# Developing an inclusive curriculum: a guide for support staff

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

# INCLUSIVE • CURRICULUM • PROJECT

<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/>. 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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<www2.glos.ac.uk/gdn>

# Developing an inclusive curriculum: a guide for support staff

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Series edited by Michele Hills and Mick Healey
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Published by:

Geography Discipline Network
University of Gloucestershire
Swindon Road
Cheltenham
Gloucestershire
GL50 4AZ

Developing an inclusive curriculum:
a guide for support staff

ISBN: 1 86174 168 5

Typeset by Michele Hills
Cover design by Michele Hills and Trudi James

Printed by:
Frontier Print and Design Ltd
Pickwick House
Chosen View Road
Cheltenham
Gloucestershire, UK

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# Acknowledgements

This guide has taken a long time to develop, and has drawn on the experiences of support and academic staff in a range of departments, including particularly the Department of Natural and Social Sciences at the University of Gloucestershire. My sincere thanks go to them all, and to my brother Andrew, through whom I first became aware of the many challenges that disabled people face when learning.

Carolyn R. Roberts

# 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 advisers 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/>.

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 advisers. 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 advisers 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> and TechDis <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 (GeolSoc)
- 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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# 1 Setting the scene

## 1.1 Who are the 'support staff' and what do they do?

The activities of departmental 'support' or 'professional' staff influence students' learning both directly in face-to-face settings, and indirectly through the work they do alongside academic staff, in many different roles. Many Geography, Earth and Environmental Science (GEES) departments in universities and colleges include technicians, administrators, cartographers and resource centre managers amongst their staff. Larger departments may have a range of other staff, including ICT managers, data analysts, librarians, drivers and equipment technicians. These are people who make a real difference to students' experiences and learning. Their understanding of legislation such as the Disability Discrimination Act Part IV (DDA), and of good practice in relation to disability, is just as important as that of the academic staff. Moreover, some senior support staff will be involved in higher education policy setting, and in organising and guiding the work of their colleagues in laboratories, resource centres, departmental libraries and offices. They are essential players. However, their contribution to the life of a department can sometimes be undervalued or unrecognised. Otherwise excellent books on the management of universities, for example, may make only passing reference to support staff roles, for example in grounds maintenance or catering (e.g. Shattock, 2003). Even the categorisation of 'support staff' used in the title of this guide is contested, although it seems less controversial that the negatively defined 'non-academic' staff; how many other jobs can there be which are potentially identified in terms of what they are not?

Support staff in geography, earth and environmental science departments perform many duties, including:

- assisting students by providing basic information and administrative services, such as through departmental offices and reception areas;
- assisting academic staff with specific administrative functions relating to core activities such as teaching and research;
- providing guidance to (and sometimes control of) students in technical areas such as geosciences laboratories and IT suites;
- producing and presenting technical information for staff and students;
- brokering information to keep departments running smoothly;

- demonstrating the use of specialist equipment or facilities to support student learning, where inevitably there is a blurred divide with the 'teaching' role undertaken by academic staff;
- undertaking analyses for research and knowledge transfer activities.

The balance of these activities for individual staff and specific departments will contrast. Moreover, although support staff perform such crucial and expert roles, the way in which their activities are organised and managed differs considerably from one institution to another, which has major implications for the nature of their engagement with students. Some GEES departments have a strong focus on undergraduate teaching, whilst in others research predominates. In a small minority, the typical student will be undertaking postgraduate study. Support staff may work wholly within individual departments, directed by a Head of Department or indirectly through a senior departmental manager. Others operate across Schools or Faculties, engaging with students and academic staff in a range of related subjects, not only GEES disciplines. In some universities, specialist support staff will rarely meet students other than in the refectory queue or at the bus stop. However, in most institutions there are efforts to maintain links between teaching and research, and it is therefore likely that a majority of support staff will interact with students from time to time.

Strangely, there are few definitive reviews of the numbers and characteristics of support staff in GEES or other university departments. Based on a telephone and postal survey in 2004, it has been estimated that some 660 technicians and 540 administrators work in GEES departments in UK HEIs (Roberts, 2004). The typical student to support staff ratio is around 35:1, roughly double that for academic staff, but the range is enormous and the arithmetic adaptable depending upon who is included. The ratio for administrators in polled departments averaged 79:1, with a range from 27:1 to 112:1. A similar variability affects the technician ratio, with an average ratio of 64:1, but a range from 26:1 to 320:1. Some of this variability reflects the specialisms of GEES departments, with levels of technological support higher in the more scientifically-focused earth science areas, as compared to the humanities-based realms of geography. In the view of some support staff, high ratios may also reflect profound under-investment in support capacity, leading to serious difficulties in coping with new challenges on top of existing duties. Nonetheless, this is a significant number of personnel, who theoretically should have a powerful influence.

However, university support staff rarely operate as a group, infrequently meet to discuss policies relating to higher education, and seldom speak with one voice. There is no single representative body, although trades unions such as UNISON and AMICUS (and for some support staff, the Association of University

Teachers (AUT) and the National Association of Teachers in Further and Higher Education (NATFHE), currently on the point of amalgamation) do provide theoretical channels of communication. Professionally, support staff may be members of diverse organisations such as the Society of Cartographers, the Royal Society of Chemistry, the Association of University Administrators, or the Chartered Institute of Library and Information Professionals, according to their various interests. But for the most part these bodies do not include the support of students' learning amongst their priorities. Some support staff work single-handedly in small departments, providing a range of services from administration and reception duties to driving and equipment loans. They feel hard pressed to cover the range of duties, and may complain of the limited opportunities for staff development, and the lack of consideration of their views and potential inputs. This is the context of communication challenges within which many support staff operate.

## 1.2 Why is this guide required?

Support staff potentially face many different scenarios involving disabled students (and indeed disabled colleagues, whose needs, though not the focus of this guide, will be similar) every day of their working lives.

As a departmental secretary, you may encounter disabled students as they arrive in the office for advice on where they can find out about the demands of a field class, how they can secure advance information on a laboratory practical, or whether they are entitled to additional time to complete an examination. Sometimes the disability will be immediately apparent to you, for example, a student using a wheelchair or support frame, or wearing a hearing aid. But more typically you will not be aware of a student's impairment. The student may have dyslexia, experience mental health problems, or be insulin-dependent. Can you be sure that your practices allow each student to secure the information they need efficiently, and without undue difficulty?

As a laboratory technician, you normally prepare reagents for students who arrive in the laboratory, assemble their equipment, and start following the analytical instructions in a standard text. But occasionally someone may unexpectedly require additional assistance because they have difficulty reading the small print or opening jars, taking you away from research tasks you had previously scheduled. Should this be happening so frequently?

Or as a resources centre manager, you may increasingly find that the style of web index pages you create is being scrutinised for accessibility, according to particular conventions, and that some of your material has to be rewritten. The time to do this has to be drawn from somewhere, and time is a precious commodity. How can you plan ahead to work effectively?

In every case, issues are arising because you may not have been aware of the relevant issues, or not have the relevant knowledge and skills to prepare appropriately for them. This is both a barrier to the disabled student's participation, and wasteful from your point of view. The appropriate word for being prepared for these situations is **'anticipation'**; you need to anticipate the issue potentially arising and make provision.

The law now requires that universities and colleges comply with the Disability Discrimination Act Part IV; there is more about the legislation in section 2.1 of the guide and in the Issues guide of this Inclusive Curriculum Project series. They have a duty not to treat people 'less favourably' for a reason related to a disability, and to ensure that they make 'reasonable adjustments' such that a disabled person is not placed at a substantial disadvantage compared with a non-disabled person. The DDA Part IV embraces almost every part of a student's life at university, including the physical and operational aspects of working in a department, the services they receive from careers advisers, librarians and ICT administrators, and the curriculum they study. It also affects students' access to social opportunities linked to the institution. Responding to this challenge is not an optional activity that may or may not be undertaken, dependent on whether sufficient time and resources appear to be available. There is a legislation-driven government agenda for the increased participation of disabled people in higher education, and compliance from universities and colleges and their staff at all levels is mandatory.

At face value, this might imply that you should respond to the situation by providing the bare minimum of support to disabled students, according to the law, whereas forethought suggests that a positive and proactive approach may yield better results for everyone. We know already that the number of disabled students in higher education has risen steadily since the mid 1990s, and will continue to rise. Section 2 contains more information about this. Whilst some of this rise is probably the result of increased declaration of disability by students who might formerly have kept the information to themselves, some of it reflects more disabled students earning places in universities and colleges; it represents a genuine and welcome increase in accessibility. Disabled people are rightly seeking and securing a fairer share of the educational resources of the country, and their numbers are very unlikely to decrease in future. Consequently, high quality teaching and learning can only be maintained by integrating disabled students effectively into existing provision, changing the practices of everyone who is involved in supporting them. It is not going to be possible to make significant progress by making *ad hoc* adjustments in response to particular individuals' circumstances.

There is also need for interpretation of the legislation, and this guide is intended to assist in establishing what is 'reasonable', as well as what is desirable. But perhaps overriding all of this is a need to ensure that teaching and learning is

made increasingly accessible to everyone, not just disabled students. University students are becoming more and more diverse in terms of age, ethnicity, ability, personal circumstances and disability. As Healey (2004) has argued, the legislation relating to disability is potentially a Trojan horse that will generate debate about access and widening participation more generally. Adjustments made to accommodate disabled students are therefore potentially the means to securing improved services for all students. This is a debate in which support staff need to participate.

## 1.3 Objectives of the guide

The objectives of this guide are to

- consider some of the factors that influence the work of support staff, including the lines and methods of communication which exist within universities and colleges;
- examine some of the issues that may arise when planning for compliance with the DDA Part IV, as part of the department's 'anticipatory duty';
- provide a series of scenarios that may be used to highlight the operational aspects of meeting disabled students' needs effectively;
- identify a range of specialist resources that are available to support staff with different roles;
- stimulate support staff to modify their work practices and those of their colleagues, beyond mere compliance with the DDA Part IV, towards proactively offering an inclusive experience for all students.

A short guide such as this cannot provide detailed information relating to the complete range of situations in which GEES support staff work, but it does provide examples of the issues which can arise, so that you can think about identifying the relevant information to help you respond. Some of the scenarios provided are based on real life, and others are hypothetical, sometimes based on composites drawn from universities in the UK. The guide offers friendly and sensible advice that is feasible, tried and tested. But solutions for all situations, for all staff and for all disabled students, cannot be provided. Much will need to be worked out for individual people in their different professional work settings. The guide is intended to prompt you to think about changing your practices to make the services you offer more generally accessible to disabled people. It suggests that you may require staff development to do this, and that you should request appropriate opportunities. It may also prompt you to think about the values and attitudes you hold.

Just as support staff roles are many and various, so are the circumstances of disabled students. Hence using a general title of 'disabled students' is itself a problem. It is vital to emphasise the importance of individual discussion with disabled students, rather than assuming that one solution is appropriate for all. Nevertheless, there is a balance to be struck between necessary individual discussions and a situation where numerous students need to explain repeatedly what their needs are to many different staff. So, effective communication and record keeping are vital tools. This means that the moves to include disabled students more fully in departmental life are part of a broader agenda of social inclusion, and everyone capable of benefiting from higher education can be offered an opportunity to study in your department, regardless of their personal circumstances.

## 1.4 What does the guide assume?

This guide assumes that you probably receive direct or indirect guidance about your duties from a manager or an academic Head of Department, although you might also have an opportunity to provide operational advice to them from your perspective. Most support staff do not set the details of the curriculum for students, but you could offer advice to academic staff when they arrange learning activities in specialist facilities, and you may have some autonomy over the administrative arrangements for supporting both staff and students. There is more about communication structures in Section 2.4. The guide does not assume any particular responsibilities, but does assume that you will be willing to move to full compliance with the DDA Part IV, even though it may be demanding. You may also find yourself challenging your manager's assumptions and practices, or those of your Head of Department. In responding to the needs and aspirations of disabled people, cultures, policies and practices may have to be further developed, and some of the long established rituals of departmental life will be questioned and ultimately abandoned, but in doing so there should be improvements to the experiences of all students.

Disabled people are sometimes viewed principally as objects of concern in need of medical assistance, or as tragic individuals whose 'bravery' and resourcefulness demonstrate extreme endeavour in the face of suffering, adversity or overwhelmingly poor odds. Indeed you have probably seen media examples of individuals or groups of disabled people who have fought their way across hundreds of miles of hostile terrain, or struggled to reach positions of national importance in government or industry. Whilst sometimes inspiring, this is not the norm for disabled people or for any of us. Such perspectives are linked to a **medical** model of disability, where we assume that interventions from doctors and special arrangements from others are needed to help a person who has something wrong with them, and where intellectual success is unusual.

By contrast, this guide presumes that we hold a **social** model of disability where disabled people do not need sympathy, pity, or celebration beyond any other group, but that the barriers to their participation and learning need to be identified and removed. Although disabled people may have physical or mental impairments to learning, the removal of barriers will enable them to operate amongst everyone else and to be equally valued for their contributions to the departmental environment. There is more information about this in the overview guide in this series, *Issues in developing an inclusive curriculum: examples from geography, earth and environmental sciences*.

