

<http://www.glos.ac.uk/gdn/>

## **Issues in Providing Learning Support for Disabled Students Undertaking Fieldwork and Related Activities**

Mick Healey<sup>1</sup>, Alan Jenkins<sup>2</sup>, Jonathan Leach<sup>2</sup> and Carolyn Roberts<sup>1</sup>

<sup>1</sup>University of Gloucestershire

<sup>2</sup>Oxford Brookes University

Series edited by Phil Gravestock and Mick Healey  
University of Gloucestershire

*This work was undertaken as part of the Higher Education Funding Council for England's 'Improving Provision for Disabled Students Funding Programme'.*



© Geography Discipline Network / Authors 2001

Published by:

Geography Discipline Network (GDN)

Geography & Environmental Management Research Unit (GEMRU)

University of Gloucestershire

Francis Close Hall

Swindon Road

Cheltenham

Gloucestershire, UK

GL50 4AZ

Issues in Providing Learning Support for Disabled Students Undertaking  
Fieldwork and Related Activities

ISBN: 1 86174 113 8

ISBN (full series): 1 86174 119 7

*The content of this guide has been developed in good faith, but the authors and their institutions cannot be held responsible for actions which readers may take in response to the advice contained herein.*

# Issues in Providing Learning Support for Disabled Students Undertaking Fieldwork and Related Activities

*Mick Healey, Alan Jenkins, Jonathan Leach and Carolyn Roberts*

## Table of Contents

About the Authors .....	i
Mick Healey (University of Gloucestershire) .....	i
Alan Jenkins (Oxford Brookes University).....	i
Jonathan Leach (Oxford Brookes University).....	i
Carolyn Roberts (University of Gloucestershire) .....	ii
Abstract.....	iii
Editors' Preface.....	iv
1 Setting the Scene .....	1
1.0.1 Need for this project .....	4
1.1 Aims.....	5
1.2 Who should read this guide?.....	6
1.3 Project funding.....	6
2 Some Challenges .....	7
3 Our Approach .....	10
4 Role of Fieldwork in Geography, Earth and Environmental Sciences.....	13
4.1 What types of activities are done in fieldwork?.....	14
4.2 Why is fieldwork so central to these disciplines? .....	15
5 Models of Disability.....	17
5.1 Why do you need to know about models of disability? .....	17
5.2 Who is a disabled person?.....	17
5.3 A medical model of disability .....	18
5.4 Individual and charitable models .....	18
5.5 A social model of disability .....	19
5.6 Attempts to integrate individual and social models of disability.....	19
5.7 What are the implications of the social model of disability for academic staff? .....	20
5.7.1 Terminology.....	20
5.7.2 Identification and removal of barriers .....	20
5.7.3 Disabled people and/or medical professionals as 'experts' on disability issues .....	20
6 Barriers and Strategies .....	21
6.1 Access issues .....	21
6.2 Barriers .....	23
6.2.1 Attitudinal Barriers .....	23
6.2.2 Institutional and organisational system barriers .....	25
6.2.3 Physical barriers .....	26
6.3 Overarching strategies embracing the whole curriculum .....	26
6.4 Virtual fieldcourse: part of the 'solution', or sidestepping 'the problem'? .....	28
7 Legislation and Regulation .....	30
7.1 Context .....	30
7.2 The impact of the Disability Discrimination Act (DDA) (1995) and the Special Educational Needs and Disability Act (SENDA) on providers of education.....	31
7.2.1 Background to the DDA and SENDA .....	31
7.2.2 DDA definitions of disability and discrimination.....	33
7.2.3 The Special Educational Needs and Disability Act Code of Practice.....	35

7.3	Extension of DDA principles on employment and provision of goods and services to educational provision: practical implications for field studies courses..	36
7.3.1	Identifying disabled students .....	36
7.3.2	Provision of information .....	36
7.3.3	Making reasonable adjustments.....	37
7.4	Health and safety legislation .....	40
8	The Quality Assurance Agency's Framework .....	42
9	Creating an Inclusive Fieldwork Curriculum .....	45
9.1	Planning the whole curriculum .....	45
9.2	Planning field experience, travel, sites, activities.....	47
9.3	Preparatory meetings, discussion, explanation and materials .....	48
9.4	During the field trip.....	49
9.5	Post field trip follow-up and assessment .....	50
10	Examples of Good Practice in Higher Education Institutions Offering Field Classes.....	51
10.1	Planning the whole curriculum .....	51
10.2	Planning field experience, travel, sites, activities.....	52
10.3	Preparatory meetings, discussion, explanation and materials .....	55
10.4	During the field trip.....	57
10.5	Post field trip follow-up and assessment .....	57
11	The Role of Institutional Disability Advisers .....	58
12	Conclusion.....	60
13	Web Sites .....	61
14	References .....	62

## About the Authors

### Mick Healey (University of Gloucestershire)

Mick is Professor of Geography and Director of the Geography Discipline Network (GDN), based at the University of Gloucestershire. He is also the Senior Geography Advisor for the National Subject Centre for Geography, Earth and Environmental Sciences. Mick has over twenty-five years' experience teaching and researching geography in higher education in old and new universities and colleges. He has directed three consortium projects on: '*Computer-assisted learning in geography*' (Teaching and Learning Technology Programme – TLTP); '*Dissemination of good teaching, learning and assessment practices in geography*' (Fund for the Development of Teaching and Learning – FDTL); and '*Key skills in geography in higher education*' (Department for Education and Employment – DfEE). Mick is a past Editor and current Editorial Board Member of the *Journal of Geography in Higher Education*; member of the Royal Geographical Society with the Institute of British Geographers' (RGS-IBG) Council and Education Committee. He is co-leader of the '*Enhancing fieldwork quality through pedagogic research*' (<http://www.gees.ac.uk/pedresfw/pedresfw.htm>) programme for the Geography, Earth and Environmental Sciences National Subject Centre. In 2000 he was awarded one of the first twenty National Teaching Fellowships.

### Alan Jenkins (Oxford Brookes University)

Alan has long taught and researched geography at Brookes with a research/scholarly specialism of teaching geography in higher education. He now works in the Westminster Institute at Brookes as an educational developer/researcher working across the institution in all departments to improve aspects of teaching including fieldwork. Alan was a member of a Joint Information Systems Committee (JISC/JTAP) funded virtual fieldcourse project (<http://www.geog.le.ac.uk/vfc/>) and was co-founder and editor of the *Journal of Geography in Higher Education* and helped set up the specialist study group on geography in higher education in the RGS-IBG. He is author of *Fieldwork With More Students*, co-author of *Teaching Geography in Higher Education* (<http://www.glos.ac.uk/el/philg/gdn/gold/index.htm>), and was author of the GDN guide *Curriculum Design in Geography* and was advisor for the '*Key Skills in Geography in Higher Education*' DfEE-funded GDN project. Currently he is advisor to the national FDTL Project '*Link*' (<http://www.brookes.ac.uk/schools/planning/LTRC/>) on linking teaching and research in built environment disciplines and co-leader of the '*Enhancing fieldwork quality through pedagogic research*' (<http://www.gees.ac.uk/pedresfw/pedresfwint.htm>) programme for the Geography, Earth and Environmental Sciences Subject Centre.

### Jonathan Leach (Oxford Brookes University)

Jonathan is the full-time Project Manager/Researcher responsible for the day-to-day running of the Oxford Student Mental Health Network. Previously Jonathan was Deputy Course Director for City University's MSc course in Disability Management in Work and Rehabilitation. Prior to that he worked for RESTORE, a voluntary sector mental health project in Oxford.

## **Carolyn Roberts (University of Gloucestershire)**

Carolyn is Head of the School of Environment at the University of Gloucestershire. She has over twenty years' experience in higher education teaching and management, including current management of a large multidisciplinary department embracing the teaching of approximately forty-five staff spread across seventeen degree programmes from geology and the environmental sciences, through geography, into areas of applied humanities such as rural planning and local policy, and design-based courses such as landscape architecture. A physical geographer by origin, she has previously published on environmental higher education, and been extensively involved in hydrological consultancy work for public, private and voluntary sector clients. Carolyn was previously leader of undergraduate and postgraduate courses in applied environmental disciplines and was a member of the Quality Assurance Agency's Benchmarking Panel in Earth Sciences, Environmental Sciences and Environmental Studies.

## **Abstract**

This guide is intended as an introduction and overview to the other five guides in this series (see Editors' Preface), each of which looks at a particular form of disability. It examines specific issues in providing learning support for disabled students undertaking fieldwork. The emphasis is on identifying the barriers that disabled students face to participating fully in fieldwork and the ways in which institutions, departments and tutors taking fieldclasses can help to reduce or overcome them. There is a section on the role of fieldwork in the curriculum for disability advisers and other readers who are not familiar with this mode of teaching and learning. However, the majority of the guide focuses on issues, such as models of disability, the legislative and regulatory framework and the Quality Assurance Agency Code of Practice, which tutors supporting disabled students will find helpful. There are separate sections on creating an inclusive fieldwork curriculum and the role of Disabled Students' Advisors.

Inclusive field trip design will envisage a variety of potential participants, and accommodate as many varied needs as possible without compromising the educational objectives.

(University of Strathclyde, 2000, p.2)

If widening participation is to become a reality for disabled students, academic staff will need to take ownership of disability issues and work in partnership with disability practitioners and disabled students to ensure an appropriate learning experience.

(Adams & Brown, 2000, p.9)

## Editors' Preface

Awareness of the need to develop inclusive practices, which provide equal opportunities for disabled students in various parts of their courses, is beginning to spread through Higher Education Institutions (HEIs) in the UK. This has been stimulated by the publication of the Quality Assurance Agency (QAA) (2000) *Code of Practice – Students with Disabilities* and the extension of the Disability Discrimination Act (1995) to education through the Special Education Needs and Disability Act (2001).

This series of guides to providing support to disabled students undertaking fieldwork and related activities is the main output from a project funded by the Higher Education Funding Council for England's (HEFCE) *Improving Provision for Disabled Students Funding Programme*.

The advantage of focusing on fieldwork is that many of the issues faced by disabled students in higher education are magnified in this form of teaching and learning. If the barriers to full participation by everyone can be reduced or overcome it is likely that our awareness of the obstacles to their full participation in other learning activities will be heightened and the difficulties of overcoming the barriers will be lessened.

The project has been 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. This project was undertaken by a group of geographers, earth and environmental scientists working alongside disability advisers and educational developers.

There are six guides in the set. This guide provides an overview of the issues involved including the role of fieldwork models of disability, barriers and strategies and the legislative and quality assurance frameworks. It also discusses ways of developing an inclusive fieldwork curriculum and the role on institutional disability advisers. The text is peppered with case studies and boxed examples of good practices. Each of the remaining guides addresses the application of these general issues along with the particular circumstances involved in providing support to particular groups of disabled students:

- Providing Learning Support for Students with Mobility Impairments Undertaking Fieldwork and Related Activities
- Providing Learning Support for Blind or Visually Impaired Students Undertaking Fieldwork and Related Activities
- Providing Learning Support for d/Deaf or Hearing Impaired Students Undertaking Fieldwork and Related Activities
- Providing Learning Support for Students with Mental Health Difficulties Undertaking Fieldwork and Related Activities
- Providing Learning Support for Students with Hidden Disabilities and Dyslexia Undertaking Fieldwork and Related Activities

These categories are ones commonly used in providing information, support and analysis of disabilities. Furthermore, many of the obstacles that disabled students face in undertaking fieldwork, and the appropriate methods of overcoming or minimising them, are specific to the kind of disability. Despite using medical categories for describing disabilities we are committed to emphasising a social model to exploring disability, which emphasises 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 individuals (blaming the victim), to society and the strategies and policies that higher education institutions and their constituent departments develop and enact. The emphasis of this series of guides is on identifying the barriers that disabled students face to participating fully in fieldwork and the ways in which institutions, departments and tutors taking fieldclasses can help to reduce or overcome them.

The net outcome of the quality assurance and legislative changes is that HEIs will 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.

Phil Gravestock and Mick Healey  
University of Gloucestershire  
November 2001

## References

Adams, M. & Brown, P. (2000) *'The times they are a changing': Developing disability provision in UK Higher Education*, paper presented to Pathways 4 Conference, Canberra, Australia, December 6-8.

*All World Wide Web links quoted in this guide were checked in November 2001.*

# 1 Setting the Scene

*Abstract: This section sets the scene by discussing the case of the golfer who successfully sued his professional association for refusing to allow him to use a golf cart in a tournament. It draws some parallels with this experience and the attempts to develop an inclusive fieldwork curriculum. The aims of this guide, its intended readership and the funding source, are all identified. Two case studies covering the experience of disabled students, who wished to participate in fieldwork, are presented. One had a positive outcome the other negative.*

Should a golfer be allowed to compete professionally, even if s/he can't walk properly and needs a wheelchair? Casey Martin successfully sued the US Professional Golfer's Association when they refused to allow him to use a golf cart in a tournament (<http://www.golfonline.com/tours/casemartin/>).

Looking at issues of disability and fieldwork from this golfing context suggests a range of issues connecting these different worlds, including:

- Are able, committed students being put off pursuing some disciplines because we design and promote fieldwork (or other practices/curricula concerns) in ways that exclude them?
- Can we reflect on how our disciplines – and the role of fieldwork in them – have been transformed and enriched by explicitly recognising and valuing issues of diversity (e.g. gender and ethnicity)?
- If we looked at issues of disability and fieldwork through the benefits of creating an 'inclusive' curriculum how would this benefit all our students?
- But, as with strenuous walking being seen as an essential element of a golf competition, are there certain aspects of fieldwork that are essential and cannot be modified or compromised to meet particular needs?

Internationally these issues are now being considered and resolved through legislation and discussions with professional bodies.

Some tentative answers to some of these questions begin to emerge if we look at the experience of disabled students undertaking fieldwork. Two case studies are presented in Boxes 1 and 2. Both speak of the excitement and benefits of participating in fieldwork. One, despite this experience, relates how on changing schools at 16 he was prevented from taking geography A-level because of the perception of the head of department of the difficulties of taking a disabled student on fieldwork. Working to prevent this kind of experience reoccurring is one of the stimuli behind undertaking this project. The second case study shows how, with imagination and willingness, severely disabled students may still participate and be integrated effectively with other undergraduate students in fieldwork.

## **Box 1: Supporting the learning of disabled students: the situation in 1989**

I attended what was referred to then as a special school for disabled students in East Sussex. Geography was my best and favourite subject. I vividly remember the geography field trips to both Bodmin Moor and the Yorkshire Dales as part of my GCSEs. Abseiling down a viaduct was not a problem for me (I was very trusting of the guy holding the rope!). Visiting china clay quarries was also a challenge but most interesting.

It was these experiences that decided my academic career. I attended a mainstream 6th form college in Hampshire but resided at the specialist college nearby. At my interview I met with the assistant principal and told her that I wanted to do geography A-level. She said she wouldn't be a minute and that she would get the head of geography to come and talk to me.

Five minutes later he poked his head around the door and disappeared. It transpired that he didn't know how to handle disabled people, the field trip element of the course would be impossible and, therefore, he wasn't going to allow me a place on the course. The response from the assistant principal was 'I must be used to disappointments'!

This was 1989, and I am glad to say that this attitude is not as prevalent today. My career path was changed because a key person felt they couldn't/or I couldn't cope with being on the course.

What was needed: A change in attitude – an opportunity to demystify disability, creativity and innovation in thinking about those parts of the course which may or may not have been a challenge – the concept of widening participation was not a seed that had been sown in Lord Dearing's mind at this point.

Mike Adams (May 2001)

Director of the National Disability Team (NDT) (<http://www.natdisteam.ac.uk/>)

## **Box 2: The experience of undertaking fieldwork: a disabled student's perspective on geological fieldwork with the Open University**

### **Background**

My interest in geology started at primary school, where I met a like-minded individual of my own age. By the time we reached senior school we were actively involved in fieldwork and our holidays became intensive geological expeditions. In a spirit of competitive co-operation we taught ourselves to GCE level. My friend went on to university and is now a Doctor of Geology, whilst I became an insurance underwriter, relegating geology to a hobby.

However, in 1990, at the age of 39, the long-term complications of diabetes forced me into early retirement. Since then I have had renal dialysis and subsequently, a kidney transplant, my right leg has been amputated below the knee and I am registered as partially sighted. I found the frustration of being unable to read and take an active role in life intense.

The Open University (OU) was my salvation. Over the last ten years I have been able to study a variety of subjects, using audio tapes provided by their Office for Students with Disabilities and the RNIB, together with computer technology (courtesy of a grant from the RNIB) and an array of magnifying lenses.

Many OU courses include Residential Summer Schools. My first two attempts at attending these were abortive due to health problems, but fortunately the OU adopts a flexible attitude to this and I was able to seek excusal and complete the courses. Similarly I have been able to take special late examinations.

## Fieldwork and summer school

The OU Geology course, S236, involved a small amount of fieldwork at local level, with group outings to nearby sites of interest. Being centred on Essex these weren't too demanding and my wife accompanied me on them as my helper. However, Summer School was a different matter, but I was determined to get there this time. The OU operates a Special Support Summer School week for disabled geology students, based at Durham University. I opted to go on this, not least because it was only months since my amputation and although I could walk reasonably well with my prosthetic leg I really wasn't sure how I and it would stand up to tramping across the moors. As the time approached my trepidation grew, but this time my brittle health held out. My wife accompanied me again – you can take your own helper or the OU will provide one if required. We weren't quite sure how this would work out, but it seemed the best option for us personally and we had some practice on the local field trips. The OU also kindly paid my wife's expenses.

The Regional Office at Newcastle sent me a Summer School handbook in large print. When we arrived at Durham we were greeted and shown around. We had expected Spartan accommodation, but were given a pleasant double room on the campus. There was always a choice of at least two wholesome meals from which I was able to find something to suit my diabetic diet. For those on more restrictive diets, special arrangements could be made by prior notification.

The days were divided between tutorials, laboratory work and each day a coach trip to some geologically interesting part of the north of England for fieldwork. At the first tutorial I was given a large print copy of the Summer School Notes and each successive days handouts were provided in this format. Although probably only about 10% of course members were disabled, a wide variety of disablements was represented. A range of special needs equipment was available from which I took advantage of a sturdy walking stick (I normally just use a white cane).

In the field the less mobile of us tended to work together in groups with our helpers. This built up bonds of mutual support and encouragement between us. We were always helped on and off the coach. Easier, shorter routes were found for us where possible, even to the extent of having a car follow the coach on one occasion, so we could be ferried down the last steep section of road that the coach couldn't manage. There were always extra demonstrators on hand to give help and encouragement *if and when we needed it*. They might describe something we couldn't see or even give a bodily push over difficult terrain. Safety was always borne in mind and we were discouraged from taking dangerous routes.

We visited a variety of outcrop types, quarries, cuttings, sea cliffs with wave cut platform, limestone pavements and riverside exposures, all of which presented different visual and physical challenges. We were taken up close to the outcrops for the best visibility where possible and encouraged to feel sections to examine texture and grain size.

My wife acted as my amanuensis and drew field sections for me, so that I could examine them later in the laboratory. We both learned a lot of geology and a lot about ourselves as well (even after some 25 years of marriage).

The tutors, demonstrators and counsellors were all very helpful and concerned, but we were not patronised or made to feel awkward because of our disabilities in any way. We were accepted as equals by the other students, even though they sometimes had to wait for us to catch them up. In fact they were not all always

aware of our difficulties; after one particularly strenuous day I was asked if I had a blister as I limped down the corridor. And I think I surprised a few people when I arrived in shorts on the final day.

The social side of Summer School is traditional and we were able to join in the quiz night, disco and ceilidh. If someone had told me a few months earlier that I would be dancing at a ceilidh (albeit the more restrained numbers) I don't think I would have believed them.

Although there were inevitably a few moments of frustration at the things I wasn't able to do or see, these did not diminish the elation and sense of achievement I felt at the things I was able to do. The week was enjoyable, stimulating and informative for both my wife and me. I felt that going on the Special Support week was beneficial and increased what I was able to get out of the course.

At the end of the year I passed my Geology examination with distinction and have since graduated with a BSc degree. My Summer School experiences did give me the confidence to start independent fieldwork again, with my wife's sterling assistance, of course. On a recent visit to Yorkshire we did the several mile traverse at Ingleton and the High Force unconformity, and went down White Scar caves, both of which had featured in OU Geology TV programmes.

I am continuing with my OU studies and am currently taking AA309, *Culture, Identity and Power in the Roman Empire*, a very different challenge to geology.

Alan Totham, Chelmsford (May 2001)

### **1.0.1 Need for this project**

Although there is a small, but rapidly growing literature on disabled students and their use of space (e.g. Gleeson, 1998; Golledge, 1993, 1997; Imrie, 1996; Kitchin, 2000; Lawrence, 1997); only a handful of studies have been published which examine issues in teaching geography, earth and environmental sciences to disabled students (e.g. Boyd, 1993; Cooke *et al.*, 1997; Desforges, 1999; Travis, 1990). There is also an extensive literature about fieldwork in geography, earth and environmental sciences in higher education (Cottingham *et al.*, 2000) and several recent guides and reviews about fieldwork have been published (e.g. Jenkins, 1997; Kent *et al.*, 1997; Livingstone *et al.*, 1998). Yet, with a few exceptions (Grant & Higgitt, 1994; University of Strathclyde, 2000), very little has been written previously about supporting disabled students undertaking fieldwork in higher education (Hall *et al.*, 2002).

Providing appropriate learning support for a disabled student on a fieldcourse can seem a major challenge for the staff involved. Departments running fieldcourses are likely to experience such challenges more frequently in the future as universities in many countries respond to legislation aimed at answering equal opportunities for students with disabilities. In the UK, for example, universities are faced with the government's expansion and access targets and the need to meet the Quality Assurance Agency's (QAA) Code of Practice relating to students with disabilities (QAA, 2000c) and the Disability Rights Commission's rulings and Code of Practice associated with the Special Educational Needs and Disability Act (HMSO, 2001). However, there are also opportunities to be grasped in widening the participation of disabled students to the curriculum. As we become more sensitive to the diversity of student needs we may modify how we teach and facilitate learning in ways that will benefit all our students.

## 1.1 Aims

The increased interest in disability issues is part of a larger agenda concerned with widening access and participation in higher education. Some of the current interest in higher education in the UK was inspired by the Dearing Report's call for reducing the disparities in the participation of disabled students. It noted that 'disability awareness is poorly developed in most HEIs' (NCIHE, 1997, p.3).

The project, which this introductory guide forms a part, is designed to identify, promote and transfer the principles and good practices of how to provide learning support for disabled students undertaking fieldwork and related activities. Many of the issues faced by disabled students are magnified in this form of teaching and learning and will, of course, have been identified in the context of on-campus teaching and learning activities before students participate in their first fieldtrip. However, when on fieldwork existing issues may become enhanced and other issues may become apparent for the first time.

This guide is intended as an introduction and overview to five other guides that examine specific issues in providing learning support for students with particular disabilities undertaking fieldwork:

- students with mobility impairments
- blind or visually impaired students
- deaf or hearing impaired students
- students with mental health difficulties
- students with hidden disabilities and dyslexia.

More than 4% of undergraduate students in the UK (22,500) self-assessed themselves as having a disability in 1998/9. Given that there is no obligation for students to report a disability, the actual number may be closer to 10%. Despite common perceptions of the students who registered themselves as having a disability, less than 5% were wheelchair users or had mobility difficulties. The most common category was unseen disabilities, such as epilepsy, diabetes or asthma (39%); dyslexia was the next most common category with 26% of students declaring a disability; a further 12% assessed themselves as having 'other disabilities'; 6% had multiple disabilities; and 6% were deaf or had a hearing impairment. None of the other categories (blind/partially sighted, personal care support, and mental health difficulties) accounted for more than 5% of the disabled students (Table 1). Many conditions are temporary, such as a broken limb, and do not appear in these figures. Birnie & Grant (2001) refer to a recent survey which suggests that approximately 10-15 per cent of students are experiencing difficulties that may benefit from, or require, some form of professional intervention, ranging from counselling to medication or, more rarely, hospitalisation.

Our aim, in this guide, is to identify and discuss some of the general issues that apply to providing learning support for disabled students going on fieldcourses and undertaking fieldwork whether for a day or a week, and whether as part of a class activity or an independent project.

**Table 1: Self-assessed disabilities by UK undergraduates 1998/99**

<b>Self-assessed disability</b>	<b>%</b>
Unseen disabilities (e.g. epilepsy, diabetes, asthma)	39.0
Dyslexia	25.5
'Other disabilities'	12.1
Multiple disabilities	6.6
Deaf/hearing impairment	5.8
Wheelchair user/mobility difficulties	4.7
Blind/visual impairment	3.3
Mental health difficulties	2.8
Personal care support	0.2

Source: HESA (2000)

## **1.2 Who should read this guide?**

Our primary audience is teaching and support staff in geography, earth and environmental science departments, their heads of department, and disability advisers in higher education institutions. However, the principles are equally relevant to all disciplines in which students spend time outside the classroom where the object of study is also the place of study, whether visiting art galleries, participating in a work placement, or undertaking a site visit.

We recognise that the role of fieldwork in the curriculum varies not only between disciplines but also by country. However, although the focus of the guide is on the UK, much of what it contains is equally applicable in other countries.

Disabled students considering taking a degree course which involves fieldwork should find the information valuable in seeing what kinds of learning support they might expect to receive and what kinds of learning activities they may be involved in on a field trip.

## **1.3 Project funding**

Since 1993/4 the Higher Education Funding Council for England (HEFCE) have had a series of disability-focused special initiatives to encourage HEIs to make better provision for students with disabilities. The project, on which this guide is based, is one of 50 funded in the fourth initiative, worth £6m, on *Improving Provision for Disabled Students Funding Programme*; although it is the only one of the projects which takes a discipline-based approach to disability issues.

## 2 Some Challenges

*Abstract: After presenting some common stereotypes and myths about disability this section examines some scenarios presenting a range of practical situations that provide challenges to staff concerned with running fieldcourses.*

Many stereotypes and myths surround the idea of disability. It is as well to put some of these to rest before dealing with practical situations (Boxes 3 and 4).

### **Box 3: Some common stereotypes about disability**

Some common stereotypes that have emerged from a history of devaluing people with a disability include:

- disability is a monumental tragedy
- people with disabilities are appropriate objects of pity and charity
- people with disabilities who do 'normal' things (like hold an interesting job or get married) are exceptional
- people with disabilities lead boring and uneventful lives
- people with disabilities are brave and saintly
- people with disabilities are asexual, eternal children.

(Based on University of Newcastle, 2001, Part I, p.4).

### **Box 4: Some common myths about disability**

Some common myths about students with disabilities include:

Equal opportunity means that everyone is treated the same – so students with disabilities should not get any 'special treatment'

*Equal opportunity exists to provide all people with access to achieving their potential. The application of reasonable adjustments addresses barriers to access. It does not provide advantage.*

Students with disabilities require too much staff time and their needs are inordinately difficult to cater for at university

*Students with disabilities, as other students, want an education with its ensuing benefits. They are often not only experienced but motivated at finding solutions and overcoming barriers that may appear daunting to others.*

Students with disabilities create substantial costs through the need to provide extra equipment and academic time

*Inclusive policies and practices, such as accessible classrooms or the provision of book reading lists at the start of the semester, create an environment in which the amount of requests for major adjustments are reduced. Many adjustments are simple and low cost, and support personnel, such as notetakers, can in some cases assist a student independently of teaching staff.*

Students with disabilities would be better off studying externally

*All students can find external study isolating, with restricted opportunities for interaction in a stimulating social and intellectual environment. Qualifying students, with or without a disability, should have the choice of studying on or off campus.*

(Based on University of Newcastle, 2001, Part I, pp.4-5).

The following factions present some examples of practical situations that provide challenges to staff concerned with running fieldcourses, which involve disabled students. Thinking through your responses to these situations should help you to identify several of the issues that are involved in providing learning support for disabled students undertaking fieldwork and related activities.

1. Tom had a leg amputated as a child. Nevertheless, with the aid of crutches he is very agile in the field (more agile than other students and certainly some of the staff), and on a recent fieldcourse had no problem scaling steep mountain paths in the Lake District, and carrying out all the required fieldwork.

*Question: At a departmental meeting where forthcoming fieldcourses are discussed, some staff mindful of recent accidents involving school students on school trips abroad asked whether Tom should be allowed to come and if so how would they be insured against any claims of malpractice if there was an accident involving that student? However, other staff argued for an inclusive policy. The department expects to be reviewed by the QAA the following year. What would you contribute to this discussion?*

2. Claire is an epileptic who has fits once or twice a year, which can lead her to have black-outs. These may be due to her failing to take medication regularly, but may also sometimes be due to unconscious reoccurring seizures.

*Question: What are the appropriate decisions about whether she should be allowed to participate in fieldcourses; and if so what if any special arrangements need to be made? Who in the department and the institution has responsibility here?*

3. As part of a fieldcourse you are training students to conduct on-street interviews of the public about their shopping habits. The students will work in groups of four, each group being in a different part of town. Winston is deaf and uses a signing interpreter at university.

*Question: How can you ensure equality of opportunity for Winston in this exercise? What should the fieldcourse leader and Winston's fellow students do before, during and after the field exercise?*

4. The study of river flow is being conducted just below the weir after heavy rain and in rather gusty conditions. All the standard precautions have been taken by you and your field assistants to ensure the safe operation of this exercise. Helen is partially sighted.

*Question: What, if anything, should you do additionally to ensure her safety and that of the students around her?*

5. Students are working in pairs to examine sedimentary rocks up a small cliff face, a few yards from an accessible path. Fred and Catherine work together. Catherine is unable to walk, and uses a wheelchair.

*Question: How should the students divide the responsibilities for measuring the beds, describing the rock types, taking notes and so on. What should staff advise?*

6. Sacha, who has severe dyslexia, is undertaking an independent project on moraine deposits in a group of three involving a project proposal, collection and analysis of field samples on the second year fieldcourse and presentation of the findings by a poster.

*Question: What, if any, assistance and advice would you give Sacha and the other students in her group? How can the assessment of the task be designed to enable all to feel equally involved and intellectually stretched?*

There is a danger of thinking of the challenges of designing inclusive fieldcourses as a series of problems. It is worth remembering the significant gains which have been made in higher education in recent years in giving greater recognition to gender, race and different learning styles. Improving the opportunities for disabled students to participate in fieldwork can be seen as a move to improve our teaching and the quality of the learning experiences we provide.

### 3 Our Approach

*Abstract: Our approach emphasises the application of the social model to disability and puts the issues in the wider context of equal opportunities. Provision for disabled students in higher education is shifting away from a stress on physical accessibility to one emphasising an inclusive curriculum. As this happens the issue becomes more part of the mainstream teaching and learning debate.*

If you have thought through your responses to the factions in the previous section it is likely that you will have identified a wide range of issues. Some of them will have to do with the nature of the particular disability; others will concern the barriers that disabled students face in accessing the full range of learning experiences. The first approach focuses on the medical condition faced by students, the second emphasises the obstacles which society places in the way of disabled students obtaining equal access to learning opportunities. Both approaches are used in this project, although we emphasise the latter.

Providing learning support for disabled students undertaking fieldwork is an equal opportunities issue and many of the principles of good practice in providing equal opportunities in the curriculum apply (Box 5). Equal opportunities is about managing diversity. This means seeing disabled students as individuals, who have many different characteristics, one of which just happens to be a disability. As the other guides make clear, treating people in categories, such as 'the blind' or 'the deaf' is fraught with problems. Not only are there many different forms and degrees of blindness and deafness, but the needs of any two students with similar disabilities may vary because they are individuals, who may have different learning styles, educational backgrounds, abilities and motivations.

#### **Box 5: Good practice in developing equal opportunities in the curriculum**

- Provide explicit information
- Operate transparent procedures, criteria and decision making
- Undertake student experience surveys, monitoring and information
- Adopt policies and procedures on inclusive language, respect, values, modes of communication etc.
- Develop Student Charters, which indicate students' rights and responsibilities
- Examine the curriculum to see if it is responsive to a variety of student needs, provides opportunities for all students to achieve their potential and to participate fully, and uses approaches which positively value student and staff diversity.

(Based on Carroll, 1999)

Equal opportunities is not about treating everyone the same. It is about recognising that people have different needs and that some people suffer greater levels of disadvantage and discrimination than others do. In the curriculum, it is about positively responding to 'diversity' and ensuring equality of opportunities in terms of access, treatment and outcomes

(Ryan, 1997, p.5)

Ryan (2000) went on to produce a guide for teaching international students. Many of the principles equally apply to teaching disabled students. In the following quotes the term 'international' has been replaced by 'disabled' and the term 'home' by 'abled'. The changes are shown in italics.

It is not about lowering standards or doing more. It is about doing things differently. Take a step back and look at how you can change your practices. Start small making changes with which you feel comfortable. Remember that *abled* students have needs as well and that these should be balanced with the needs of *disabled* students  
(Ryan, 2000, p.4)

Universities need to respond to the needs of *disabled* students by opening not just their doors to them, but once in, making sure that the curriculum is also accessible. *Disabled* students are too often seen as a 'problem' that needs solving. Instead they should be seen as one group among many in an increasingly diverse student population, with needs that may be unfamiliar. Instead of expecting all students to fit to pre-existing structures, universities need to respond to diverse student populations, including *disabled* students  
(Ryan, 2000, p.5)

A sensible response to recognising this diversity is to negotiate with individual disabled students what kinds of learning support they need and how the barriers that they face to effective learning in the field can be reduced or overcome. This negotiation is a two-way process. Many disabled students may have a stereotyped vision of what fieldwork involves, just as many non-disabled staff (and students) may have a stereotyped view of what disabled students can or cannot do. The aim of such negotiations is to help disabled students achieve the learning outcomes that are associated with fieldwork.

Providing learning support for disabled students is not just a matter of meeting legislative requirements and the Codes of Practice of the QAA and the Disability Rights Commission (see Sections 7 and 8), important though these may be. It is just as much part of the wider issue of improving learning opportunities for the increasingly diverse student body that is entering higher education. There are many examples in the other guides of how relatively small changes or additions to a fieldwork programme made to benefit a disabled student have also lead to benefits for other students on the fieldcourse or degree programme (Box 6).

**Box 6: Examples of modifications and additions to fieldwork that may benefit more than just disabled students**

- Providing written details about the main features to be seen in the field and the activities and projects to be undertaken to benefit a d/Deaf student also clarifies the learning to be experienced by all the students on the field trip.
- Making a video of a classic geological site that is not accessible to a student in a wheelchair may also be used in other classes and as part of the pre-fieldwork introduction for students visiting the site in subsequent years.

- Investigating an alternative local non-residential fieldcourse venue for a student needing daily dialysis treatment, may lead to the alternative location also being offered to other students, particularly benefiting those with unavoidable family responsibilities.
- Prepare all handouts using at least 12 point Arial or other sans serif font printed on yellow or buff coloured paper will help dyslexic students, but also make them more readable for all students.

Making special provision for disabled students by providing, for example, alternative forms of assessment, extra examination time, technological assistance, scribes, readers and so on, is a way of enabling them to compete on a level playing field with non-disabled students. 'Disabled students are fully expected, and indeed themselves expect, to be subjected to the same measurement against academic standards as non-disabled students' (Gosden & Hampton, 2000, p.4).

Provision for disabled students in higher education is shifting away from a stress on physical accessibility to one emphasising an inclusive curriculum. As this happens the issue becomes more part of the mainstream teaching and learning debate.

At the cornerstone of the debate are two mutually interdependent overriding principles:

- A need for both variety and flexibility in all aspects of teaching and learning.
- A need to ensure quality and parity with students' non-disabled peers.

...whatever the approach undertaken, we must avoid falling into the trap of viewing disabled students as a homogeneous group. The process of designing an 'accessible curriculum' for one disabled student will undoubtedly be different, and in some cases at total odds, with that of other individuals. Therefore, in developing new courses academic staff should be striving to ensure that no 'hidden barriers' are unnecessarily included in the course content and delivery and that the learning outcomes build for both variety and flexibility from the outset.

(Adams, 2000, p.1)

## 4 Role of Fieldwork in Geography, Earth and Environmental Sciences

*Abstract: This section is aimed in particular at university disability advisers and other non-field scientists so they can understand why most staff in these disciplines see fieldwork as central to their curricula. It reviews the role of fieldwork in these three (and related disciplines) and the kinds of learning activities in which students will be engaged. Relevant sections from QAA benchmarking statements for these disciplines are presented.*

Most of the staff teaching geography, earth and environmental sciences (and indeed colleagues in many other disciplines from architecture to zoology) see field study not only as something worth experiencing but also as something central to the curriculum, without which a qualification in the discipline has little or no value (Box 7).

### **Box 7: Reasons given for undertaking fieldwork**

Reasons for doing fieldwork:

- develops observational skills
- allows students to visit places they would not normally experience
- facilitates experiential learning through a focus on the real world – comparing real examples with model or idealised examples in textbooks
- encourages students to take responsibility for their own learning
- develops analytical skills
- experiencing 'real' research through fieldwork, particularly residential fieldwork, allows concentrated study of a topic not usually possible with the normal timetable structure
- develops a respect for the environment
- develops personal skills, such as teamwork, leadership and responsibility
- breaks down barriers – fieldwork often facilitates a more relaxed social contact between students and their peers and between students and staff.

Source: Based on Gold *et al.* (1991), pp.25-26 and Livingstone *et al.* (1998), p.3

Fieldwork plays a pivotal role in the Quality Assurance Agency's (QAA) Subject Benchmarking Statements for Earth Sciences, Environmental Sciences and Environmental Studies, and for Geography (see Section 4.2). Whilst this view of fieldwork's centrality may be contested by some staff in geography and environmental studies, their view is very much a minority position. So the apparent 'requirement' poses evident challenges to attempts to ensure that the learning experiences that disabled students have are comparable to those of the other students. In particular, issues of mobility and sight seem to pose difficulties or even insuperable problems for both staff and students. Consider this account by Peter White, on his first journeys outside the gates of his special school for the blind

(Worcester College). (Peter White is now a well known and respected radio presenter/editor, in particular for the BBC series on issues concerning 'disability', *Does He Take Sugar?*)

In those early weeks my adventures included getting lost on almost every housing estate around the edges of Worcester, falling into several muddy ditches in the surrounding lanes ... finding myself in a farmer's hen coop ... In the end I shattered this happy state of bucolic mayhem by getting run over by a rather large lorry ... One minute I thought I was crossing the entrance to Dog Rose Lane in what was a permanent state of geographic uncertainty ... In the end it turned out that all I had sustained was a bump on the head ... Nevertheless it did not take long for the shock waves of my incompetence to register with the school of what might have happened.

White (2000, pp.98-99)

Who would wish such a student to be placed in the position of being required to undertake an independent survey of pedestrian safety on a main road near the College? Or more positively, how could the organiser of a field trip ensure that a blind student could achieve the required learning for their academic programme through undertaking this study or some equivalent activity?

In the following pages we mainly address colleagues outside the three core disciplines to explain firstly what sort of activities are undertaken on fieldcourses, and secondly why they have been seen as central to our activities for many years. Indeed, this will implicitly highlight why some people wonder whether students such as Peter White should attempt to study these disciplines at all.

#### **4.1 What types of activities are done in fieldwork?**

Fieldwork is any structured experience that takes students to learn outside the classroom, where the object of their studies – whether it be a building, a geological site, a museum or a group of people – is also the place where they study. Sometimes the field visit can be a brief trip for an hour or so; often it can involve overnight stays of a week or more, and in both cases it may be formally assessed. For longer visits the term fieldcourse may be preferred (Jenkins, 1997, p.6). What is done in fieldwork varies in part by discipline course. But it includes:

- Students in groups of various sizes being introduced to some landscape feature. The 'showing' might be from a coach or directly on the ground, for example a rock face in a quarry or a particular building in its local setting. It might be seeing some industrial process at a factory; or visiting and meeting with business or planning officials to hear and ask questions about policies. Students here are likely to be the whole year group or module gathered together.
- Students in small groups of perhaps three to five doing some (semi-) independent survey or analysis, for example of stream nitrate levels in environmental science or physical geography or a street survey of fear of crime in human geography. Such group work may well have been guided or even structured by staff but students are likely to be working independently with no direct staff supervision often for a whole day or more.

- Students carrying out some individual survey or analysis, often largely alone or (for safety reasons) in pairs, or with an assistant. This can take many forms from interviewing people for a few hours, as in a visitor survey in a National Park, to the more extreme independent mapping project in earth sciences that may require trekking and camping in mountainous or remote terrain for several weeks. In this case the activity may be less structured, and the central ethos is to encourage independent learning with little or no staff supervision in the field.

Fieldwork can also include lengthy individual or group travel to the field location, which may be abroad. Accommodation, domestic arrangements, and end-of-day socialising are often done in groups too, and may be regarded by some as part of the experience of learning, for example, through practising teamwork.

## 4.2 Why is fieldwork so central to these disciplines?

Most colleagues within these disciplines would see the answer to this question as self-evident. It is rather like asking whether a doctor should learn directly about the human body, or whether they should study anatomy solely through reading a book without being able to touch or observe their subject. For landscapes, whether 'natural' or 'human', are the subject of these three disciplines, an excitement with which brought students to study these subjects. Once on a course of study, an ability to understand and analyse in the field is viewed as central to students succeeding in the discipline.

The pivotal role of fieldwork is clearly reflected in the overview reports of Teaching Quality Assessment, prepared by the Higher Education Funding Council for England.

*Earth Sciences* (HEFCE, 1995a, para. 14)

Fieldwork carried out on day trips and residential fieldcourses is a vital component of the study of geology. The assessors reported that fieldwork provided opportunities for the development of understanding that could not be achieved in the classroom or laboratory. It also encouraged teamwork amongst students, and helped students to integrate course materials with practical experience. It was also seen as reinforcing the good rapport between academic and technical staff and students. In examples of best practice, the assessors noted that group work in the early stages of a course provided a foundation for individual fieldwork at a later stage. Geology students frequently undertake individual mapping projects for which the prior understanding of practical techniques acquired on fieldcourses is crucial.

*Environmental Sciences* (HEFCE 1995b, para. 21)

Fieldwork on day trips and residential fieldcourses is regarded as an essential component of environmental courses; the assessors were critical of one institution where resource constraints had precluded appropriate fieldwork.

*Geography* (HEFCE, 1995c, para. 14)

Fieldwork is a key component of the curriculum. Despite the pressures of tighter budgets for both students and institutions, almost all departments continue to provide some locally-based and some residential fieldwork.

The QAA's *Benchmark Statement for Earth Sciences, Environmental Sciences and Environmental Studies* states:

The Panel believes that it is impossible for students to develop a satisfactory understanding ... without a significant exposure to field based teaching, and the related assessment. Much of the advance in knowledge and understanding in our subject areas is founded on accurate observation and recording in the field. Developing field-related practical and research skills is, therefore, essential for students to pursue careers in Earth Sciences, Environmental Sciences and Environmental Studies.

(QAA, 2000a, para. 4.3)

This view is reinforced by the Geography Benchmarking Panel, who state that:

An education in Geography involves an active engagement with the external world. Fieldwork constitutes an essential element of this engagement and thus has a variety of roles, in:

- providing an opportunity to apply theoretical, technical and scientific laboratory methods to the more complex, uncontrolled field environment, and to appreciate how processes that might be regarded as 'general' are mediated by the social and environmental character of a specific place
- prompting students capacity to identify a problem or research question, and to develop approaches to solving or answering this through hypothesis testing, research design and data collection
- encouraging consideration of the ethical aspects of the research processes
- developing a sense of place, awareness of difference, and tolerance for others
- finally, but no less importantly, promoting certain transferable skills required in practical work and seminars, such as teamwork and observation.

(QAA, 2000b, para. 5.8)

## 5 Models of Disability

*Abstract: This section explores the meaning of disability, looking at individual, charitable, medical, social and integrated models of disability. There is discussion of the implications of these models for academic staff. The use and significance of the terminology applied to disabled people is considered.*

### 5.1 Why do you need to know about models of disability?

Models of disability, like all models, are representations of reality, in this case the reality of disabled peoples' life experiences. These models influence the attitudes and behaviour of disabled and non-disabled people alike. Knowledge of these models can help you examine your own approach to supporting disabled students on field trips.

Over the past three decades there has been a shift in thinking towards the position of disabled people in society. The debate is changing from how can disabled people be best cared for, to how can they attain civil rights and achieve social and economic integration. This is reflected in a move from institutional to community care, from segregated to integrated education and in the adoption of the 1995 Disability Discrimination Act. As we look at different models of disability you will see that each has implications for how you view the provision for disabled students.

### 5.2 Who is a disabled person?

Estimates of the number of disabled people in the UK vary with figures as high as ten million being quoted. Obviously the number of people included depends on the definition of disability. We shall look at definitions later on, particularly in relation to the Disability Discrimination Act. For many people the image conjured up by the word 'disabled person' is likely to be that of someone in a wheelchair; indeed this image is used as a symbol to denote disabled access points, parking spaces and so on. However, no more than 4-6% of the population of working age disabled people are wheelchair users. Academic staff need to be aware therefore that there will be many students who, whilst not being obviously disabled, will have less visible impairments which are nevertheless an issue when undertaking field trips. Examples of these impairments include: angina, arthritis, asthma, epilepsy, dyslexia, hearing loss, mental health problems and restricted vision.

Mention of such specific medical conditions may leave staff feeling concerned that they will be expected to develop medical expertise in order to support disabled students. This is where an understanding of different models of disability becomes important.

A medicalised model of disability sees the disabled person as subject for treatment and cure and tends to pay less attention to social, economic and environmental factors affecting the person. Whilst most people are grateful for medical interventions that counter the effects of chronic illness, various writers have pointed out that the medicalisation of disability causes a number of problems (Barnes, 1991; Oliver, 1990; Shakespeare, 1996).

### 5.3 A medical model of disability

Many disabled people are not ill, but differ from the expected norm in terms of physical or mental functioning. To give an example, someone who has lost a limb is not ill, but is disabled in relation to certain activities such as driving a car. What the person needs here is not medical intervention but an adapted car and the financial resources necessary to obtain and run it. The World Health Organisation (WHO) has distinguished between impairment, disability and handicap:

*Impairment:* Any loss or abnormality of psychological, physiological or anatomical structure or function.

*Disability:* Any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.

*Handicap:* A disadvantage for a given individual, resulting from an impairment or disability, that limits or prevents the fulfilment of a role (depending on age, sex, social, cultural and environmental factors) for that individual.

(WHO, 1980)

Handicap is a word that is not in favour now, and many writers use the terms impairment and disability, but not quite as above.

The WHO (2000) has produced a draft re-working of the above definitions. The word *handicap* has been dropped. *Impairments* are defined as 'problems in body function or structure as a significant deviation or loss'. The term *disability* now refers to the negative aspects of the interaction between impairment, activity limitation, participation restriction, and barriers/hindrances encountered in the world.

Whilst some people have been disabled by a previous illness we should not assume that they are now ill. However, a medically-dominated approach may lead to hope for a 'cure', which gets in the way of finding ways to overcome the barriers that they face. This approach is also criticised for taking power and control from the disabled individual and putting it in the hands of the medical expert. It is also criticised for focusing on what is 'wrong' with the disabled person at the expense of valuing their abilities.

### 5.4 Individual and charitable models

It is not just medical personnel who need to re-evaluate their approach to disability. There are many people who individualise the problems experienced by disabled people. One aspect of this approach is typified as the 'charitable' model of disability. From this perspective the disabled person may be seen as a tragic individual who needs help to cope with their loss. Alternatively some disabled individuals may be held up as exemplars who have bravely triumphed over adversity. Such images have been used in fund-raising campaigns run by various charities and may indeed provide motivational stimulus. The danger of this approach is that can lead to disabled people being seen as objects of pity who need to be cared for and protected from the demands of daily life. This approach also relies on a 'feel good factor' in that people are encouraged to support disabled people as a deserving cause. There is also a danger doing things *for* disabled people rather than with them, or even enabling disabled people to organise things for themselves.

## 5.5 A social model of disability

In contrast to (and in reaction to) these disempowering approaches to disability, a number of disability activists and disabled academics have developed a social model of disability. From this perspective disability is seen as a form of oppression. In the same way that women, people from ethnic groups and gay people have been held back by a society that cannot cope with diversity, disabled people form another disadvantaged group. The focus shifts from what is 'wrong' with an individual, to the barriers that prohibit their participation in mainstream activities. At a very simple level this can be in the barriers faced by a wheelchair user when trying to access a building that can only be approached via a flight of steps. However, barriers exist at many levels beyond the environmental e.g. attitudinal, social, economic and political. Disability theorists point out that societies tend to be organised on the basis of assumptions of what is 'normal' (Finkelstein, 1993; Oliver, 1990). Those who do not fit the stereotype will find it difficult to participate. Rather than trying to make disabled people 'normal', the social model of disability asserts that society needs to recognise and celebrate difference. From this have arisen campaigns for civil rights not charity. Definitions used in the literature, reflect this approach distinguishing between 'impairment' and 'disability':

- *Impairment* lacking all or part of a limb, or having a defective limb, organ or mechanism of the body;
- *Disability* the disadvantage or restriction of activity caused by a contemporary social organisation that takes no or little account of people who have physical impairment and thus excludes them from participation in the mainstream of social activities.

(UPIAS, 1976)

## 5.6 Attempts to integrate individual and social models of disability

A number of writers have been concerned that some proponents of the social model have 'thrown the baby out with the bathwater' (Crow, 1996; French, 1993; Low, 1993). They agree that it is not politically correct to talk about the pain, the physical and emotional difficulties associated with some impairments because this will detract from the focus on society's failure to remove the barriers faced by disabled people.

... we have tended to focus on disability as 'all'. Sometimes it feels as if this focus is so absolute that that we are in danger of assuming that impairment has no part at all in determining our experiences. Instead of tackling the contradictions and complexities of our experiences head on, we have chosen in our campaigns to present impairment as irrelevant, neutral and, sometimes, positive, but never, ever as the quandary it really is.

(Crow, 1996, p.58)

These authors and others have suggested that it is possible to acknowledge both the individual and the social levels as legitimate concerns, whilst maintaining a focus on societal and political change. In fact some social model theorists do accept this. Michael Oliver states that:

This denial of the pain of impairment has not, in reality been a denial at all. Rather it has been a pragmatic attempt to identify and address issues that can be changed through collective action rather than medical or professional treatment.

(Oliver, 1996a, p.48)

## **5.7 What are the implications of the social model of disability for academic staff?**

### **5.7.1 Terminology**

Whilst certain terms have quite rightly been dropped from use, e.g. 'cripple' or 'spastic', the use of language can have powerful effects and staff need to be aware of this. Most people don't like being referred to as medical labels: 'asthmatics', 'schizophrenics', but may find the term 'people with asthma' etc. more acceptable. 'Handicapped' has cap-in-hand associations with charity and is largely out of favour. If you accept the importance of the social model then 'disabled people' is preferable to 'people with disabilities'. This is because, as you will recall, 'disability' is a social created situation. People may 'carry' their impairments around with them e.g. hearing loss, restricted mobility, but disability is the experience of barriers and lack of provision within society. 'The disabled' is a rather impersonal term, which suggests that disabled people are somehow a different species. In certain situations it would be possible for someone to have an impairment, but not be disabled, for example, a wheelchair user in a fully accessible building.

### **5.7.2 Identification and removal of barriers**

The main implications of the social model are that disabled people do not need sympathy or pity, but that the barriers to their participation in mainstream activities need to be identified and overcome. In the context of human environments, disability can be designed out by the provision of level access, ramps, lifts, Braille and speech output devices, text-phones etc. In a teaching context there is much that can be done to ensure that disabled students participate in teaching and learning activities. In the 'natural' environment, as used for field trips, it may be less clear how to make sites accessible. However, creative solutions can often be found, and there are many disabled students for whom limited mobility is not the problem. You will need to consider communication barriers experienced by students with visual or hearing impairments. Students with mental health problems may find new situations anxiety-provoking. We will come back to the subject of making reasonable adjustments for disabled students in Section 7.3 (see also Section 6.2).

### **5.7.3 Disabled people and/or medical professionals as 'experts' on disability issues**

Another implication of the social model is that the concern is less with what medical diagnosis is attached to a student and more interested in what they are functionally able to do, and what support they need to overcome any barriers faced. In this instance it is likely to be the disabled students themselves who are the experts on what they need rather than any medical personnel. If an individual student is not sure of the solutions, it may be that another disabled student or staff member has relevant experience that can be shared. There are also a number of agencies set up by disabled people to provide consultancy advice on access issues. *Disability Matters* (<http://www.disabilitymatters.com/>) and *Access London* (<http://www.accesslondon.co.uk/>) are two examples.

## 6 Barriers and Strategies

*Abstract: This section presents some examples of the complex issues which may be faced by different types of staff when a disabled student presents themselves prior to a fieldclass. Drawing from these examples it summarises the barriers to participation under three headings – attitudinal, institutional and organisational, and physical – and begins to suggest overarching strategies for removing or reducing them.*

### 6.1 Access issues

Any classification of the wealth of issues surrounding equality of access to fieldwork opportunities is fraught with difficulty. The generic issues are similar to those encountered in developing a policy for equal opportunities in education generally, but there are particular combinations of circumstances that can appear particularly daunting to both potential disabled students and the fieldwork organisers. The examples in Boxes 8-11 suggest some of the range that may exist.

#### **Box 8: An issue for the University Disability Advisor**

A mature student aged 55 suffers from arthritis, but wishes to participate fully in a geological mapping fieldclass. The class has traditionally included only relatively fit young people in their late teens and twenties. Normally it goes to the Scottish Highlands since the lecturer running the visit is a specialist on metamorphism, and this is where the best rock exposures are found. The accommodation has been in rather rudimentary mountain chalets. The student hates to be the centre of attention, and is very keen that her presence does not compromise the experience of the younger cohort.

*Question: As the University Disability Advisor you have been monitoring her progress during the course. What advice do you give her and the department organising the fieldclass?*

#### **Box 9: An issue for a lecturer assisting with a fieldcourse**

A student with severe dyslexia is about to visit a local recycling facility, as part of a final level module on waste management in his Environmental Management HND programme. Just before the minibus leaves the campus, he is given a set of paperwork relating to risk assessment of the site, and asked to complete the relevant forms quickly as the visit is running behind schedule. The originals of the forms must be left with the Departmental Office, and copies made for the administrator of the facility to be visited; this is a legal requirement. The Departmental Administrator is agitated and in haste, and everyone else has their heads down filling in the names of their next of kin, and the agreement that they have read and understood the risks involved on the site.

*Question: You are a member of academic staff who has volunteered to drive one of the two minibuses. You notice that the student, who you do not know, appears to be having difficulty completing the form. What do you do?*

**Box 10: An issue for a fieldcourse tutor**

An introductory environmental sciences field excursion will be examining the pattern of vegetation colonisation in a conservation area on the Pembrokeshire coastline, considering the linkages between soil development and the presence of particular plant species. The tutor also intends to bring specimens of plants and invertebrates back to the laboratory for microscopic examination later. The group includes a partially sighted student who normally travels with a guide dog, and is starting to use audiotapes and large print to support her study in the classroom and library.

*Question: You, the tutor, meet the student for the first time two weeks before the class is due to go. What do you do?*

**Box 11: An issue for the head of department**

A College's compulsory residential fieldcourse in geography normally takes place on the Mediterranean coastline, where students are often involved in independent group projects investigating patterns of in-migration of English-speaking residents. One young student has identified to the College that he suffers from depression and panic attacks, although the depression is managed through prescription drugs. He does not appear anxious about participating, but the lecturers taking the trip are concerned that the student may either apparently behave irresponsibly whilst away or be unable to cope with the intensity of the work and the social life after days in the field. Their initial view is that his presence may compromise the work of other students, or that there may be a problem through over-indulgence in alcohol taken in combination with his medication.

*Question: They approach you, the head of department, with their concerns. What advice do you give them?*

Elements of these situations will probably be familiar to those of us involved in organising and running fieldwork, although most of us have encountered students with significant disabilities only occasionally, and then most frequently those with various hidden disabilities or dyslexia. This absence of experience is an interesting question in its own right, given the extent of disability in the population at large. Possibly tutors may not realise that students on their field visits have disabilities, at least until some incident raises questions. There can be no single defined approach to addressing individual circumstances. The most usual response to the situation when there is advance knowledge is an attempt to discuss sympathetically with the students what barriers may exist to their participation in the fieldwork and how these might be reduced or overcome. In some circumstances alternative learning experiences may be discussed. It is frequently thought to be important to establish the nature of the disability, through requiring students to complete confidential paperwork for consideration by the host department, prior to some decision being taken about what is 'possible' to offer given the students' circumstances. However, this in itself may be prejudicial to the student.

In an ideal world, it may be considered that the curriculum should be designed holistically from the outset to maximise inclusivity (Parker, 1999). This approach responds positively to the diversity of learning needs of all students, including those not describing themselves as disabled. In theory too it enhances students'

understanding of the diversity of the human condition and experience. However, there are other meta-strategies which address specific issues where inclusivity is not the only driving force in the design of a curriculum, and which can suggest solutions which may be regarded as 'reasonable' within the terms of legislation. Some relate simply to the provision of specific support to the disabled student to allow them to benefit from the field experience alongside others. Other approaches may involve more significant adjustments such as alternative destinations (for the group or for individual students), locally-based options, or replacement of the field experience with some classroom-based activity with similar learning outcomes, perhaps supported by the use of 'virtual' environments and examination of real samples or data. Where the intended learning outcomes of being in the field personally are judged to be critical for achieving professional competence, and this places potential barriers before disabled students, approaches based on best practice must be adopted. Naturally, opinion on best practice, and what is reasonable, will shift over time in the light of experience.

## **6.2 Barriers**

The impediments to individual disabled people accessing fieldwork and related opportunities have been classified in a non-medical way (see Section 5), using three broad conceptual groupings of the barriers which society creates:

- attitudinal barriers
- institutional and organisational barriers
- physical barriers

This categorisation also reflects the fact that students or potential students currently face multiple impediments to their participation, which potentially exclude them from undertaking study at many stages of their academic careers. For example, an admissions tutor might unwittingly assume that courses including fieldwork are inappropriate or impossible for students with particular medically-defined disabilities, and advise them of this at the time of application. There may be an impression given through publicity materials that only able-bodied people would be able to take up a particular academic discipline because of a requirement for high levels of physical fitness and mobility, or a requirement for visual acuity. Or it may be thought by course tutors to be impossible for a student with a speech impairment, although well advanced in a humanities-based course, to be involved in personal project work with human subjects off-campus. These are examples where attitudes, organisational characteristics and physical settings all pose barriers. The barriers to participation will also be apparent differentially for different types of activities, and different disciplines, as traditionally interpreted.

### **6.2.1 Attitudinal Barriers**

This refers either to attitudes held by staff responsible for coordinating or organising field visits, or to the attitudes of those who students would encounter during field visits, perhaps as colleagues or the subjects of research projects or the presenters of information. This barrier has the potential to affect the experience of all disabled students and be discriminatory, even if unintentionally. Staff may typically not have received training on how to teach to accommodate the diverse needs of all students in higher education, and may resent potential encroachments onto their perceived academic freedoms of how, what and where to teach. They may adopt an attitude of

'blaming the individual' disabled student for apparently posing them a problem, and feel themselves incapable of responding positively. Some basic training courses are usually available as part of staff development at institutional level and academic and support staff need to be encouraged to participate.

The attitudes of fellow students sharing the visit may also be an impediment to effective participation by disabled students. The disabled students' colleagues may unintentionally be over-protective or do too much of the work for them. Alternatively some of their colleagues may, through lack of prior experience, feel uncomfortable and display this through avoiding contact with them. These are the same set of barriers which students face in everyday life, but perhaps are apparent more acutely because of the lack of familiarity of the setting, the potentially close personal associations which occur between participants (staff, students) on field visits, and the semi-enforced contact with a particular set of other people as part of the 'field experience'. Where disabilities are visible (through wheelchairs or walking frames, white canes or dark glasses, hearing aids, facial disfigurements) these can lead to students being faced with exclusion, infantilisation, being patronised or stigmatised. Where the disabilities are less apparent initially, or less well understood by the public, staff or fellow students (such as medical or dietary requirements, unusual behaviour including speech patterns or movements, evidence of undue anxiety), people may be surprised and respond by appearing alarmed, embarrassed or repelled. This clearly reduces the capacity for sensible communication to take place amongst field trip participants or the subjects of field-based enquiries, let alone meaningful intellectual discourse or academic inquiry.

It is possible that during the field visit, as indeed at other times during the student's everyday life, that they will be affected by the operation of cliques and power groupings that are exclusive, and from which they are informally isolated or excluded. Students with low-incidence disabilities, such as blindness or deafness are also often unique anyway on their course, and will inevitably feel somewhat isolated. This has the potential to be particularly problematic if students are working in, or being assessed in groups, and if there is any reluctance to include the disabled student as a team member.

Moreover, it should be remembered that a disabled student, as indeed any individual, may not share the same value systems as the majority of participants in the fieldwork experience, whether staff or fellow students. They may not feel that personally ascending a high peak, walking through a complex labyrinth of small passageways in an old town, observing the detail of soil or vegetation coloration in a river valley, or spending periods of time socialising in a bar, is a valuable part of the fieldwork, or that it is a legitimate expectation. From this perspective, there may potentially be a conflict of views with field visit organisers (and in some cases with professional bodies), particularly where the intended learning outcomes for such experiences are spelled out in terms of the 'length' of the field visit (e.g. 'at least eight weeks field mapping') rather than characterising the development of skills or understanding which is expected as an outcome of the activity. Further thoughts on this are given in the section below. This raises issues of wider concern, for example whether all students have the right to negotiate their curricula, or the limits within which this might justifiably take place, which although interesting are largely beyond the scope of this study.

Enhanced public understanding of disability is clearly an issue for everybody, not just participants in fieldclasses, but academic staff have a particular role to play in their teaching. The tone of the relationships which they broker in the classroom or beyond, and the climate of expectations they set in relation to the behaviour of all students are critical issues, and can have a real impact on the experience of disabled students. