines presented in Section 8.2. There will, inevitably, be some repetition between sections; this is repeated on the basis that a lecturer may wish to review a specific teaching and learning method and may therefore look at an individual section rather than the guide as a whole. Section 9.1 provides some general advice which is appropriate to the majority of the teaching and learning methods discussed.

The information in the following sections has been adapted from: Doyle & Robson (2002); Gravestock (2006); Healey *et al.* (2006); Institute for the Advancement of University Learning (no date); SWANDS (2002); Teachability (2000); University of Gloucestershire (2004); Wareham *et al.* (2006).

## 9.1 General advice applicable to all teaching and learning methods

- a) Ensure that you are aware of any disabled students who may be present. Depending upon your institution's procedures, you may have to be proactive in finding this information.
- b) Do not make assumptions about any requirements that the students may need. Either try to contact the students in advance, and / or make a general announcement to all students to encourage disclosure by requesting that students see you privately to request any methods by which they can participate to their full potential in your lectures (e.g. by providing handouts in advance on coloured paper).
- c) Face the students when talking and do not obstruct your mouth. Make sure that your face is not in shadow (i.e. by standing with a strong light source behind you). Do not shout or over-enunciate words, as this can distort lip patterns.

- d) Make sure that all instructions are given verbally as well as visually.
- e) Provide all new terminology in advance (e.g. electronically via an online glossary). This will help students with dyslexia and Deaf students who may need to discuss new terminology with a sign language interpreter.
- f) Make sure that any important announcements (e.g. a change of room venue, or the alteration of an assessment deadline) are provided in a number of ways, for example: noticeboards; online course area within a virtual learning environment; email; mobile phone text message.
- g) Provide clear instructions for any activities, indicating what you expect the students to do.
- h) Provide suitable breaks within any activity. This will benefit students who are quickly fatigued, or have to take medication; however, be aware that, even with breaks, some students may have to leave during a session (e.g. a student may have irritable bowel syndrome). Do not draw attention to these students, or make an issue about their absence.
- i) If students are not able to eat or drink during a session (e.g. during a laboratory practical), ensure that breaks are allowed so that, for example, a student with diabetes can maintain and monitor their blood glucose levels.

“ ”

‘The three hour lectures could pose a problem if no break was given as it’s important for me to eat to avoid hypos and if they clash with lunch / dinner times this can be awkward.’ (Student with diabetes)

(Hall & Healey, 2004)

!

### **I’m not going to spoon-feed students by providing my lecture notes**

Although not aimed specifically at disabled students, an article in the *Times Higher Education Supplement* entitled ‘I refuse to hand it to students on a plate’ (Furedi, 2005) listed a number of reasons why lecture notes should not be handed out to students in advance, which included:

1. stifling of students’ attempts to interpret lectures;

2. reducing the learning experience of being able to distinguish between essential and non-essential discussions;
3. availability of lecture notes discourages additional reading;
4. removing the incentive to attend lectures.

The final concern is a common one, although there is little evidence to suggest that making lecture notes available prior to a lecture does in fact reduce attendance (e.g. Newland, 2003).

The important point to consider is the reason why some disabled students would benefit from being provided with a set of lecture notes in advance of a session (see below). It is rarely proposed that a full 'verbatim' set of notes should be provided; indeed, if all the lecturer is doing is reading out their notes, there seems to be little 'value added' reason for attending the lecture in the first place, and also assumes a 'transmission' mode of delivery rather than an active learning or student-centred approach (Biggs, 2003). What should be provided is a set of notes which provide details of the structure of the lecture session, including any new terminology which will be encountered. It should be made clear to all students that such notes will not be detailed enough to allow students to gain enough knowledge to miss the session entirely, but their intention is to provide them with the broad details of the topic to be discussed.

#### **Distributing lecture notes provides an opportunity for:**

1. Students to be introduced to new terminology.
  - This is important for students with dyslexia or Deaf students who use a sign language interpreter, as signs may have to be agreed upon for some of the more discipline-specific terms.
2. Aiding understanding of a lecture.
  - Some students may not be able to watch / listen to a lecture and take notes at the same time (e.g. students with dyslexia, Deaf students who are lip-reading or using a sign language interpreter).
3. Improving note-taking.
  - Students will not be as concerned, or anxious, about new terminology or concepts.
4. All students to research a topic in advance.

## 9.2 Lectures

In addition to the advice given in section 9.1:

- a) When presenting visual materials onto a screen (e.g. via an overhead projector or data projector), ensure that the room lighting is as bright as possible, without detracting from the visibility of the screen. Not only will this allow all students to be able to take notes when appropriate but it will allow Deaf students to be able to lip-read. If the room lighting is such that it has to be turned right down, use a spotlight to illuminate your face.
- b) Repeat questions asked by students, even those from the back of a room which may be heard by most students; a Deaf student who lip-reads may not have realised that a question has been asked and other students may have missed the question because they were concentrating on writing their notes.
- c) Use a microphone if present (and ensure that it is working), but make sure that this does not obscure your mouth.
- d) Provide an outline of your session in advance, so that students have some prior knowledge about the material to be discussed.
- e) Ensure that the room is suitable for a wheelchair user, if necessary. Where possible try to ensure that any wheelchair users are included within the group, rather than being placed at the end of a row or at the back of the room. If a room is not appropriate, or not accessible for a particular reason (e.g. the room is not on the ground floor and the lift is out-of-order), discuss with the student whether there are any alternative approaches which could be implemented. For a one-off situation (e.g. lift out-of-order) this may mean trying to find another room or, in a worse-case scenario, the disabled student having to miss that particular session if no alternative accommodation can be found. In the latter case, it would be important to go through the material with the student, and resolve the issue for future sessions.
- f) Turn off overhead projectors when not in use, as these can interfere with hearing aids.
- g) Provide captions or transcripts for video / DVD presentations.
- h) Allow students to record your session.

## ! **Students recording my lectures is an infringement of my intellectual property rights**

In many higher education institutions, copyright of any materials given to the students (e.g. handouts, notes on an internet / intranet site or virtual learning environment) belongs to the institution. In contrast, the actual verbal presentation of a 'lecture', in addition to any *aide-memoire* notes, is the copyright / intellectual property of the member of staff presenting the session.

As with providing lecture notes in advance (see section 9.1), it is important to realise why a disabled student might ask to record a lecture, and how it will be used. For some disabled students, it can be very difficult to make notes whilst concentrating on what a lecturer is saying. This may result in incomplete lecture notes, or lecture notes which do not make sense because an important point had been missed whilst the student was concentrating on writing what they had already heard. Although this situation may be true for non-disabled students, it can be exacerbated for disabled students.

In terms of what a student will do with a recording, consider that an individual student may attend several lectures each week at which they may have to make a recording. It will not be possible for them to listen to each and every lecture again in their own time. The main purpose of a recording is to allow a student to fill in some of the gaps in their notes, or to re-listen to a point which may not have been clear at the time.

There is also the fact that the number of 'traditional' didactic lectures is decreasing, with an emphasis on student-centred learning (e.g. Biggs, 2003). Active learning, group work, problem-based learning etc. are all common techniques used to engage students with the discipline material. A recording of such sessions will only really be useful for listening to points which were missed, possibly due to the level of interaction and the amount of noise generated during activities. There is, however, an issue that in active sessions such as this the other, non-disabled, students may not wish to be recorded. In such cases, it would be important to point out why the recording was being made. As an alternative, a lecturer may feel that it would be more appropriate for one of the students to act as a scribe to record some of the main points from the activities; this would mean that all students had the benefit of the notes and that the disabled student would have access to any parts of the discussion that they had missed. In such a situation, it will be important for the lecturer to ensure that the quality of the notes made is appropriate for distribution to all students.

Returning to the issue of copyright and intellectual property, some institutions have set up a 'contract' between the institution, member(s) of staff and the disabled student which states that the recording is for the sole use of the student for transcription and study purposes and that the tape should be destroyed once the course / module has been completed. Such a contract may alleviate the fears of some lecturers that copies of their lecture will be passed to other students who may then feel that they do not have to attend lectures.

“ ”

'I found that with four hours of lectures in a day I could not for the life of me sit and play the tapes back.'

Teachability (2000)

### 9.3 Tutorials and seminars

In addition to the advice given in section 9.1:

- a) Provide discussion material in advance of the session. Not all students will be able to read materials, such as research papers, and then be able to discuss and debate the relevant issues if they have not had sufficient time to read and understand the material in advance.
- b) Where possible, arrange chairs in a horseshoe configuration so that all students can see each other. For the benefit of students who are lip-reading, try to ensure that the faces of all students are visible and not cast in shadow. If the layout of the room does not allow for a suitable seating configuration, it may be necessary to repeat comments and questions made by students.
- c) Allow only one student to speak at a time. If a blind student is present, it may be appropriate to ask each student to state their name before making a comment; if a Deaf student is present, there needs to be a visual way of alerting the student to a change in speaker, e.g. raising a hand.
- d) If a student wishes to record a seminar or tutorial: first explain to all students why this would be beneficial to the disabled student and would not be giving them an unfair advantage; second, check that all students have given their consent to a recording being made. If some of the students are not happy about this, find another method of capturing the

important points made during the discussion, for example using a flip chart, whiteboard or PowerPoint presentation. These notes could be made by one of the students and should be made available to the group as a whole.

- e) Try to ensure any wheelchair users are included within a group, rather than being placed at the end of a row.
- f) Provide opportunities for all students to participate in the discussion.

“ ”

‘I rarely participate in open discussions in seminars – it often is difficult for me to explain something.’ (Student with dyslexia)

‘Sometimes feel I am unable to participate fully in seminars as I get mixed up and tongue-tied.’ (Student with dyslexia)

(Hall & Healey, 2004)

## 9.4 Laboratory practicals

The issues relating to laboratory practicals and fieldwork activities are different from lectures, seminars and tutorials in that it is important to consider whether students have to **demonstrate** proficiency / competency, or that they **understand** a topic and can perhaps demonstrate this by directing other students / laboratory technicians (Doyle & Robson, 2002; Healey *et al.*, 2006). The setting of appropriate intended learning outcomes (see Section 6) should determine the core requirements of the practicals.

“ ”

‘Some difficulties have been experienced in more accurate work that needs a steady hand, also in using bulb pipette fillers, as I am unable to operate the buttons. There are, however, often sliding fillers that I have used instead.’ (Student with arthritis)

(Hall & Healey, 2004)

Many laboratories can be noisy due to continuously-running equipment (e.g. fume cupboards) and it is therefore useful to reiterate that information should

be provided visually as well as orally.

In addition to the advice given in Section 9.1 and Box 7:

- a) Discuss health and safety aspects in advance of the laboratory practical sessions, and involve disabled students in the design of an effective emergency evacuation plan.
- b) Distribute information about the specific practicals in advance (as for lectures), as this may identify specific issues which will need to be discussed prior to the session.
- c) Make sure that there is at least one height-adjustable work bench.
- d) Following health and safety regulations, make sure that aisles and exits are not obstructed (e.g. by students' bags or coats).
- e) Ensure that safety instructions can be provided in different formats if necessary (e.g. large print, Braille), and that important notices are placed at different heights around the laboratory.

(Adapted from *Barrier-free Education*, no date; Cowork, 2001; Jones, 2002; Kucera, 1993.)



### Scenario

A student with limited upper body strength is studying for an honours degree in geology. The student has difficulty in raising his arms to a horizontal position, especially when seated, and is only able to lift very light loads for short periods of time.

One of the requirements of the honours degree is for the student to complete a geochemistry project in his third year. This involves the preparation and analysis of a series of pre-prepared rock powders. The student is required to work in a laboratory with strong acids (e.g. hydrochloric acid, nitric acid), which are used to digest a suite of rock powders prior to analysis.

As Course Tutor, what would you do to accommodate this student?

### Possible solution:

The course tutor discusses the situation with the student. Both agree that the main aim of this particular project is the ability to interpret geochemical data, and not the manipulation of acids in a laboratory. However, the student is keen to do as much of the preparatory work as possible. The student uses arm supports when working for prolonged

periods at a desk and these could be used in the laboratory for some of the work.

The COSHH (Control of Substances Hazardous to Health) analysis and risk assessments for the laboratory mean that the student cannot use some of the acids, but he will be able to complete some aspects of the rock digestion process. It is decided that fellow students working on similar projects, or a laboratory technician if available, would complete the digestion process under the instruction of the student and / or a laboratory technician.

(Gravestock, 2006)

## 9.5 Field trips

As for laboratory practicals (Section 9.4), it is important to consider exactly what tasks it is necessary for a disabled student to undertake in the field, in order to meet the requirements of the trip.

In addition to the advice given in Section 9.1 and Box 8:

- a) Discuss the field trip activities with disabled students, to determine whether there are any issues which will need to be resolved.
- b) Provide information about the activities in advance. This will assist all students, and may be particularly important if inclement weather makes it difficult to hear instructions when in the field.
- c) Consider whether additional requirements are necessary, such as travel and accommodation for personal assistants.
- d) What strategies are in place should something unanticipated happen?
- e) Do you provide a choice of destinations, so that students can choose the one most appropriate for them?

(For a more detailed discussion regarding the participation of disabled students in field trip activities see Gravestock & Healey, 2002).



### **Scenario**

A student with a vision impairment is present on a field trip. The student requires a personal assistant when in the field, mainly for guidance across uneven terrain.

As field trip leader, what would you do to accommodate this student?

**Possible solution:**

In addition to providing full information about the whole trip at the beginning of the course, the tutor provides detailed information about each day in advance. The student therefore has an idea about how much walking will be involved and the nature of the terrain (and therefore whether guidance from a personal assistant will be necessary). Detailed information about the weather forecasts are also provided so that all students take appropriate clothing with them into the field.

The tutor also uses Wikki Stix to illustrate features whilst in the field. These are pieces of string covered in coloured wax, which are reusable, flexible and stick to any relatively smooth surface. All students benefit from the Wikki Stix 'sketches', but the added benefit for the student is that they provide a tactile sketch of the feature being described.

(Gravestock, 2006. The case study is based on Hansen, 2002.)



**We can't take disabled students on fieldwork, for health and safety reasons**

Health and safety legislation has 'priority' over the DDA. Therefore, if there is a health and safety issue in taking a disabled student on fieldwork, then it is likely to be legally acceptable not to allow the disabled student to participate in the trip (see Scenario below). However, there are a number of important points which should be considered relating to such examples:

1. Health and safety should not be used as an 'excuse'.
2. It is vital that a proper risk assessment has been completed.
3. Have alternative activities / locations been considered?

The final point in this list is the most important. It may well be the situation that a fieldwork location which has been visited for many years is inaccessible to some disabled students; however, **are there alternatives which will show the features of interest and which are accessible to disabled students?** Naturally, there will be some situations where it may not be possible for a disabled student to access every locality or exposure on a field trip, but there may be appropriate alternative activities which can be carried out at the inaccessible

locations which mean that the student is able to participate in the majority of the fieldwork with their peers. Such alternatives might include the use of video, photographs or looking at a different example which may not show all the relevant features but which is accessible. More information is provided in Gravestock & Healey (2002).



### Scenario

A pupil with cerebral palsy who uses a wheelchair is on a field trip. The lecturer arranges to take the group on a 12-mile hike over difficult terrain to look at glacial deposits but, having carried out a risk assessment, they decide that the student who uses a wheelchair will be unable to accompany the group for health and safety reasons.

This is less favourable treatment for a reason that relates to the student's cerebral palsy, namely the use of a wheelchair.

The treatment that she was to receive then has to be compared with the treatment that the others would receive who did not use a wheelchair. They were being offered the opportunity to go on the hike whereas this student was being denied it.

#### **Do you feel that this is justified and legal?**

The responsible body is likely to be able to justify the less favourable treatment for a material and substantial reason: a risk assessment, carried out in relation to this particular pupil in the particular setting in which she would have to travel, indicated that the health and safety of the student, and her peers, could be jeopardised if she were to attempt the hike. This is likely to be lawful.

(Based on DRC, 2002b, Example 5.17C)

Although this example is likely to be lawful, there is the possibility that some alternative activity could have been provided. It might also be worth considering whether a 12-mile hike is an appropriate way of meeting the learning outcomes for the trip or whether there are other, accessible, examples of glacial deposits which could have been used instead.

# 10

## Designing appropriate / accessible assessment

Setting appropriate assessment activities is one of the most important aspects of maintaining academic standards, and the development of an inclusive curriculum based on the model of constructive alignment. These assessment practices should not be considered solely in terms of the 'end of course' summative activities, but should also take into account any formative assessment practices which are implemented to assist student learning outside formal contact sessions (see, for example, Gibbs & Simpson, 2004).

When considering the assessment of disabled students, Demos (2002) makes the distinction between three categories of assessed activity:

- Alternative assessments  
i.e. a different method of assessment compared with non-disabled students.
- Additional arrangements  
i.e. resources that are in addition to those offered to non-disabled students (e.g. a computer or scribe).
- Adjustments / accommodations / adaptations  
i.e. alterations in the implementation of an assessed activity (e.g. extra time).

Anecdotal evidence suggests that many universities have, in the past, undertaken a combination of the final two categories; however, with the increase in the number of disabled students participating in higher education, it is clear that these 'ad-hoc' arrangements cannot continue. For example, the use of a scribe is likely to mean that a disabled student undertakes an examination in a separate room, so as to not disturb other students whilst they dictate their answers to their scribe. This will therefore require an additional room and invigilator and it is clear that there will be a finite limit to the available resources for such arrangements. It may therefore be necessary to take a more radical look at assessments which require additional arrangements or adjustments / accommodations or adaptations. If alternative, accessible, assessments were set, then there would be no need for some of these additional 'ad-hoc' strategies.

The 'Accessible Assessments' website at Sheffield Hallam University <[www.shu.ac.uk/services/lti/accessibleassessments/index.htm](http://www.shu.ac.uk/services/lti/accessibleassessments/index.htm)> provides a list of common assessment activities (e.g. written examination, essay, field trip, oral presentation, poster presentation, etc.) and provides advice to consider

relating to students with specific impairments who may be undertaking these assessment activities.



### **Questions to consider when developing accessible assessment**

Have I:

1. Considered the needs of disabled students at the design stage, and thought about the accessibility of examinations and other assessment methods?
2. Tried to change the way in which the assessment is delivered, rather than the way in which it is marked, to take account of the needs of disabled students?
3. Involved students, and other colleagues, in decisions relating to the setting of alternative assessments or where adjustments are made to assessments?
4. Asked students to give feedback on adjustments to assessments?
5. Collected statistics on the examination and assessment results of disabled students, and compared these with those of non-disabled students so that any difficulties can be identified?
6. Checked the language of examination papers, to assess whether it is clear and unambiguous? (This is important for students with dyslexia, and also for Deaf or hard of hearing students whose first language may not be English.)
7. Provided the assessment in alternative formats, if required, or have the assessment in a form which is easily adapted?
8. Allowed students who require an amanuensis, or scribe, to practise working with the amanuensis prior to the assessment? (The amanuensis should have some knowledge of the subject.)
9. Provided comments and feedback on coursework or formative assessment, in alternative formats?
10. Been clear about what is being assessed, e.g. will grammar and spelling be considered as well as content?
11. Ensured that students are able to access past examples of assessment, and that these can be provided in alternative formats if necessary?

12. Considered the needs of individual students, where necessary, and not made assumptions of their requirements based on a general knowledge of the student's impairment?

(Adapted from: Demos, 2002; DRC, no date; Sheffield Hallam University, 2003; Teachability, 2000)

“ ”

'I have struggled at all these [written examinations] due to processing information, constructing essays, putting thoughts onto paper, remaining on the subject and understanding questions.'  
(Student with dyslexia)

'I am often told my written work doesn't pay credit to my understanding of the subject. I am continually frustrated by my inability to convey my understanding and views of a subject whenever written work is involved.'  
(Student with dyslexia)

(Hall & Healey, 2004)

Some non-disabled students may consider that an alternative assessment which is set for a disabled student may be giving this student an unfair advantage. For example, there may be a number of non-disabled students who do not perform particularly well in formal examinations who may feel upset about the fact that an alternative to the formal examination is provided for some disabled students. The question to consider here is why shouldn't the alternative assessment be available to all students? If you have decided that the alternative assessment meets the intended learning outcomes and maintains academic standards, then why shouldn't all students have the choice to undertake this particular form of assessment? If you decide that this is not appropriate, you need to ask yourself, why not? In the case of formal examinations, how important is it that the examination is time-bounded? What skills are being assessed? If it is the ability to work under pressure, what is the relative weighting of this skill compared with the others being tested, such as knowledge or construction of essays etc.?

 **Scenario**

Students with dyslexia on a Geography course are required to submit their dissertation at the same time as non-disabled students. It is appreciated that these students are faced with a disadvantage in that they may have spent more time reading and researching for their dissertation, in addition to spending more time composing and writing the document.

What could you do to reduce this disadvantage?

**Possible solution:**

It may be possible for the dissertation to be returned to the students immediately after submission, having been briefly looked at by a member of staff to check that the relevant content is present. The students are allowed an additional two weeks to check the grammar, spelling and structure of the document, but not to add to the content. (A copy of the original submitted dissertation should be retained in case there are concerns that additional information has been added.)

(Gravestock, 2006)

# 11

## Evaluating adjustments

Any adjustments that you make to your curriculum should be evaluated during a course / module, including any changes made to assessments. This evaluation should consider the impact of the adjustments on non-disabled students in addition to disabled students. For example, it would be important to determine whether an adjustment benefits a small number of disabled students, but disadvantages a larger proportion of non-disabled students. In this case, the nature of the adjustment may have to be reconsidered to assess whether it fulfils the requirements of a 'reasonable adjustment'.

Having completed the evaluation of the implemented adjustments, it may be necessary to return to the 'Designing appropriate teaching and learning methods and materials' stage (see Section 8) and to work through the rest of the framework.

# 12

## Conclusions

Much of the advice presented in this guide is simply common sense, or examples of effective practice which you may already employ in your teaching but had not considered in terms of the relevance to accessibility and inclusivity. Many of these examples do not require additional funding or resources, and will not require you to expend much additional time in their design or implementation. Also, because the strategies are based on effective teaching practices, the adoption of these techniques will generally benefit all students, not just disabled students.

A summary of some of the key points from this guide is as follows:

- a) Do not make assumptions about what requirements a disabled student will need, based solely on a knowledge of their impairment.
- b) Talk to disabled students to discuss the most effective teaching and learning strategies for them. This does not stop you from being anticipatory, but addresses the fact that all disabled students are different.
- c) Determine the core requirements of the subject that you teach.
- d) Always assume that you have disabled students in your course who have not disclosed.

“ ”

‘Have enjoyed the course **so much** - very diverse modules. Just finishing now. Want to do Masters (urban regeneration) but can't afford to. After years of isolation / boredom / loneliness, felt like I came back to life.’ (Student with complex, multiple disabilities)

‘I do not expect anyone to plan field trips round me. Nor do I want to miss them. I enjoy them. Missed too much of life already.’ (Student with complex, multiple disability)

(Hall & Healey, 2004)

# 13

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