You may be anxious about your involvement with disabled students, concerned lest you cause offence by using badly chosen language or gestures, despite trying your best to assist. This situation is now widely caricatured in comedy programmes on television, including 'The Office' and 'Little Britain', where well-meaning but ill-informed 'helpers' are seen to blunder further and further into inappropriate territory, causing embarrassment to everyone. Your apprehension is undoubtedly shared widely amongst your colleagues. Terminology and vocabulary are possible sources of nervousness, as what is seen as acceptable has varied over time. There is a very interesting discussion of this on the BBC disability website *Ouch!* at <http://news.bbc.co.uk/go/em/fr/-/1/hi/magazine/3708576.stm>. A lengthier but very readable analysis is available at <www.manchester.gov.uk/disability/language/index.htm>. Adjectives such as 'handicapped', 'spastic', 'crippled', 'retarded' and 'wheelchair-bound' have largely dropped out of use in the UK, as we recognise the stereotypes and prejudices that have existed in our minds. This mirrors the way our approach to race or ethnicity has transformed over the years, with certain words becoming unacceptable. Much more positive media role models appear in the American television situation comedy 'Malcolm in the Middle', in which a key character, Stevie, is a young, black, asthmatic wheelchair user whose friends are determined to include him in everything. You should not let the fact that this programme is aimed mainly at teenagers deter you from observing the refreshingly constructive relationships portrayed.

Some disabled people and supporting organisations in the UK now prefer to use the word 'impairment' rather than 'disability'. Strictly speaking:

- an *impairment* refers to a defect in a limb, organ or mechanism of the body, for example someone's eyes, ears or neurological patterns, which could be caused by injury, illness or a congenital condition;
- a *disability* refers to a restriction of activity caused by the way society is organised, so that people who have physical or mental impairments are excluded from participating in mainstream social activities such as higher education by physical, organisational and attitudinal barriers. This segregation may be seen as a particular form of oppression.

The Disability and Discrimination Act 1995 refers to a disability as 'a physical or mental impairment which has a substantial and long-term adverse effect on his or her ability to carry out normal day-to-day activities'. Consequently we might speak of a student 'having' an impairment such as deafness or arthritis, but we would refer to them 'experiencing' disability, rather than 'having' a disability. It is also worth keeping in mind that you and your academic and support staff colleagues may yourselves be disabled. If so, you would expect to be treated individually, with consideration and respect, and spoken to using appropriate language. You would probably not welcome being asked for intimate personal or medically-related details by a near stranger, for example. Disabled students will not necessarily expect this either. But for the most part, any initial stumbling words will be understood if you act sensitively and in good faith. Misjudgements are anyway less likely if you undertake some training and gain experience.

Most universities and colleges already have a range of structures in place relating to disability, on which support staff can draw for help. This may include a Disability Coordinator or adviser who provides guidance on the support available from the university and elsewhere, including the Disabled Students' Allowances (DSA). This latter is an entitlement to financial support, applicable to some disabled students. Over the last few years, experience will have been gained of physical modifications to premises, including the installation of ramps and lifts which are intended to assist mobility-impaired people physically to access buildings, and of the installation of induction loops to assist hearing-impaired students. But universities are not only making improvements to their physical infrastructure. Many institutions have also instigated 'diversity awareness training' for their staff, helping them to put themselves in the position of someone from a group currently under-represented in higher education, such as disabled people. A training course will also allow you to practise appropriate styles of communication, and to explore up-to-date vocabulary. If you have not had the opportunity to attend such a course, then ask about it.

## 1.5 Structure of the guide

Whilst the information in section 1 of this guide is mainly provided as background, section 2 contains more material designed to assist you to think through your own particular circumstances, and decide how to act. Your action may be very localised – a checklist for reflecting on your own personal actions and your communication with students – or it may involve exercising wider responsibilities such as designing new procedures, reviewing the learning arrangements for particular activities or developing your support staff team's awareness of issues relating to disability. Specific sections of the guide address

specialist roles, such as those held by laboratory technicians, administrators and cartographers, and these include some scenarios to illustrate the points.

Appendix 1 contains brief guidance notes and advice based on the scenarios in the text, which may help you to work through similar cases in the context of your own institution. For senior support staff, these can be used as the basis for short staff development sessions with your colleagues.

## 1.6 Links to other guides

This guide has been designed so that it can be read alone, but it is supported and cross-referenced to the other guides in the Inclusive Curriculum Project series. There are five volumes focusing on meeting the needs of people with a specific disability, plus a guide for lecturers, a guide for Heads of Department and Course Leaders, one for disabled students themselves and finally, an overview guide. You may want to read some of the others yourself to gain more detailed information on particular aspects of disabled students' support, or to refer other people to them. There are particular similarities between this guide, the one for Heads of Department and Course Leaders and the one for lecturers, since all are aimed at particular groups of university employees.

# 2 The national and institutional contexts

In ten years, the total number of disabled students in higher education who have registered as being disabled has quadrupled to over 120,000 (HESA, 2004), and there is no doubt that there are many others who keep knowledge of their disability to themselves, or who do not regard themselves as disabled despite an impairment (such as dyslexia). Roughly one in twenty, 5%, of all students have 'declared'. But the actual proportion is probably closer to 10% because of the stigma percieved to be attached to some impairments. Table 1 presents an overview of the undergraduate population, and compares the figures for GEES departments with universities and colleges generally.

**Table 1:** Percentage and number of undergraduates entering higher education.

| | **1994-95** | **2001-02** | **GEES 2000-01** |
|---|---|---|---|
| Total percentage of students known to have a disability | 14,034 (3.1) | 32,165 (5.0) | 6.9 |
| Specific learning difficulties (includes dyslexia) | 2,112 (15.0) | 11,965 (37.2) | 43.0 |
| Blind/visual impairment | 597 (4.3) | 1,085 (3.4) | 1.9 |
| Deaf/hearing impairment | 985 (7.0) | 2,055 (6.4) | 4.7 |
| Wheelchair user/mobility difficulties | 925 (6.6) | 1,600 (5.0) | 2.3 |
| Personal care support | 30 (0.2) | 100 (0.3) | 0.1 |
| Mental health difficulties | 267 (1.9) | 1,440 (4.5) | 1.8 |
| Unseen disability | 6,960 (49.6) | 7,490 (23.3) | 31.9 |
| Multiple disabilities | 675 (4.8) | 2,405 (7.5) | 2.7 |
| Other disability | 1,483 (10.6) | 4,030 (12.5) | 11.6 |

Note: Figures in brackets in row 1 of the table represent the percentage of disabled students entering higher education. In all subsequent rows, the percentage of each impairment is given in relation to the total number of disabled students. The GEES 2000-01 data represent the percentage data for disabled students in GEES subjects (data from the Higher Education Academy GEES Subject Centre).

It is apparent from the table that undergraduates in GEES subjects are more likely than other students to have impairments such as dyslexia and related learning difficulties, and unseen disabilities such as diabetes, asthma, epilepsy and ME/Myalgic Encephalopathy or chronic fatigue syndrome. On the other hand, they are less likely than other students to be visually impaired, experience mobility difficulties or mental health problems, although the differences from other subjects are usually small. GEES disciplines have a similar pattern to most of the physical science subjects. You may notice that GEES students are slightly more likely than average to register a disability of any sort, 6.9% as against the 5% recorded nationally, although whether this reflects a higher percentage of disabled students studying GEES disciplines, or a greater proclivity to declare an impairment, is unknown.

The disabled students you could expect to find in your own department are most likely to be experiencing a specific learning difficulty such as dyslexia (a difference in the brain area that deals with language, adversely affecting their information processing abilities), dyspraxia (an impairment or immaturity in the organisation of movement) or dyscalculia (a mathematics difficulty), with about 3% of all your students being affected. This is ten times as many as for any other medically-defined disability, and includes 38% of all the disabled students in GEES departments in 2001/2. This figure is worth bearing in mind because dyslexia is a disability which affects almost every aspect of students' learning experiences, whether in the laboratory reading health and safety guidance, in the IT suite searching for information, or at the reception desk establishing the whereabouts of their tutor. Table 2 (see overleaf) shows the complete breakdown, as best understood, but the categorisation has changed from year to year and the figures differ somewhat from those shown in Table 1.

From the table you will also see that you will typically encounter deaf or hearing impaired students only very occasionally (the ICP guide *Developing an inclusive curriculum for students with hearing impairments* will assist here), and wheelchair users even less frequently (see ICP guide *Developing an inclusive curriculum for students with mobility impairments*). The reality is that the combined numbers of these students in GEES disciplines nationally are probably less than students with mental health difficulties. Mental health impairments are least likely to be declared; there still remains a real stigma attached to such a declaration, unfortunately. It has been estimated (see *Developing an inclusive curriculum for a) students with mental health difficulties*

*b) students with Asperger Syndrome*) that, for every 10,000 students, 3,377 will experience anxiety and depression at any one time – over a third – with another 2,200 having other clinical symptoms of mental health difficulties. Again, the incidence will vary greatly from institution to institution. Students of GEES disciplines appear similar to others in this regard. Additional up-to-date statistics are given in the ICP *Issues in developing an inclusive curriculum* guide.

**Table 2:** LTSN –GEES disabled students

| **Disability category** | **Percentage of UK disabled students in LTSN – GEES 2001-02** |
|---|---|
| Dyslexia | 38.1 |
| Unseen disability | 19.4 |
| Wheelchair user / Mobility difficulty | 6.0 |
| Mental health difficulty | 4.6 |
| Deaf / Hearing impairment | 7.3 |
| Blind / Partially sighted | 3.1 |
| Multiple disability | 9.2 |
| Other disability | 11.9 |
| Asperger Syndrome / Autism | nsi |
| Total | 100 |

nsi – not separately identified

Source: Hall and Healey, 2005 p.5

Most of the classifications are relatively straightforward. 'Personal care support' (Table 1), refers to the provision of a personal assistant, and can include some students disabled by autistic spectrum disorders, or Asperger Syndrome. The recently published award-winning novel entitled 'The Curious Incident of the Dog in the Night-Time' by Mark Haddon gives some insight into the challenges of everyday life for someone with this impairment, and you may find it an interesting read. Autistic students experience specific difficulties in face-to-face meetings, and may find activities such as closely supervised laboratory work particularly challenging. The categorisation used in Table 1 refers to the availability of dedicated support workers, but many students cope without this support. 'Mental health difficulties' refers to mood-related disorders such as depression, anxiety-related disorders (phobias, panic attacks, post-traumatic stress, compulsive or obsessive behaviour), psychosis (schizophrenia or bipolar disorders), eating disorders (bulimia, anorexia nervosa) and personality disorders (SWANDS, 2002).

You may wish to understand a little about each of the disabilities, although your employer will obviously not expect or wish you to embark on medical diagnoses. Keep in mind the fact that every student is different, and that we still understand relatively little about their academic experiences. Some interesting perspectives from individual disabled students can be found in the website linked to this project at <www2.glos.ac.uk/gdn/icp/>. Case study 6 refers to the experiences of a physical geography student with dyspraxia trying to use a library, for example. As SWANDS (2002, p.119) points out, students disabled by specific learning difficulties, 'are all individuals and the impact of their dyslexia (dyspraxia and dyscalculia) will vary according to their particular strengths, their choice of study and their coping strategies'.

**Prompt:**

How does your own department's experience of disabled students compare with the statistics in Tables 1 and 2? Do you think that your department has more or fewer disabled students than the national average, and if so, why? Might there be something in your publicity material, or other information that you make available, that either encourages or deters disabled students from applying to study your department's courses? Do you share any responsibility for this?

## 2.1 National DDA legislation

The Special Educational Needs and Disability Act (SENDA) became law in September 2002. This act is an amendment to the Disability Discrimination Act (DDA) of 1995, and is known as Part IV. Since 1st September 2002, all universities and colleges have a duty not to treat people 'less favourably' for a reason related to a disability. There have been phased implementations that widened the groups of people covered by the legislation (i.e. who is disabled), and the nature of services required to comply with it. Universities are also required to make 'reasonable adjustment' to ensure that a disabled person is not placed at a substantial disadvantage compared with a non-disabled person. Beyond this, it is the university's responsibility to make sure that 'reasonable adjustment' anticipates the needs of disabled people generally, and does not only respond to the needs of known disabled individuals.

Everyone in a department should therefore think ahead and anticipate that disabled students might be members of any class, any field trip, any practical session or undertaking any activity that they oversee. They may be studying as undergraduate, postgraduate (including research students) or extra-mural students, on the campus or as distance learners. They may just be attending

a short course or 'taster day'. Provision will normally have to be made to allow them to participate alongside other students, and this may require an adjustment to what is currently being offered. This thinking ahead is referred to as the institution's 'anticipatory duty'.

Determining what is 'reasonable' requires some consideration, since your view and that of a disabled student may differ, and there is very little legally determined case law yet. Reasonableness will depend on all the individual circumstances of the case, including the importance of the service to the student's course and learning, the financial or other resources of the institution and the practicality of making the adjustment. Further matters, such as the need to maintain health and safety and the relevant interests of other people including other students are also important. SKILL, the National Bureau for Students With Disabilities, has a useful website that gives some examples of differences of opinion which arise between students and institutions about 'reasonableness' at <www.skill.org.uk/>; however, there are unfortunately no GEES students in their sample.

As SKILL also points out, making sure you do not place a student or potential student at a 'substantial disadvantage' starts with the information you make available to them. Information for your area needs to be accessible and to give accurate information to disabled students and potential students. Depending upon your role in your department, you might need to consider:

- Is information about your services accessible to disabled students? Is it available, or potentially easily available, in alternative formats (electronically, in Braille or in large print, for example)?
- Is web-based material accessible to those using assistive technology, such as screen reading software, or those not using a mouse?
- Does information about services and facilities make clear what adjustments are already in place?
- Is it clear to students that additional adjustments can be made on an individual basis?

## 2.2 The particular responsibilities of universities and colleges

Universities' academic activities since the mid 1990s have been partly regulated by a government agency called the Quality Assurance Agency (QAA), which oversees the academic quality and standards of courses, and the general arrangements made by universities to manage their affairs. It has published an important series of ten documents that together make up the *Code of practice for the assurance of academic quality and standards in higher education*, in which Section 3 (produced in October 1999, but broadly compliant with the DDA Part IV) addresses 'Students with Disabilities'. You will find it at

<www.qaa.ac.uk/academicinfrastructure/codeOfPractice/default.asp>.

The main thrust of the Code of Practice document is to emphasise the idea already established in this guide, that disabled students should not be regarded as troublesome, but as requiring equivalent access to facilities, equipment, teaching and services as others. It notes that 'institutions should ensure that in all their policies, procedures and activities, including strategic planning and resource allocation, consideration is given to the means of enabling disabled students' participation in all aspects of the academic and social life of the institution'. The Code sets out a series of principles that govern the way your university and department should be acting. In particular, it highlights that those senior managers responsible for arrangements for disabled students must be identified clearly, and that they must have an adequate understanding of the law concerning disabled people. If you are a senior administrator yourself, you may have such a duty. Moreover, it establishes that institutions must provide staff development in disability awareness/equality for all staff, to ensure that everyone understands what they should be doing.

Some examples of reasonable adjustments are included in the Code, for example, that there should be flexibility regarding where classes are held, including moving teaching from inaccessible lecture theatres and classrooms to more accessible ones, whilst ensuring that timetabling allows sufficient time for students with mobility impairments to travel between them. It also refers to the need to ensure that, wherever possible, students have access to academic and vocational placements, including field trips and study abroad. This latter is particularly relevant to many GEES departments.

## 2.3 Working within a particular university or college

Every university should by now have incorporated the requirements of the DDA Part IV into its policies on relevant aspects of its activity, including student admissions, its building management and the teaching it provides. You should be able to find relevant information about these matters by using the search engine associated with your institution's website, searching for information on 'disability' or 'disabled students'. There will almost certainly be an institutional policy specifically on disability somewhere in the webpages, although it may itself be difficult to find - inaccessible in a very specific way. This should tell you about the arrangements by which disabled students receive advice, how they can assist the university to accommodate their needs, and any specialist assistance that is available. Some institutions indicate on their website that they have particular expertise and experience in dealing with particular impairments – deafness, or blindness, for example. Usually the names and contact details of relevant people are given on the website, together with information which can assist you to find the answers to specific questions.

**Prompt:**

Can you identify the name and location of the Disability Coordinator or adviser in your institution, or another person who performs the same role, along with the instructions on how students may make an appointment to discuss their needs? In some institutions, the function is performed by an 'Equal Opportunities Adviser', for example, with welfare staff in student services departments providing the one-to-one advice. Can you also find your university or college's Disability Policy or a similar document on the website?

The Disability Coordinator or adviser will be a key contact in any institution, as they will be well informed on all the relevant legislation and support systems. In larger institutions there will be a team of people. Usually there are also disability liaison people within each faculty or department, whose responsibility is to act as a pathway for information and good practice examples around the university. Communication within the department is essential, and more will be said about this in section 2.4.

The experiences of geography, earth and environmental science support staff are in theory highly transferable to other disciplines since they embrace arts, humanities, sciences and social sciences activities, drawing on a rich variety of teaching and learning styles and varied methods of assessment. You may find that your department has aspects of good practice that you can usefully share with support staff elsewhere. Whilst the detail may be different, the principles remain constant.

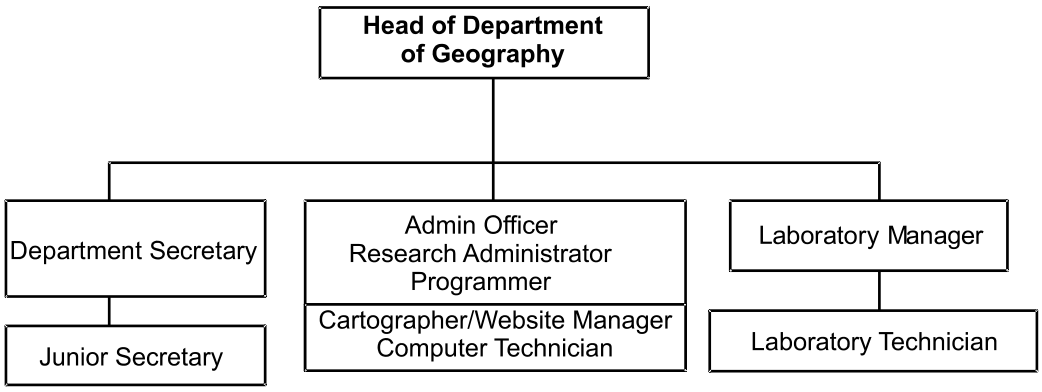
External sources of information about disability exist that can be accessed by anyone with access to the internet. Trade unions operating in universities, such as UNISON, AMICUS and NATFHE (the National Association of Teachers in Further and Higher Education) or the AUT (the Association of University Teachers) can be helpful in this regard (note that NATFHE and the AUT are scheduled to amalgamate on 1 June 2006). UNISON, membership of which includes support staff in universities and other public sector organisations, has a series of factsheets on its website which consider the particular needs of disabled members, but have wider applicability to students as well <www.unison.org.uk/disabled/index.asp>. It has an interesting approach to ensuring accessibility of documents through its website, deliberately providing them only as pdf files. AMICUS, a trade union with some members in technical areas of universities such as laboratories, runs short residential disability training courses for its members at <www.amicustheunion.org/default.aspx?page=1126>. The Trades Union Congress (TUC), an affiliation of 70 trade unions, also has a comprehensive set of materials at

<www.tuc.org.uk/equality/tuc-9666-f0.cfm> that may be helpful in particular circumstances. More will be said about other specialist professional bodies in section 3 of the guide. You may wish to spend a few minutes browsing these sites, or indeed to take matters further by requesting time for attending a course, if this would be useful to you and your department. The personnel department or a similar section of your university should publicise details of staff development opportunities that can help you.

## 2.4 Management and communication structures within departments and universities

The Quality Assurance Agency note in their Code of Practice that internal communications systems should ensure that appropriate staff receive information about the particular needs of disabled students in a clear and timely way. Geography, earth and environmental sciences departments are of many different sizes and levels of organisational intricacy. Whilst some are large and complex, teaching many hundreds of students, the organisation in others appears simple and straightforward since they support the learning of relatively few. We have also already seen how the ratio of staff to students is also very variable. This directly affects information flows to and from support staff within and beyond departments.

**Figure 1:** A medium-sized GEES department's support staff structure




Figures 1 to 4 are based on research undertaken in GEES departments in English universities and colleges in 2004-5. Figure 1 shows the organisational structure of a medium-sized geography department in an old established university. There are three groups of support staff broadly covering administrative, ICT/cartography and laboratory duties, all reporting directly to the Head of Department who is an academic. In practice, most of the support staff receive their day-to-day instructions directly from academic staff. Management of, and communication with, the support staff groups hence takes place both informally and formally through departmental meetings at which many of the staff are present. Working in a department like this, you are likely

to have some awareness of the major issues about teaching and learning, including supporting disabled students, if and when these are discussed. The department may also have a relatively sophisticated network of support for students, underpinned by a set of policies that it has developed over time.

In larger departments, teams of support staff are likely to liaise only indirectly with their Head of Department, communications being mediated through key individuals such as a Senior Technical Officer who attends meetings on their behalf. Figure 2 shows six different teams in one GEES department, each with a supervisor. In these circumstances, the teams are also likely to meet separately to be briefed on their work, and to provide feedback on their views. Figure 3, by comparison, shows a less complex departmental structure with a similar number of support staff organised into larger and more diverse teams. Communication of issues may depend to a large extent on the skills of the team leaders, and there is a danger of isolation of some groups, with bottlenecks in the flow of ideas and information. On the other hand, there can be many instances of related staff supporting one another and the students, because of the number of disabled students they have needed to accommodate and the experience they have gained.

**Figure 2:** A large and complex GEES department's support staff structure

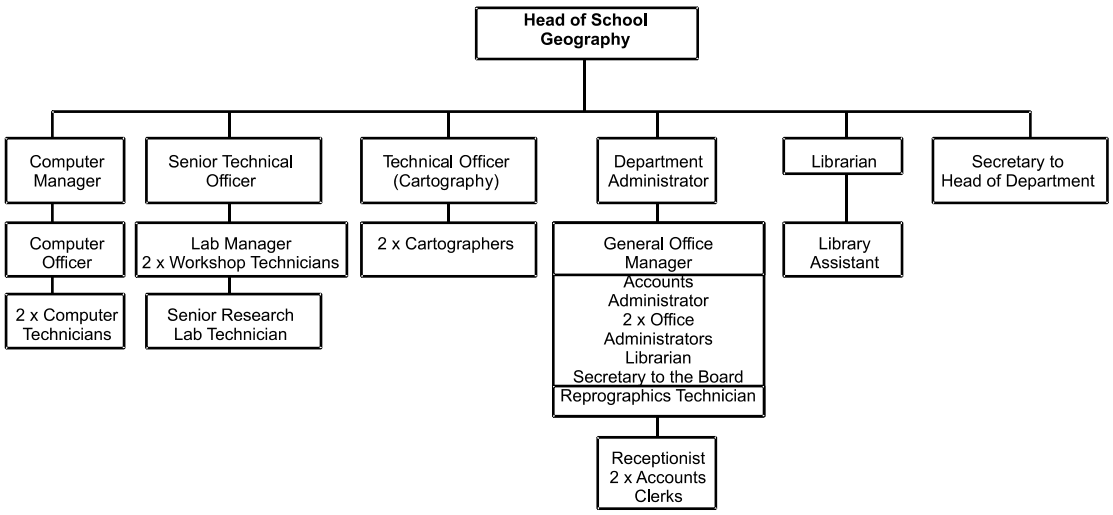
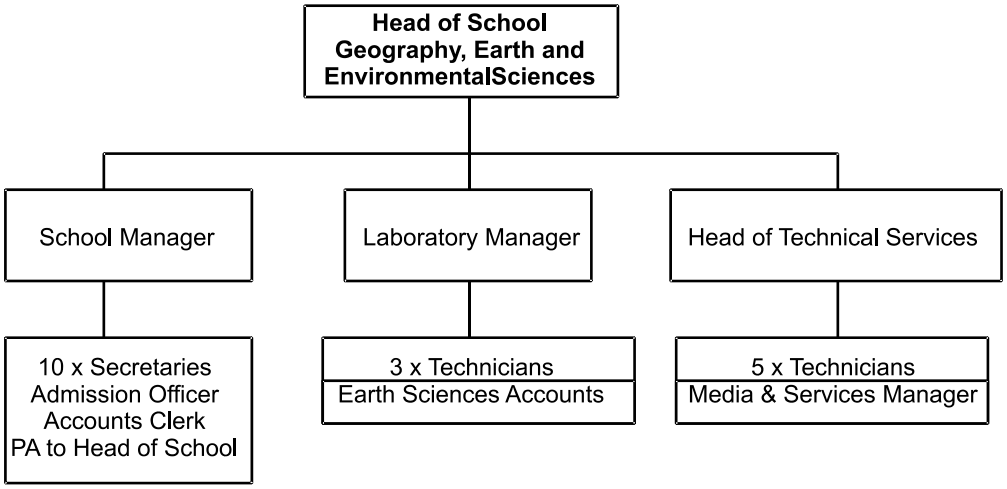
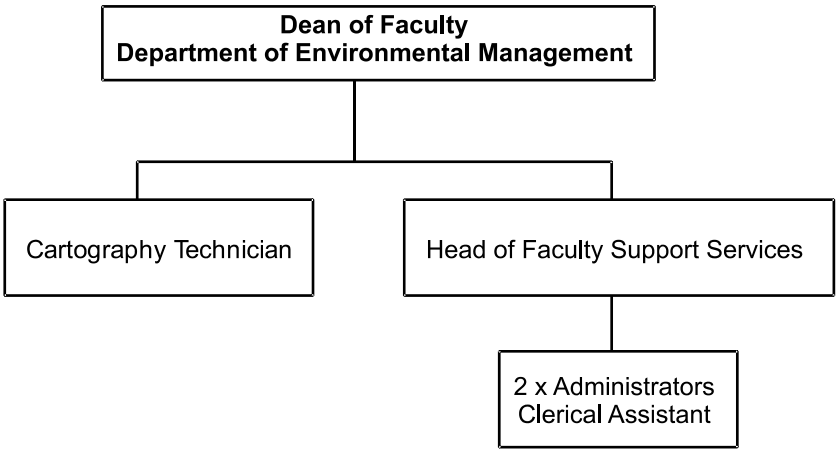


**Figure 3:** A large GEES department in a 'new' or post-1992 university




Finally, the very considerable number of small GEES departments or units principally supported by administrative staff should not be overlooked. Figure 4 gives an actual example, where laboratories and similar facilities are not required to deliver its courses in environmental management. Whereas the chain of communication may be shorter, the number of disabled students is likely to be low, and there will probably be relatively limited experience of meeting their individual needs. In situations like this it is particularly important that accurate and up-to-date information, and examples of best practice, are sought from beyond the department. Whilst small departments can be very friendly and accommodating to students and offer a personal service, there is a greater risk of staff not taking appropriate anticipatory action, because of lack of experience. In this case, the department may not have their own guidelines, but may need to draw on wider institutional practices that are rather less specific.

**Figure 4:** A small GEES department in a 'new' or post-1992 university



These diagrams, of course, represent only some of the formal lines of communication. You should consider the organisational structure within your own department, and how you might, and actually do, communicate with other members of staff. You may find it helpful to think through a particular issue, about how you and your colleagues were made aware of the needs of the department, and how you publicised what you would be doing in response.

**Prompt:**

Does a diagram of the organisational structure of your department actually show how information on disability and inclusion is communicated? Are there any bottlenecks in the flow of communications within your department, and how might these be eased?

However you communicate within your department, your practice in relation to disabled students must be sufficiently embedded such that the details are not lost on the departure of particularly knowledgeable individuals. What you do must not only be part of your everyday activity, but recorded and sustainable. You do not want to keep reinventing the wheel, except when there is a need to take advantage of new ideas. In some departments, the turnover of support staff is high or a number of temporary staff are employed, and there is a higher risk of ignoring institutional and national policies. Team managers within departments need to consider this carefully in their arrangements for staff induction and training, and to ensure that their staff have positive and supportive attitudes to disabled students from the first day of their employment.

**Prompt:**

If you are working in some isolation because of the nature of your job, could you perhaps initiate a 'buddying' system with support staff in another department, so that you share good practice examples? Who could you approach?

## 2.5 Listening and making your voice heard

Your information about supporting disabled students may come from a variety of official and institutional sources, but disabled students already enrolled on your department's courses are often a useful source of advice. The Quality Assurance Agency note that '[disabled students'] participation at every stage of provision, from design to evaluation, is likely to ensure that developments are both effective and efficient in increasing access and improving the quality

of disabled students' experience of higher education.' You might bear this in mind if you are working with a disabled student in your laboratory or resources room. Ask them if they have time to help you with suggestions about anything that poses a barrier to learning for them, and talk to your colleagues about the implications. Review and evaluate the success of your new practices with them; this evaluation is too often neglected. You may wish to raise the matter more widely and formally through a departmental meeting, particularly if you can suggest an improved way of handling the situation. Normally it is possible for anyone to raise agenda items for inclusion in a departmental meeting; if in doubt, ask your line manager whether this would be appropriate. Your department may also have a Disability Working Group, or some similar forum for discussion. Make your voice, and that of the disabled students whom you support, heard in relevant places.

This guide contains a plea that support staff take some initiative in demanding appropriate staff development and influencing institutional policy and practice on supporting disabled students. Some groups of support staff can feel disempowered and alienated from the decision-making in their departments. An anonymous delegate at the May 2004 *Supporting the Supporters* conference specifically for support staff and run by the Higher Education Academy's Geography, Earth and Environmental Sciences Subject Centre with the University of Gloucestershire, commented 'This course is only for senior support staff with sufficient power to influence outcomes. Junior staff like me can only do as we are instructed, as we do not have the ability to influence outcomes. [We have]…a job with set items to do each day and no flexibility'. This is a disturbing indictment of communication systems in some HEIs, and one that needs challenging. Conversely, after the same conference another delegate said 'I will value my position and know that I *do* make a difference'. Support staff can and should make a huge difference to the learning experiences of all students, including disabled students. There is more about this in the GEES Higher Education Academy Subject Centre journal *Planet*, available at <www.gees.ac.uk/pubs/planet/p13/confreps.pdf>.

**Prompt:**

If you have a new or temporary colleague, how can you help them get to grips with the issues surrounding disability? What might you do if you thought their approach towards students was inappropriate?

## 2.6 Knowing when to seek advice

It is important that you know your limitations and the boundaries of what you can do, and understand when to seek specialist advice on the best sources of assistance for disabled students. Basically, if you feel uncertain how to respond to a disabled student, or how to anticipate their needs effectively, and you cannot find this out yourself through basic research (looking through these guides, for example, or consulting a more experienced colleague), then you should seek advice from your line manager. You might occasionally wish to seek advice if you are experiencing emotional challenges or fear a personality clash with a disabled student.

But there is a further important aspect of the Disability Discrimination Act that requires some attention to communication. Some students will alert the university to an impairment when they first apply to study, so that any assistance which is available can be evaluated and made available. However, some may not, and it is possible to be surprised by a student who suddenly declares a need for specialised assistance whilst in the departmental office or laboratory, for example. It is not usually a good idea for you immediately to discuss sensitive details with the student, or suggest what adjustments may or may not be possible, particularly when other students are close by. Such discussions should normally take place in confidence between the student and the relevant qualified member of staff within the department or university, who will let other people know if and when the need arises, and only then with the student's permission. The QAA Code of Practice advises that it is sensible to have a written agreement with the student, detailing how the disclosed information will be used, and to whom it will be passed. Some students will not agree to this information being made available to either academic or support staff. If you are contacted with information about a particular disabled student, you must ensure that the information remains confidential to those amongst your team that need to know.

However, if a student tells you or your colleagues about an impairment, even in passing, the institution as a whole is assumed in law to know about it. It is therefore vital that when disclosure does occur, and with the student's agreement, the information is passed quickly to the relevant people, such as the institution's Disability Coordinator, so that reasonable adjustments can be discussed.

## 2.7 General issues for all support staff

Seven key points of general relevance to all support staff are summarised below.

- Being aware of the changing context of higher education.

  You will know that participation in higher education is changing, and the student population is becoming much more diverse. But beyond this, institutions are being required to be more accountable for the way they treat their students, disabled students amongst them. In 2005, undergraduates near the end of their studies in England, Wales and Northern Ireland were asked their views on the quality of the education they had received. Some 170,000 students responded to this National Student Survey, and the results were published, by institution and by subject area, at <www2.tqi.ac.uk/sites/tqi/home/index.cfm>. The students were asked for their views on many aspects of the teaching and support they had received, and the skills they had gained (particularly those relating to employment), providing a good source of information about improvements that could be made. This reflects increasing governmental pressure on universities to evaluate their services, to be more transparent about the strengths and weaknesses identified, and to be responsive to the views of students and other stakeholders.

- Meeting the differing needs of individual students

  Staff involved in supporting students' learning need to be aware that they are all individuals with particular needs and aspirations rather than a homogeneous group. It may be necessary to make provision for a few disabled students amongst a larger group; this is now expected and will require careful planning. As a first response, try to make sure that information for students about your area of work is available in written (printed and electronic) form, so that any student can study it in advance. The other crucial aspect is ensuring that you are part of the communication system which flags up the particular needs of individual students who will definitely be working in your area. This is particularly relevant if you have responsibilities for specialist premises such as laboratories. Typically, a confidential message will be sent out to module or course tutors at the start of the academic year or semester. Talk to your line manager or the university's Disability Adviser about this as there may be restrictions on access to the information for reasons associated with confidentiality or data protection legislation.

- Working within resource constraints

  You may feel that you are already performing miracles in supporting teaching, research and 'third stream' or 'consultancy' activities with limited time and scarce resources. The pressure on departments to teach more students, compete in Research Assessment Exercises and generate additional income, is now very intense. Understandably, some support staff may resent an additional demand falling on their shoulders, and may be uncertain how to plan strategically to accommodate the diversity of activities. This issue will need to be discussed by teams and their managers because ideally, support staff views should be represented on programme planning groups, on disability working groups, and certainly on departmental executive teams. This may require some agreement about reallocation of time and effort.

- Being accessible to students

  Students increasingly expect that all academic and support staff will be readily accessible to offer guidance to them immediately their need for assistance arises. This is associated with a shift towards higher education being viewed by students as a service that is bought by their tuition fees. Again, set against other pressures, this can feel like a step too far, and will need discussion.

- Securing inputs into higher education policy formulation

  It is important for support staff to tell their managers about their experiences in working with disabled students, so that higher education policy can take account of all the issues. Moreover, responding proactively to policies ahead of the legislation is good practice, and enables new ideas to be tested before being implemented more widely.

- Finding straightforward and appropriate sources of specialist information

  GEES departments undertake teaching and research in a huge range of different disciplines, covering many areas of science, social science and humanities. They include diverse subjects such as planetary science, landscape and environmental management, and the geography of sexuality. Some support staff consequently work in very specialist areas within a department, but may still require access to the appropriate information to support disabled students effectively. Research students and other postgraduates may pose particular challenges as their needs to be supported in independent working in a

variety of settings within and beyond the campus may exceed those of undergraduates. Identifying and securing appropriate networking and training opportunities is therefore important.

- Remaining up to date in information and communications technology

  Geography, earth and environmental science disciplines were pioneers in using information and communications technology. Their staff were amongst the earliest academics to engage fully with the power of computers, and pioneered many aspects of digital data analysis including statistical analysis, graphics production and automated mapping. More recently, they are leading in remote data collection, using portable technology. Such cutting edge activity has implications for the staff who support this work, alongside the more routine developments in basic office communications technology. Assistive technologies, technological developments which assist disabled students such as computer programmes which enlarge screens of information automatically, or which convert electronic files into Braille, are now a part of this. Maintaining your professional currency is crucial, but challenging, particularly when superimposed onto other demands.

In addition to consulting the specialist advice in sections 3.1 to 3.5, many support staff may be interested in the contents of section 3.6 which is nominally addressed to support staff whose roles are not readily embraced by the earlier categories. It does, however, also raise issues of generic interest.

The following pages also include some scenarios to start you thinking about particular issues. You will find possible courses of action for each scenario discussed at Appendix 1.

# 3 Supporting students in specialist areas

## 3.1 Departmental administrators

**Scenario 1:** Working as a team

Whilst in your office drafting the minutes of a Course Board of Studies, you overhear the new part-time receptionist talking to a young man who has just enrolled on an MSc in Hydrogeology. He asks about the timing of his first practical class, and is insistent that he needs to know the exact time it will end so that he can arrange transport home afterwards. Your junior colleague looks up the start time on the computer, but cannot find out the length of the class. She laughs, joking that he must be desperate to return to his mother, but the student does not seem to understand and becomes rather agitated. He repeats several times over that he needs to organise his transport. At the back of your mind you have a recollection of a corridor conversation about a new student with an autism spectrum disorder. What should you do?

Administrators in GEES departments come in many guises, including departmental secretaries, office managers, course coordinators, accounts clerks, receptionists and personal assistants to senior academic staff. They are frequently the 'glue' of the organisation, and often regarded as the fount of all knowledge. You may have smiled over the antics of long-suffering 'Maureen', stereotypical departmental secretary at Poppleton University and creation of sociologist Professor Laurie Taylor. Maureen appears in Taylor's weekly column on the back page of the *Times Higher Education Supplement*. She oscillates between tasks that variously involve significant exercising of power, and much more mundane matters. She liaises with the Vice Chancellor's Office, hectors a reluctant, disorganised and frequently idle set of academic staff, advises students on their choice of modules, and organises the filing. She probably makes everyone's tea, and she almost always appears to defer to the views of her Head of Department. Needless to say, Maureen's contribution is unappreciated, at least until something threatens to go wrong. Perhaps you recognise yourself in this description?

A case study about a post described as a GEES Departmental Manager is available as part of the materials for this Inclusive Curriculum Project, at:

<www2.glos.ac.uk/gdn/icp/case27.htm>. But whatever your administrative post is called, it will incorporate some generic areas where forward thinking about disability issues will be useful. These include

- exchanging information between departmental students, staff and others;
- providing the public face of the department;
- managing the records of the department;
- advising visitors about the department's premises and facilities;
- organising events;
- responding to emergencies;
- managing a team, if you are a senior administrator.

### 3.1.1 Exchanging information between departmental students, staff and others

Departmental offices are a significant conduit of information between students, staff and external people. Making sure you do not place disabled students or potential students at a 'substantial disadvantage' starts with the information you provide, and it needs to be accessible as well as accurate. The departmental office should make 'anticipatory' adjustments, not simply wait until a disabled person requires a particular adaptation. The leaders of administrative teams need to plan for this, building potential adaptations in from the start even if they are not immediately required. Exactly who should take responsibility for doing this will need establishing with the relevant line manager and Head of Department.

It is good practice to offer enquirers a choice of formats for departmental information, maintaining an electronic or web-based database of documents that can be consulted on screen, printed off in various sizes and colours, or emailed as required. Documents would include the departmental handbook, course handbooks, module or course unit guides, health and safety information and marketing materials. You will also need to consider when and how to offer this information in non-standard formats, such as files that can be converted into Braille or MP3 files. Departmental documents should be written in plain English for non-specialist audiences; academic staff and other authors may periodically need gently reminding.

Many GEES departments will ask all their students about any special needs, including disabilities, in order to be able to plan for field class participation. The information requested will often include details on dietary requirements and religious observances that require accommodating, as well as physical or mental

impairments. It is good practice for administrators to make clear to students why this information is being requested, and how it will be kept confidential, in order to encourage disclosure. Disabled students who do not respond to a reasonable request for the information will be at higher risk of finding the planned fieldwork activities unsuitable, though they cannot be forced to inform you. You may also want to explain the importance of a discussion with the university's Disability Adviser or the person carrying the equivalent responsibility, if they have not previously advised the institution of their needs, because this is normally the gateway to receiving additional support.

**Prompt:**

Do all the administrative staff know how to respond if a disabled student discloses a disability to them, either informally or formally? Do they know to whom, with the student's consent, information should be passed?

### 3.1.2 Providing the public face of the department

Students will contact the office in person or by telephone or email to find out the location of a seminar, query the departure time for a field class and hand in coursework. Students with dyslexia may approach support staff for assistance in filling out a form, or try to hand in one that is clearly incomplete. A student with a mental illness may ask in the office for somewhere quiet to sit down. A new member of academic staff may rush in requesting urgent assistance as a student is having an epileptic episode in their seminar, and they are unaware what to do. Your attitudes and communication skills when greeting and responding to them are critical. For new students, support staff can be an 'extended family', their friendliness and encouragement influencing decisions they make about continuing to study or withdrawing from university. It is consequently vital that you are able to be supportive and use appropriate language to everyone, disabled or not. The DDA Part IV applies to applicants and potential students, including those attending open days or interviews, those receiving a prospectus and those targeted by recruitment drives and outreach work, as well as enrolled students. Naturally, the same points about language and attitude apply when speaking to anyone, not just to your current students. Section 1.4 of this guide contains general information about this.

Alongside staff awareness, the physical aspects of the department's reception area are also important. The counter should be sufficiently low for wheelchair users to be comfortable, and include an induction loop (and a sign indicating its availability). Chairs should be available for those unable to stand in queues. Printed notices, if required at all, should be bold enough to be legible to

students with visual impairments, and well lit. If you provide a telephone for student use, you may wish to visit <www.tiresias.org/phoneability/telephones/> for information to help you choose an appropriate model. If you think there are deficiencies in your own department's arrangements, you should discuss this with your line manager and press for alterations to be made. In the meantime, think carefully about how you might be able to respond more thoughtfully to disabled students, for example, by moving around a counter to be closer to the enquirer, or making sure that you speak clearly and face them. Removing unnecessary and distracting clutter from reception desks is another positive move.

Student satisfaction surveys are good sources of information about improvements that might be made to the department's administrative systems and premises. Some departments have a 'suggestions box' in their reception area, into which anonymous comments can be placed. But students may find it easier to send an electronic message, particularly if it removes the need for another challenging journey into the department. Try prompting all of your department's students for their views, including an option of responding about particular needs. You may also wish to consult the responses of your department's students to the National Student Survey that is being undertaken annually. The results for 2004-5 are available at <www2.tqi.ac.uk/sites/tqi/home/index.cfm>. The results from this survey need careful analysis, however, because GEES disciplines are split between two or more subject categories; try looking at answers to the questions on Learning Resources to get some feel for this information.

**Prompt:**

Do the administrative staff know how to communicate effectively with someone who lip-reads or has a speech impairment? Would they be able to use text messaging to contact a deaf student?

### 3.1.3 Managing the records

Records such as policy documents, printed or electronic records of meetings and decisions, and personal information about students are often managed by departmental offices. In relation to documents or files containing student information (for example, minutes of examination boards, and health and safety details) care needs to be taken to reflect the requirements of the Data Protection Act, 1998 (available at <www.opsi.gov.uk/acts/acts1998/19980029.htm>) that defines any written or electronically stored information about an individual's disability as 'sensitive personal data'. This information may only be passed to other people with the 'informed consent' of the

individual. It is good practice to ensure that a written record of the student's agreement to disclose information to those who need it in order to make appropriate arrangements, or conversely their refusal, is kept with their other records. Normally, the institution will provide central guidance to departmental administrators on the appropriate procedures.

**Prompt:**

Are there procedures in place to ensure that sensitive information is kept confidential to relevant staff, or completely confidential if the student requests this?

### 3.1.4 Advising on premises

GEES departmental premises may be large and complex, including lecture and seminar rooms, resource centres and libraries, and several different types of laboratories. Whilst not usually directly responsible for commissioning modifications to buildings, administrators are well placed to provide basic information about accessibility to disabled visitors, including potential students. It is worth reviewing the information you have available to ensure it explains what facilities are already in place. A short guide explaining the issues, and the support which can be provided with or without advance notice, is helpful for larger departments. Figure 5 shows a theoretical example of a handout or file that would be useful for disabled visitors.

**Figure 5:** Specimen information note for disabled visitors

**University of Poppleton**
**Department of Geography and Environmental Sciences**

Notes for disabled visitors

The Department welcomes disabled visitors, and during the working day will normally be able to provide someone to guide you. Reserved car parking for those with a disabled driver's badge is available within 50m of the front entrance to the Department. Access to the main parts of the Department, including the main lecture theatre, is level. There are ramps and large lifts throughout the building, which is modern. Reception and teaching rooms are accessible to wheelchairs, although large motorised units will need to use specified routes. There are chairs and places to rest throughout the building. An introductory tour around the whole Department typically takes about 20 minutes.

Only the W.M. Davis Laboratory, based in a nineteenth century annexe of the Department, is currently inaccessible to motorised wheelchairs. A manual wheelchair and helper can be provided for use by mobility-impaired visitors who need to visit this laboratory, providing two working days advance notification is given.

There are disabled WCs off the Reception area, and by the centrally-located Von Thunen Resources Room. Support dogs are welcome everywhere except in the geoscience laboratories covered by COSHH Regulations. Induction loops are fitted in Reception and in all teaching areas. Electric sockets for laptop computers are provided for seating and there is wheelchair space in the front two rows of the main lecture theatre, and around the sides of other rooms.

A 360° virtual tour of the Department is accessible from our website, or direct at <www.poppleton.ac.uk/geogtour/frontpage.htm>.

Please contact the Departmental Office for further information:

tel..... email..... fax..... web.....

The University of Poppleton exists only in the *Times Higher Education Supplement*, courtesy of the pen of Professor Laurie Taylor. Your own department might not be quite as well appointed as the University of Poppleton's, naturally.

### 3.1.5 Organising events

Departmental offices organise or administer a range of events for students, prospective students and other visitors, including such activities as guest lectures, exhibitions, student social events and induction programmes. Each will produce its own challenges. Induction events are particularly important for new disabled students, and should include orientation sessions for disabled freshers. Some institutions recruit disabled students to join 'Welcome Teams' to meet new students during induction weeks and applicants at Open Days.

An excellent guide to organising accessible events is available from the Joint Information Systems Committee (JISC) TechDis Service, based in the Higher Education Academy Building in York. Entitled '*Accessible Events: A good practice guide for staff organising events in Higher Education*' (Elliott, Phipps and Harrison, no date), it provides comprehensive checklists on each stage of the administration so that full participation by disabled people can be assured.

Key elements to consider are:

- access and transport, including to any sites beyond the campus;
- event planning and administration, including schedule, speakers and budget;
- pre-event publicity, including registration and venue details;
- planning for additional support requirements, including specialist staff and equipment;
- support during the event, including signage, registration, refreshments and emergencies.

**Prompt:**

Do those responsible for day courses and taster days encourage disabled participants to let them know about disability-related support needs in advance, and are staff resourced appropriately to make reasonable adjustments for disabled people who just turn up?

### 3.1.6 Responding to emergencies

Regardless of forward planning, occasional emergencies of greater or less seriousness are inevitable. Central institutional arrangements are usually made for responding to campus-based emergencies but departmental support staff may be delegated to assist, and will need to be trained. Training may be necessary for staff and other students coping with more localised emergencies, for example, supporting someone having an epileptic seizure or an asthma attack. It is helpful to check that the emergency arrangements for entering or evacuating specialist departmental facilities such as geoscience laboratories have recognised the implications for disabled people, including mobility-impaired, blind and deaf students. Specialist technical staff should be nominated to ensure that disabled people are evacuated safely from laboratories. In some GEES departments, emergency alarm systems for laboratories are triggered in departmental offices, whose staff are then responsible for contacting the local emergency services. A 'Responding to Emergencies' flowchart should highlight any special issues arising from disabled people present in these settings.

Departmental support staff may be involved in assisting with crises associated with field visits where the staff and students are away from the department. Taking responsibility for coordinating field class communications, particularly overseas, is a significant responsibility that should be discussed with the Head of Department and the institutional Health and Safety Manager. The value of locally held departmental records covering disabled students' particular needs will be immediately apparent when time is short. Care needs to be taken to ensure that all the relevant support staff have access to the basic information about particular field visit schedules, and the people participating, should the need arise, for example, during a medical emergency.

### 3.1.7 Managing a team

Some departmental managers are responsible for sizeable teams of staff, up to thirteen in the case of the UK-based geography, earth and environmental sciences department illustrated in Figure 3 (section 2.4) of this guide. In other departments, senior administrators coordinate and direct the entire support staff team, including technical people. They thus occupy key positions in their university, and will have additional responsibilities requiring understanding of the full implications of the DDA Part IV. If you are in this position, you must ensure that members of your team have received appropriate training about it as well. Your responsibilities will certainly extend to briefing temporary staff, and possibly contractors and visiting speakers in the department, as well as the full complement of full- and part-time employees you manage. Guidance on this should be sought from your institution's personnel and staff development department or equivalent, who may do the briefings of more permanent staff

on your behalf. As a senior person, you also need to act as a role model for your colleagues, undertaking the training yourself and approaching changes to the department's practices proactively and positively.

Securing resources to provide some of the necessary administrative services will require forward planning of finance, but the most significant need is probably for staff time. This will need to be negotiated alongside other priorities. You may find it helpful to instigate or access disability awareness training days, monitoring your colleagues' attendance and ensuring that everyone has participated. If you need to organise training locally, useful staff development packs are available from TechDis, the details of which are available at <www.techdis.ac.uk>. Particularly relevant packs include '*An Introduction to Assistive Technology*', '*Benevolent Bill: What Microsoft does for Accessibility*' and '*Dyslexia and the Use of Assistive Technology*'. The packs can be supplied on a CD. Consider how best to communicate with your team, to ensure that the details of your procedures are adapted to meet the anticipatory duties of the department. Whilst informal lines of communication will meet some needs, more formal structures for auditing and ensuring appropriate actions will be needed for some matters. The Association of University Administrators publishes an interesting series of guides concerning university administration, whose intriguing titles can be seen at <www.aua.ac.uk/publications/gpg/>. Unfortunately, there is not yet one concerning disability.

## 3.2 Laboratory and field technicians

**Scenario 2:** A disabled student's success leads to new challenges

You are delighted that Nandika, a former departmental undergraduate, has secured a Natural Environment Research Council studentship to study for a PhD. She will be looking at the evidence for plant community change over the last four thousand years, as recorded in peat bogs across Europe. Nandika is a student who spent a lot of time in your laboratories last year. She was a great person to have around and she was often able to show other students where equipment was stored, whilst you were out of the laboratory. You know that she is dyslexic and dyspraxic. The techniques she employed in her undergraduate Dissertation were relatively routine, and you provided a good set of written worksheets that she was able to study before starting her practicals. Now she will be moving into more experimental sample preparation and analytical techniques, some of which will involve working with hazardous chemicals. What is the best way to prepare for her research?

GEES departments typically include science laboratories where geochemistry, sedimentology, soils, water quality and flow patterns, and plant materials, are investigated at all levels of undergraduate and postgraduate courses. Tutors will expect laboratory staff to provide for and support the relevant practical exercises, with various levels of autonomy. There may also be specialised laboratories used principally by staff and research students, the bases for substantial, valuable and potentially dangerous items such as spectrometers and spectrophotometers, auto-analysers, gas chromatographs, microscopes and luminescence dating equipment. Use of these facilities is likely to be carefully monitored.

You might feel that the simplest approach to accommodating a disabled student's needs would be for the technical team (it could be just you) to offer to perform the analytical work on their behalf because of the risk of catastrophe. They might also be given an opportunity to use computer-based experimental simulation packages, if the lecturing staff agreed. However, this would deny many students a chance really to understand what laboratory investigations involve, would prevent them from experiencing the thrill of a scientific discovery (however small) and would not normally be 'reasonable' in terms of the DDA Part IV legislation. THE DDA Part IV does not override health and safety legislation, but adjustments, including anticipatory adjustments, are required. Consequently, this is where the guide will start.

There is plenty of guidance on good laboratory practice for disabled users, but it is not always written with GEES disciplines in mind. Comprehensive sources include:

- the Royal Society of Chemistry's (RSC) '*Note On The Safety of Laboratory Workers with Disabilities*', available at <www.rsc.org/Membership/Networking/EHSC/ehscnotes.asp> <www.rsc.org/images/disabled_tcm18-12717.pdf>
- The University of Strathclyde's 'Teachability Project' guide '*Creating accessible practical classes for disabled students*', available at <www.teachability.strath.ac.uk/chapter_6/tableofcontents6.html> that includes an interesting analysis of the legal angle at <www.teachability.strath.ac.uk/chapter_6/reflectingfromthelegalangle6.html>.

An example of a helpful policy statement produced by a particular UK institution is that from Oxford University at <www.admin.ox.ac.uk/eop/disab/weblabs.shtml>.

An interesting case study of disabled staff and students' frustrations when using poorly designed laboratories, produced by the Higher Education Academy Engineering Subject Centre but highly relevant to GEES laboratories, can be read at <www.engsc.ac.uk/downloads/Disability/hersh.pdf>. Another relevant

article, describing the facilities and realities of use of some laboratories at York University, is available on the JISC TechDis website at <www.techdis.ac.uk/index.php?p=3_8_12>.

Finally, an indication of the feelings of Darren, a visually impaired student with dyslexia, on being faced with a laboratory class for the first time in his university career can be found in the BBC online magazine for disabled people, *Ouch!* at <www.bbc.co.uk/ouch/lifefiles/student/week1/darren.shtml>. Part of Darren's diary records that

> *'For various complex reasons, I am only permitted to take a Geology module called 'This Is Planet Earth'. So I find myself studying rock and mineral formation for the first time in over seven years. Distressingly, practical experiments are an assessed portion of the module and the specialist scientific lab equipment is not available to me. Actually, never in my life have I independently conducted any sort of scientific experiment. Even when I was at mainstream school (where I last attended science classes) I was afraid of all the lab equipment, so instead I just observed experiments carried out by other people'.*

Key aspects for GEES laboratory technicians to address include:

- discussing the intended learning outcomes of activities with academic staff;
- discussing needs with individual students;
- evaluating and minimising health and safety risks;
- providing protocols and experiment details in writing, in advance;
- making physical adjustments to access and equipment;
- accommodating non-medical helpers.

### 3.2.1 Discussing the intended learning outcomes of activities with academic staff

Accepted practice in most laboratories is for technical staff to discuss proposed laboratory activities with the academic staff who are responsible for the teaching or research. In the case of teaching, the intended learning outcomes - exactly what the students are being expected to learn - need to be established from the tutor. This will be in addition to clarifying the laboratory methodology that is to be used. You need to establish whether the intention is for the students to practise actually doing the analysis, or whether they are only intended to understand how it is done. For example, a blind student might not safely be able to undertake an experiment involving acid dissolution

of limestone without assistance, but they could either listen to a description of the process, or personally instruct a helper who undertakes some of the manual work on their behalf, describing the results to them as they progress. The appropriate adjustment will depend upon the learning outcome required. Over time, such discussions will also suggest what additional anticipatory actions are needed in the laboratories. It is possible, though unlikely, that personal student involvement in laboratory classes is not actually an intended outcome of a course in your department at all. More usually, academic staff will be keen to have students learning actively about laboratory-based research, and hence the full range of accessibility issues will need to be considered.

Use this meeting with tutors also to identify any disabled students who will be taking the course or module, if the information is not routinely provided to you from centralised records.

### 3.2.2 Discussing needs with individual students

All students should receive induction in the appropriate use of the laboratories when they start to use them. This should include written guidance (see below). Disabled students may need an opportunity to become familiar with the laboratory before this first group session. They can then join in the orientation programme more easily since they will already know the locations of exits, showers and fire extinguishers, and be aware of other critical elements. Nevertheless, this induction may be insufficient on its own, and the equivalent of individual risk assessments will be required for some disabled students. Get together with them, and if possible with their tutor and any personal assistant, at an early stage to agree how to assist in overcoming particular physical impairments they may have. In a majority of cases no special arrangements may be necessary, but you will need to discuss whether there are any operations too risky or challenging for them to handle alone.

Examples of appropriate individual adaptations will include placing a student with impaired mobility on an outside aisle, ensuring that a deaf student (and his signer) uses a laboratory station that affords an unobstructed view of the tutor, and placing large labels onto reagent bottles for a visually-impaired student. You will need to have thought about potential adaptations in advance, as some will be need to be sourced and installed. Adjustable height benching and specialised clamps and equipment stands for use by students with restricted grip in their hands, will need to be purchased and installed, for example. Some of these individual adaptations will require moving of equipment, so you will need to liaise carefully over the timetable, ensuring that sufficient time is available for changing arrangements. As the Royal Society of Chemistry points out, it is possible that you may be unable to make adjustments to accommodate some disabled students, because the adjustments required would be unreasonably extensive or there would be negative implications for other

students. Before arriving at this decision, it will be important to involve the university's Disability Coordinator. You may also wish to reassure yourself about any issues concerning students with known mental illnesses; there is more about this in the ICP guide *Developing an inclusive curriculum for students with a) mental health difficulties b) Asperger Syndrome*.

Finally, do ask individual students for feedback at the end of the course on whether or not the arrangements made were appropriate for them, or whether they have any suggested improvements.

### 3.2.3 Evaluating and minimising health and safety risks

Safe practice in laboratories is important, but you should not start by assuming that disabled students are necessarily a risk to health and safety. Disabled students may be safer in the laboratory than non-disabled colleagues as they are more aware of their limitations. It is also worth recalling that by far the largest number of disabled students in GEES disciplines are affected by dyslexia, not the physical impairments of mobility and vision which feature more commonly in case studies of laboratory adaptation. Dyslexia affects students' ability to read instructions and follow logical sequences - key processes in a laboratory - but most people with dyslexia do develop coping strategies, and with advance planning this need not pose major problems. You can certainly assist them with this.

Generic issues concerning physical aspects of accessibility, health and safety are listed below. They include:

- arranging and reviewing evacuation and rescue plans for fire and other emergencies, ensuring that disabled students will either see, hear or feel an alarm, and can act appropriately with or without assistance;
- ensuring that copies of health and safety rules are written in straightforward language and posted at heights to suit all laboratory users;
- giving all students, disabled or non-disabled, safety quizzes or safety-rule sheets to read, sign, date, and return to you. Emphasise the procedures and rules with them, asking open-ended questions to prompt their thought. Provide them in a range of alternative formats, such as electronically or in large print;
- ensuring that eyewashes and protective equipment such as rubber gloves are located close to disabled students' workstations;
- considering whether specialist protective clothing can be adapted to provide increased protection, for example for students who cannot stand at workstations, and may spill chemicals into their laps;

- exploring the implications of self-paced learning in the laboratories, and issues arising from students working alone.

Finally, reassure yourself that in the laboratories, the senior technician should have overall operational authority for health and safety, not people without specialist scientific knowledge. If you have doubts about any suggested arrangements for particular students, or you feel uncomfortable about the safety of an activity, you should feel free to address it immediately, as well as taking anticipatory action for the longer term.

### 3.2.4 Providing protocols and experiment details in writing, in advance

Written instructions in different formats should be made available in advance of scheduled classes, to enable students to prepare. There is little educational merit in an element of surprise in practicals. This information will assist disabled students with many different impairments, including students with dyslexia who need to read through instructions very carefully, students with hearing impairments who are unable to hear the demonstrator over the noise of equipment, and students who work with notetakers or personal assistants. Write the instructions as simply as possible, consistent with the methodology being explained. It may be necessary to edit sections of technical manuals to make them accessible for disabled students, whereas the temptation is to pass round photocopies of the relevant pages. You could use junior members of the laboratory or technical team as a sounding board for assessing whether the instructions are clear.

Always discuss these procedures and any special safety considerations with the students before allowing an experiment to begin, and check with disabled students whether there seem to be any unforeseen problems.

### 3.2.5 Making physical adjustments to access and equipment

Some imposing university geoscience laboratories were constructed many years ago and have proved challenging to adapt for disabled users. Access and pedestrian circulation between benches is restricted, workbenches and shelves are high and fixed, sinks and taps inaccessible and colour contrasts poor. The potential for major structural adjustments to laboratories may be limited but doors and fitted furniture or equipment can be adjusted during refurbishments. Every teaching laboratory should normally have at least one adjustable height workbench, with fittings adapted for students with restricted reach and grip, for example. It is also possible to procure adjustable height and mobile fume cupboards and hoods. Major redesigns of laboratory layouts are probably best undertaken by specialist laboratory furniture suppliers.

In terms of assistive technology, smaller items of laboratory equipment can be sourced from the website managed by the JISC TechDis Service at

<www.techdis.ac.uk/index.php>. Information is mainly available about generic items such as audiovisual aids and mobile furniture. However, specialist equipment such as lightweight fire extinguishers, hand-held and screen magnifiers, equipment with dual visual and audible alarms and timers, equipment supports and clamps, non-slip mats for bench tops and labelling materials are available. Some specialist equipment can be adapted simply by enlarging the labels on the controls.

Good housekeeping practice can greatly increase accessibility, such as maintaining walkways clear of obstacles, ensuring that cupboards are easily reachable by all users, and requiring the appropriate protective clothing to be worn at all times by all users.

### 3.2.6 Accommodating non-medical helpers

Some disabled students require personal assistants to act as extra pairs of hands or eyes, for example when they have manual dexterity impairments. The use and training of assistants in geoscience laboratories should be considered carefully. Assistants who are unfamiliar with the terminology and equipment can increase rather than decrease the risks, and it may be preferable to evaluate the relative advantages of students working in pairs rather than using inexperienced people. This should be discussed with your line manager or the Disability Coordinator, as well as the student.

## 3.3 Resource centre managers and librarians

**Scenario 3:** Reasonable adjustment

A student comes to the issue desk of the departmental library asking for assistance in finding books for her essay on water resource management. She explains that she has some difficulty in walking and lifting the books; some science books are very heavy. The Dewey decimal system is unhelpful as hydrology books are classified in several different places in the sequence, some are in an adjacent room, and she wants to browse. You are on your own, and several other students also need your help. You ask her if she can come back later when a colleague will also be available, but is this reasonable?

GEES departments may include individuals who manage or curate collections of geological, petrological and palaeontological materials, books and journals, and paper-based information such as maps and plans. The distinctiveness of GEES department collections is likely to be their diversity, and in some cases

their longevity. Some GEES departments also have modern dedicated computing facilities for student research and data analysis, staffed by a subject specialist and supported by paper-based materials. Excellent guidance is available on the appropriate management of such facilities, produced by the Society of College, National and University Libraries (SCONUL) and available at <www.sconul.ac.uk/pubs_stats/pubs/topical/documents/AccessDisabilitiesBrief.doc>. The Disability Rights Commission website also includes relevant guidance on libraries, <www.drc-gb.org/education/knowyourduties/libraries.asp>. An interesting article based on research undertaken for a Master's degree by Heaven (2004) is accessible online from the website of the Chartered Institute of Library and Information Professionals (CILIP) at <www.cilip.org.uk/default.cilip>. Her findings are readily transferable to the setting of the departmental library, and may suggest particularly important aspects to consider in your own workplace.

Key aspects for GEES resource centre managers and librarians to address include:

- physical access to the resources;
- accessibility of services;
- communications;
- assistive technologies;
- evaluation of services.

### 3.3.1 Physical access to the resources

The normal requirements for facilitating disabled access (accessible entry, low counter heights, sufficient door width, availability of lifts, non-slip flooring and so on) will probably not be the responsibility of departmental support staff. Nevertheless, you can usefully pay particular attention to furniture such as desks and chairs, the appropriate height and separation of shelving and storage units to permit wheelchair access, lighting levels, the colour of the decor and the legibility of signage and labelling. Traditional GEES departmental libraries can often be congested, the result of many years of accumulation of materials, and this is a particular impediment to students with visual or mobility impairments.

### 3.3.2 Accessibility of services

When the resources themselves are physically inaccessible to disabled students because the shelves are too high or the map chest drawers too heavy, basic assistance will have to be provided by staff, and students will need to be advised of this service. They also need to be told if it is possible for a personal assistant to take out items on their behalf. Realistically, most support staff are

likely to be working alone in these facilities, which poses its own challenges; you may want to offer timed sessions or inductions for disabled students who find it difficult to wait for you to finish dealing with other students. In addition to assistance with fetching items, you may wish to consider other privileged services for disabled students, such as extended loans, setting aside items for students who find it difficult to access the centre or library, or serviced or subsidised photocopying. Given that librarians and resource centre managers may not routinely be informed of individual students' declared disabilities, it may be possible to provide a discreet service through their university identity card. This is the card that most institutions issue which permits book borrowing and sometimes the payment of fines or photocopying bills. Consult the university's Disability Coordinator to find out if, for example, students with visual impairments could be granted extended loan privileges automatically when they borrow a book, rather than having to explain their circumstances publicly on each occasion.

### 3.3.3 Communications

The same issues surrounding verbal communications affect support staff working in libraries and resource centres, as they do departmental reception staff and administrators. This is explained in Section 1.4 of this guide; it is particularly important to be positive and encouraging to all students, disabled students amongst them. Resources guides and bibliographies or catalogues should be available in a range of alternative formats including electronic, printed in different sizes and colours, and audio formats. Maintenance of the files electronically will allow for students to manipulate the format themselves, to generate a sound file from read-speak software for example.

### 3.3.4 Assistive technologies

ICT-based assistance such as workstations with enabling technology will be covered in section 3.5 of this guide, but there is a range of other facilities that are helpful. Induction loops, magnifiers (fixed or hand-held), enlarging photocopiers and screen readers are particularly useful. The JISC TechDis Service website at <www.techdis.ac.uk/index.php> provides useful details of technological adjustments. Occasionally you may receive requests for video materials with subtitles or transcripts. Although it is probably unreasonable to have these available on demand, you can suggest to academic staff who utilise broadcast materials on video or DVD, or digitally, that they attempt to capture any available subtitling on their recording.

### 3.3.5 Evaluation of services

Consider how you might establish whether the service you provide to disabled students could be improved. You could invite the university's Disability

Coordinator to audit the facility, and you could certainly ask disabled students themselves what they think, either directly or anonymously through a questionnaire issued to all students, but including targeted questions for users with particular needs. Be open to suggestions for changes.

## 3.4 Cartographers, illustrators and designers

**Scenario 4:** Active learning

Most of your time is spent drawing maps and diagrams for books and journal articles, but occasionally students will need help to download maps from EDINA, the online mapping data repository to which the University subscribes. The instructions are quite challenging, and mapped information needs to be printed using a large format specialised printer that can be temperamental. Anna is deaf, but wants to have a discussion with you about the information she needs for her project. In the lecture theatre she works with a British Sign Language interpreter. From your point of view it would be easier to produce the maps yourself, but Anna wants to be able to explore the process so that she understands more about its limitations; she is considering a career in cartography. How can the two, or three, of you work together most efficiently, so that Anna is not just a passive observer?

The services provided by cartographers and allied specialists have changed dramatically over recent years. Whilst the clear structuring and presentation of huge volumes of information in a carefully-drawn diagram or map remains a priority, the way in which this is done has transformed. Professional staff rarely produce hand drawn paper-based maps, diagrams and illustrations nowadays, but manipulate electronic files to produce similar outputs on screen or printer. They also assist students to do the same in many GEES departments, particularly by utilising specialist subscription services such as EDINA <http://edina.ac.uk/>, and analysing satellite and other remotely sensed images or handling digital files using Geographic Information Systems software.

The disability issue immediately arising from this activity would appear to be the potential impact of visual impairments, including colour blindness. Universities internationally have sometimes sought to overcome this through providing tactile maps and diagrams, but these have formerly been prohibitively expensive for routine use. The technology is described in the National Centre for Tactile Diagrams website at <www.nctd.org.uk/MakingTG/index.asp>. In the case of monochrome line diagrams, the 'Teachability Project' at Strathclyde

University notes that

> *'While it is not likely that routine preparation of teaching materials will include the re-presentation of visual, diagrammatic material into tactile format, such provision might well meet the needs of some students. Assumptions about whether such diagrams would or would not be appropriate or adequate for particular students in particular subject areas are to be avoided. Some students in disciplines that demand a heavy reliance on very detailed diagrammatic material, such as chemistry, have studied successfully with materials prepared by the National Centre for Tactile Diagrams. It of course does not follow that this solution would be equally usable by all blind or partially sighted students. But staff knowledge of such a possibility can lead to the investigation of this resource for some students…*
>
> *….Not all 'tactile teaching' requires a similar degree of advanced preparation….The Royal National Institute of the Blind (RNIB) note that 'The simplest way of producing tactile images is by using plastic embossing film (also known as German film and available from RNIB) which is available in two sizes – 211 x 298 mm and 340 x 270 mm. The film, which needs to rest on a rubber mat, raises when drawn upon with a ball point pen or special embossing tools (also known as spur wheels). Braille text can be added using a hand frame and style. You can use this to make your own images.'*
>
> <www.teachability.strath.ac.uk/chapter_6/reflectingonpractice6b.html>

It remains particularly challenging to provide interpretation of illustrative material for visually impaired students, whether the source is on paper or in electronic format. Using an interpreter to describe what appears on the image is one way of approaching this. However, students with other impairments may also require assistance in dealing with maps and technical diagrams. Scenario 4 focuses on one such case, that of communicating with a deaf student where specialist language is required. In such cases, basic information on the technology and terminology should be made available beforehand in writing, using several different formats including electronic files, paper-based in different colours and print sizes, and possibly audio files. This will assist when demonstrating the technology to students.

Technical advice for cartographers in university departments is provided by the Society of Cartographers, but it has not published significant guidance on supporting disabled students.

The numbers of disabled students that you are required to assist may be relatively limited, so a systematic approach to evaluating your service (such as

a questionnaire) is probably excessive, but you should certainly ask individual students if there is anything you might do to assist their study further. The section on evaluation, included in section 3.5.5, offers some advice to those cartographers who deal with larger numbers of students. Alternatively, you could request that a question on cartographic services could be included in any generic departmental evaluation which students undertake.

## 3.5 ICT technicians and learning technologists

ICT technicians and related staff such as learning technologists and technical services managers work in and with GEES departments to support both teaching and research. As programmers and computer technicians, they are more frequently associated with research activity, including file handling for dissertations (such as hydrological information or social science surveys). Sometimes this extends into the production of illustrative material such as graphs, and increasingly into file handling for GIS applications and satellite image interpretation. In supporting teaching, they typically work with academic staff to develop and manage course and module websites, assist with managed learning environments such as WebCT and 'Blackboard', and develop particular pieces of in-house software such as modelling simulations. These roles are becoming more common. Learning technologists are more specifically associated with teaching, although some undertake pedagogic research alongside academic staff. You will find that some of the ideas in sections 3.3 and 3.4 are also relevant to ICT technicians and learning technologists.

Amongst the various disability-related barriers to learning identified by disabled students, using information technology-based facilities was unexpectedly ranked least problematic of the various different settings in a recent survey of GEES students undertaken as part of this project (Hall and Healey, 2004) <www2.glos.ac.uk/gdn/icp/student%20survey.doc>. Only 17% of disabled students across several universities noted significant problems, compared to 54% who identified lectures as challenging. As a consequence, it might be thought that there is little more that needs to be done by ICT technicians other than to follow general guidance on rendering information clear, and using national standards for accessibility. However, this would not necessarily be true, even if the picture were a static one. It is conceivable that developments in ICT are rendering learning less, rather than more, accessible, for example, as websites become more interactive and complex to navigate.

**Scenario 5:** Legal and ethical duties

Your department runs a Postgraduate Certificate in European Rural Development, which is studied principally through distance learning, with two residential weeks based on your campus. The marketing information for the course indicates that it can be taken by international students who have access to a computer running Microsoft Windows XP or a later version, and that they will principally be accessing WebCT-based materials. Kasper, who is Polish, has a visual impairment and wants to be reassured that all the course materials will be accessible to him. The course is expensive and he has no intention of wasting time and effort on something that will not help his career. You think that whilst most of the modules will principally involve text-based information where Kasper could use interpretation software, he might have a problem with the module on Geographic Information Systems. What duty will the ICT technicians have to support Kasper with his studies?

Broadly the same criteria need consideration by ICT technicians as librarians, although the emphasis will be different. Key aspects to address include

- physical access to the resources;
- accessibility of services;
- communications;
- assistive technologies;
- evaluation of services.

### 3.5.1 Physical access to the resources

Students need to be able physically to reach the computers, and to stand or sit comfortably at them, whatever their disability. If you have responsibilities for managing premises, try to evaluate the accessibility and ease of use of computing equipment by disabled students in laboratories. Include peripheral equipment such as printers and scanners in your assessment. Any computers which are provided as 'rapid short term access only', for example, by assuming that users will stand, should be matched by other machines available for wheelchair users or those who need to be seated. Care should be taken not only with the furniture, but also with the physical layout of monitors and keyboards on desks. In anticipation of a demand from disabled students, at least one workstation in a suite should have a large screen monitor, specialist

keyboard and software. Other assistive technology is becoming available very rapidly. You should particularly check that ports for 'memory sticks' (flash drives or pen drives) are accessible, and do not require users to manhandle machinery or to crouch down (for example, to use near floor level USB ports).

### 3.5.2 Accessibility of services

Accessibility for disabled students can be unintentionally impeded by other users. Do disabled users in your area have priority on computers with specialist services installed, and do networked computers allow a 'roaming profile' so students can customise screens to suit their needs?

### 3.5.3 Communications

You will need to ensure that you understand how to communicate effectively with disabled students, using a variety of formats. Do not make the assumption that everyone is a committed ICT user, and provide background information about the facilities and the teaching materials in different, non-screen-based ways, including print and audio format. Take care to make guidance notes as simple and straightforward as possible, avoiding the temptation simply to photocopy pages from manuals. Consider using non-technical colleagues as guinea pigs to evaluate the straightforwardness of basic written instructions for your system. This will clearly benefit all students.

For information on making websites and other electronic material accessible, particularly for students with dyslexia or visually impaired students, examine the JISC TechDis website at <www.techdis.ac.uk>. There are particularly appropriate standards for checking your webpages, for example, the World Wide Web Consortium (WC3) guidelines at <www.w3.org.WAI/>, used for the well-known Bobby web accessibility checking software tool. Good practice suggests that page design and navigation should be simple, images limited, and that a site map is essential.

### 3.5.4 Assistive technologies

Do give consideration to the appropriate software and hardware such as screen magnification and screenreaders, which can allow disabled students to secure text materials (but not diagrams) from the screen in different formats. Given the size of most departmental technical teams, it is most likely that specialist advice of this type should be sought from centralised information technology support departments in universities rather than your immediate colleagues. You might be involved in helping students who tape record lectures or staff using microphones, in which case you will clearly need to understand how to operate the equipment.

### 3.5.5 Evaluation of services

Consider how you might establish whether the service you provide to disabled students could be improved. You could invite the university's Disability Coordinator to audit the facility, and you could certainly ask disabled students themselves what they think, either directly or anonymously through a questionnaire issued to all students, but including targeted questions for users with particular needs. Be open to suggestions for changes.

## 3.6 Other staff

There are many more roles undertaken by support staff in geography, earth and environmental sciences departments in UK universities. You may work as a workshop technician, a field and equipment technician, a driver, a porter, a reprographics technician or an admissions officer. Your experience of working in higher education, and the engagement you have with students will be very variable. Given the diversity, it is difficult to identify common themes that suggest the adjustments that should be made for disabled students. You should start by considering the elements of your post that you share with the job categories which are explored in sections 3.1 to 3.5, and reading through the relevant sections of this guide.

**Scenario 6:** Hidden disabilities

You work as a field and equipment technician for a large earth and environmental sciences department in a university in the south of England. Your department's placement adviser has arranged for Darren, a student on an undergraduate course, to join a research team working on soil characteristics and erosion in the Pennines. He has called in to introduce himself and get the background information, and you know that he is keen to get involved in the practical side of installing equipment, which can be physically demanding. He seems like a pleasant lad, and you are happy to be having some assistance. Last time you were up in Yorkshire, the whole team unexpectedly had to manhandle a heavy sampler across a mile of moorland in the rain, which took all day. During the drive up, you stop at a motorway service station and you see Darren inject himself with insulin before eating his lunch. Should you discuss this with him, and let anyone else know about his diabetes?

Scenario 6 is designed to prompt your thoughts on an aspect of student learning which is not directly academic, namely work experience. Any member of the support staff in a GEES department could find that they are working with

a disabled placement student, and if this happens, your work will be governed by the general principles of the DDA Part IV in just the same way as formal classroom-based tuition. There is a set of guides dealing specifically with supporting disabled students undertaking fieldwork, available at <www2.glos.ac.uk/gdn/disabil/index.htm>.

You could think about this example in relation to your own work practices, whether in the field or on campus. The Department for Education and Science produced a guide entitled *Providing work placements for disabled students: a good practice guide*, which is available free from DFES Publications, PO Box 5059, Annesley, Nottingham NG15 0DT. Work experience, either undertaken in short blocks or for a period of twelve months, is becoming more common in GEES degree programmes (and more particularly in Foundation Degrees and vocational courses).

# 4 Into the future

## 4.1 Inclusive departments

The Higher Education Academy and similar agencies are beginning to develop national staff development initiatives about teaching and learning for university support staff, but progress lags behind that of developments supporting academic staff. This is one dimension of 'inclusion', or rather the lack of it, which may be familiar to administrators, technicians, cartographers and other GEES support staff. Perhaps, though, this may be turned to advantage? Understanding something about how feelings of alienation, frustration and powerlessness can develop in marginalised groups of people can assist your understanding of the situation of disabled students. Encouraging them to take the same opportunities for learning as you would wish to take yourself, and supporting them to do it, requires empathy, knowledge and skill. And you have a key enabling role within your department.

An inclusive university department is one where disabled and non-disabled people of all ages, ethnicities, religions and sexuality can learn together, with the right assistance from academic and support staff. The Centre for Studies in Inclusive Education (no date) notes that 'Inclusion means enabling [students] to participate in the life and work of mainstream institutions to the best of their abilities, whatever their needs.' Their website is accessible at <http://inclusion.uwe.ac.uk/csie/csiefaqs.htm> and although originally applicable to schoolchildren's education, the principles are equally applicable to many aspects of higher education.

Not only do the premises, the curriculum and the course materials in geography, earth and environmental science departments need to be accessible, but the attitudes of all of their staff need to be positive, accommodating and helpful. Inclusive departments will ensure that all of their employees contribute effectively to the development of student learning, in policy and practice, where diversity is celebrated and managed rather than 'equal opportunity' or legal compliance with the DDA Part IV being the focus of attention. To achieve this, responsibilities for making appropriate adjustments for disabled students, and for maintaining accessibility thereafter, need to be clear, both general responsibilities for anticipatory action, and those specific to individual support and academic staff roles.

Finally, inclusive departments involve all students, disabled or not, as partners in their decision-making. They draw on their students' experiences, respond to their views and share their evolving good practice widely within and beyond their own institutions.

# 5 References

Elliott, T., Phipps, L. and Harrison, S. (no date) *Accessible events: A good practice guide for staff organising events in Higher Education* (York: Joint Information Systems Committee (JISC) TechDis Service, Higher Education Academy).

Haddon, M. (2004) *The curious incident of the dog in the night-time* (Vintage Books).

Hall, T. & Healey, M. (2004) *The experience of learning at university by disabled students in geography, earth and environmental sciences and related disciplines: a report on the Geography Discipline Network (GDN) Inclusive Curriculum Project (ICP) student survey* (Cheltenham: Geography Discipline Network).

Healey, M. J. (2003) Trojan horse is good bet for all *The Times Higher Education Supplement,* 19th September, p.26.

Heaven, S. (2004) The provision made by higher education library services for people with disabilities, *Library and Information Research*, 28 (90), pp.24-30.

HEFCE *Disability statements. A guide to good practice* (HEFCE 98/66).

HEFCE *Guidelines for accessible courseware* (HEFCE 99/05).

HEFCE/Skill/eQuip *Resource directory of disability-related products and services.*

Hurst, A. (ed) (1998) *Higher education and disabilities: international approaches* (Ashgate Publishing).

Roberts, C.R. (2004) Supporting the supporters: encouraging continuing professional development for support staff, *Planet* 13, December 2004, pp.36-37.

Shattock, M. (2003) *Managing successful universities* (Open University Press (on behalf of the Society for Research into Higher Education)).

SWANDS (2002) *SENDA compliance in higher education: an audit and guidance tool for accessible practice within the framework of teaching and learning* (Plymouth: The University of Plymouth).

# Appendix 1

## Discussion notes for scenarios

These notes are designed to start your thinking about a particular issue or scenario within the main text (see Section 3), and may be suitable for senior support staff to use in staff development sessions with colleagues. The scenarios, just as reality, all have several dimensions: a particular medically-defined disability, an actual set of surroundings, a challenge specific in its timing, and an individual member of a GEES department support staff team. There are probably no 'correct answers', but some approaches are likely to yield more positive results than others.

### Scenario 1: Working as a team

Working with new students poses many challenges for administrators, as the students will be learning about your systems, and you will be learning about them. In the first weeks of a student's enrolment, registration information will still be trickling through from busy central university departments to academic units. Key information, such as might have been circulated by the institution's Disability Coordinator concerning particular students, may not be in place before the start of term. Or indeed, administration staff may not be routinely included in the circulation of sensitive information about individuals. Here, the problem is compounded by being urgent, as the student appears to be becoming distressed.

As the senior member of staff, direct personal intervention seems necessary, and there is little point in waiting. Offer your assistance directly to the student. The guide in this series entitled *Developing an inclusive curriculum for a) students with mental health difficulties b) students with Asperger Syndrome* provides information about mental health and mental impairments, but a straightforward offer to the student to find out the finishing time and call or email him with the answer at a particular time, may help. You could explain your role in the department, and point out that should he ever be in difficulties with transport, there is a student telephone in Reception, from which he can call home. Someone will always be available at Reception to assist.

Clearly here there are longer term issues too. Your new colleague needs some training, and as her line manager you may be responsible for ensuring that she participates. The amount of training which is reasonable to provide will vary with the circumstances, but an hour spent talking through some of the issues surrounding the DDA Part IV in a structured way would be useful; you could refer her to the relevant sections of this guide. You should also identify a source of support for her should she feel unable to cope. You might suggest to your Head of Department that, confidentiality arrangements permitting, you could receive

information in a more systematic way than through corridor conversations.

### Scenario 2: A disabled student's success leads to new challenges

Firstly, you can congratulate both Nandika, and yourself, on the success story. The anticipatory action you took in relation to disabled students' needs has brought benefits to her, and almost certainly to all students using your laboratory. As Nandika moves to doctoral research, the laboratory procedures she needs to use will become less predictable and potentially more hazardous. It may not be feasible to prepare analytical procedure notes as far ahead as previously, but they will still need to be written in concise plain language. Nandika will be working with her supervisor to plan the investigations, and you will anyway need to be involved in ordering and supplying chemicals, and in COSHH briefings. You will want to know about the schedule well in advance, so that one of the laboratory team can be close at hand when peat digestions and similar analyses are being undertaken. No student should work alone with caustic, toxic or volatile substances. Discuss the uncertainties and precautions with her, making it clear that she can ask for assistance at any time. Tackling the early sample analyses together would be useful, concentrating on the need for a tidy bench and clear written methodology. Nandika's obvious ability will assist you.

### Scenario 3: Reasonable adjustment

A decision will have to be made about priorities, as you cannot perform two tasks at once, and it would not be reasonable to expect two staff always to be available. Initial guidance to the student could suggest that she starts by searching the catalogue. If this is electronic, matters will be relatively straightforward; she can search at a computer and note any texts that appear appropriate, whilst you deal with the other students. Anticipative action would suggest that your library should already have been evaluated by the Disability Coordinator, and that the shelving is as accessible as possible, gangways are clear, chairs are available and that there are bookstands for heavy texts. A few lockers, in which students can leave personal effects, would be helpful too. You might even have posted a notice for students (electronically, and at the desk) pointing out times when you will have most capacity for providing assistance. And you may already have made arrangements for disabled students to have extended loans. Some of these anticipatory adjustments will help the student to cope alone. But she may still struggle.

Once your student has identified some books, it would seem reasonable for you to offer to bring some to a desk for her to consult, and with her list you might be able to bring others in between assisting other students. Beyond that, you might point out the best times for her to secure assistance with lifting and carrying the books, and enquire if she might be interested in making an

appointment for a future session, so that you can arrange for help. There is no case law yet about what is a reasonable adjustment in this area, so you will need to reach a mutually acceptable conclusion. The guide in this series entitled *Developing an inclusive curriculum for students with mobility impairments* provides specialist guidance on assisting mobility-impaired students.

### Scenario 4: Active Learning

Cartographers are not always in regular contact with students, and hence the need for substantial anticipative adjustments appears limited. However, text usually poses no problem for hearing impaired students, so your first action might be to suggest that Anna consults your manual or other guidance notes to establish the capabilities of the system you use to download maps. A preliminary discussion can take place through the BSL interpreter, but be prepared for this to take some time, as technical terms will need to be spelt out. As a courtesy, you should normally face the student rather than the interpreter when speaking (so you will have to look up from your screen or printer), but do ensure that the interpreter can see you too. Take your time.

Once Anna becomes a little more proficient, you may be able to establish a way of supporting her independent work that does not require the translator always to be present. If Anna speaks, you can write a note, and she can speak to you. If not, both of you will have to write. Do try to avoid the temptation to do the work yourself. This is a keen student who has clearly thought about her needs and aspirations, and a career as a cartographer could be ideal if she has talent. She needs an opportunity to experiment, with your support. After a session, you may be able to produce a small amount of written feedback outlining what went well and what was less well handled, so Anna can learn from this. She could do the same for you. The guide in this series entitled *Developing an inclusive curriculum for students with hearing impairments* provides detailed advice relating to hearing impairments.

### Scenario 5: Legal and ethical duties

Financial support is provided to disabled UK students through the Disabled Students' Allowances, but this is not available to international students. However, the DDA Part 4 requires institutions not to treat students with disabilities in a 'less favourable' way. Hence recruiting international students also brings legal and ethical duties to support them effectively. SKILL, the National Bureau for Students with Disabilities, offers guidance specifically about disabled international students, available at <www.ukcosa.org.uk/pages/disability.htm>.

Kasper has disclosed to the University that he has a visual impairment, and

hence it is reasonable to expect anticipative action. It would be helpful if he was asked about any support services he had accessed in his first degree, by the Disability Coordinator, and that this information was made available to the distance learning course team, including the ICT technicians. There should be no problem with WebCT-based modules, especially if they have been designed to be compliant with Bobby standards. Kasper can still be asked specifically to contact your ICT team to report any problems he has, and if he agrees, they can be told about his disability and the urgency of the required response. Action here will enable other students to benefit, too.

Anticipative action would include having an email dialogue with Kasper to test out his potential access to the GIS module. GIS systems are industry standard packages, and it would not normally be feasible to make adjustments to the programming. If the software proves incompatible with his spatial visualisation software, discussion will need to establish whether the module is essential to the programme or optional, and Kasper's preferred course of action. If GIS is optional, another module may be acceptable. If not, it might be possible for Kasper to take the GIS module with local assistance, but this would be very challenging and the University would probably have to pay. It would also be advisable for a written commitment to be made about the level of service that could reasonably be provided by the University, and the appropriate lines of communication. Discussion needs to happen as early as possible, preferably before Kasper starts the course, as sadly he may not wish to proceed on this basis.

### Scenario 6: Hidden disabilities

This situation should not have happened, but the unexpected can always arise. Work placements are specifically covered by the DDA. Assuming Darren declared this to the University, information should have been provided to you, the 'employer' on this occasion, by the placement adviser. When you get back, you should remind her gently of the University's obligations. Since you are currently unable to access advice, you should consider raising Darren's impairment directly with him, asking whether there is anything of which you should be aware. Explain your anxieties relating to the nature of the planned activity – go through what you will be doing - and ask for his guidance. He should be conscious of his own potential physical limitations and needs, and be able to advise you effectively. He may be content for other people in the field team also to be told, in case he needs their assistance.

# Appendix 2

## General websites

<http://news.bbc.co.uk/go/em/fr/-/1/hi/magazine/3708576.stm>

Interesting site managed by the BBC, but including ideas about the appropriate use of language when discussing disability issues, or when making reference to disabled people.

<www.bbc.co.uk/ouch/lifefiles/student/week1/darren.shtml>

Another BBC site, specifically aimed at disabled listeners and viewers, including students.

<www.amicustheunion.org/default.aspx?page=1126>

Training programme information on disability, organised by one of the major support staff Trades Unions, AMICUS.

<www.aua.ac.uk/publications/gpg/>

The publications list for the Association of University Administrators, with an interesting set of titles. Very helpful for support staff with administrative duties or management responsibilities for teams of staff. Titles include 'Going Places', with guidance on organising study visits, and 'I know it's here somewhere', about maintaining effective databases, both relevant to providing support for disabled students and others.

<www.gees.ac.uk/pubs/planet/p13/confreps.pdf>

The Higher Education Academy's Subject Centre for Geography, Earth and Environmental Sciences has a journal (available online and in hard copy) entitled 'Planet'. This is an article describing the first national GEES conference specifically for support staff, entitled 'Supporting the Supporters'. You may recognise some of the themes which affect your working life in a GEES Department.

<www.manchester.gov.uk/disability/language/index.htm>

Manchester City Councils' webpages about the appropriate use of language when discussing disability issues. General good practice.

<www.opsi.gov.uk/acts/acts1998/19980029.htm>

The UK Government's 1998 Data Protection Act, which may require consultation if records about disabled students are being maintained. Probably not appropriate for a quick read.

<www.qaa.ac.uk/academicinfrastructure/codeOfPractice/default.asp>

The Quality Assurance Agency's 'Code of practice for the assurance of academic quality and standards in higher education'. A pdf of Section 3, 'Students with Disabilities' is downloadable from the site. An overview of generic guidance about what is expected to happen in higher education institutions to support disabled students.

<www.skill.org.uk/>

The home page of SKILL - the National Bureau for Students with Disabilities, an equal opportunities charity.

<www.teachability.strath.ac.uk/>

Home page of the Teachability project at the University of Strathclyde, which promotes the creation of an accessible curriculum for students with disabilities. Specialist pages are also available, listed in the specialist section below.

<www.techdis.ac.uk>

The home pages of TECHDIS, which is a leading educational advisory service, working across the UK, in the fields of accessibility and inclusion. TechDis aims to enhance provision for disabled students. There is also an interesting page on laboratories, though with a chemistry slant (see specialist websites).

<www.tiresias.org/phoneability/telephones/>

Useful article on the features to look for when sourcing telephones that may be used by disabled people, for example, for reception areas or emergency phones.

<www.tuc.org.uk/equality/tuc-9666-f0.cfm>

Summary of the Trades Union Congress Advice to unions on monitoring disability.

<www.ukcosa.org.uk/pages/disability.htm>

UKCOSA and Skill: the National Bureau for Students with Disabilities have jointly produced guidance for higher education institutions concerning disabled international students in higher education.

<www.unison.org.uk/disabled/index.asp>

The Trade Union UNISON's advice for disabled members, but useful as information to guide support staff working with disabled students, or indeed disabled colleagues.

<www2.glos.ac.uk/gdn/icp/>

Information about the GDN Inclusive Curriculum Project, with links to the ICP student survey <www2.glos.ac.uk/gdn/icp/student%20survey.doc> and case studies <www2.glos.ac.uk/gdn/icp/caselist.htm>

<www2.tqi.ac.uk/sites/tqi/home/index.cfm>

The Teaching Quality Information (TQI) website brings together sources of official information about the quality of higher education in UK universities and colleges and is part of an initiative to make more information available and accessible to applicants and their advisers.

# Appendix 3

## Specialist websites

<http://edina.ac.uk/>

The service provider for specialist cartographic information, including a useful section on use of the information in support of teaching and learning.

<www.admin.ox.ac.uk/eop/disab/weblabs.shtml>

Oxford University's introductory guidance notes on creating accessible laboratories and running practicals; applicable to all types of science laboratory.

<www.cilip.org.uk/default.cilip>

The Chartered Institute of Library and Information Professionals' home page, taking you on into sections about supporting disabled library users.

<www.drc-gb.org/education/knowyourduties/libraries.asp>

The Disability Rights Commission's webpages dealing with libraries, and the facilities which can support disabled users.

<www.engsc.ac.uk/downloads/Disability/hersh.pdf>

An interesting case study about laboratory use by disabled staff and students, from the Higher Education Academy's Engineering Subject Centre.

<www.nctd.org.uk/MakingTG/index.asp>

The National Centre for Tactile Diagrams pages concerning the use of tactile graphics for visually impaired readers and students. Useful material for those with responsibilities for producing hard copy artwork or graphics for learning packs or similar materials.

<www.sconul.ac.uk/pubs_stats/pubs/topical/documents/AccessDisabilitiesBrief.doc>

A document describing the findings of a SCONUL Taskforce investigation into library access for users with disabilities.

<www.teachability.strath.ac.uk/chapter_6/tableofcontents6.html>

The University of Strathclyde's Teachability Project findings include useful information about practical classes, including the legal aspects at <www.teachability.strath.ac.uk/chapter_6/reflectingfromthelegalangle6.html> and general information about practical class management at <www.teachability.strath.ac.uk/chapter_6/reflectingonpractice6b.html>.

<www.techdis.ac.uk/index.php?p=3_8_12>

TECHDIS information specifically concerning chemistry laboratories, but of wider interest to GEES support staff who manage or work in scientific laboratories.

<www.rsc.org/images/disabled_tcm18-12717.pdf>

Very helpful guidance from the Royal Society of Chemistry concerning disabled users of laboratories. Subsidiary pages such as <www.rsc.org/Membership/Networking/EHSC/ehscnotes.asp> contain generic advice which will be of value to all science laboratory managers.

<www.w3.org/WAI/>

Guidance notes on accessibility standards for electronic materials.

# Appendix 4

## Checklist for administrative or technical managers to use in arranging staff development concerning disability issues

This checklist is partly based on material from the 'Teachability Project' produced at the University of Strathclyde, which may be found at <www.teachability.strath.ac.uk/>.

| Statement | True/false; comments |
|---|---|
| Our staff understand the background issues surrounding the position of disabled people in society, including students in higher education. | |
| We are aware of the appropriate language which should be used in talking to or about disabled students, and try to use it. | |
| Our staff are well informed about the respective duties of health and safety and disability discrimination legislation, and we are confident that they know how to identify and implement safe, reasonable adjustments. | |
| The nature and limits of the applicable confidentiality are well understood by staff and explained to the students as required. | |
| Our department is fairly clear about the educational objectives of courses, particularly practical work; we have discussed the matter and are thus well-placed to consider reasonable adjustments. | |
| We use every opportunity, such as refurbishment or purchasing of new equipment, (e.g. seating, laboratory benches or specialised kit) to anticipate the needs of future disabled students. | |

continued overleaf

| Statement | True/false; comments |
|---|---|
| Our applicants and students are all well informed in advance of the nature of practical elements of the course and of what they will have to do in order to undertake it. It is a straightforward matter for disabled students to identify any potential need for adjustments. | |
| We know that reasonable alternatives to the practical course component exist and we can offer them, either as standard course components or in suitable cases where for any reason the practical course elements are not appropriate. | |
| Do our answers and comments above suggest that our Department could make tuition more accessible for disabled students? If so, what action should we take? | |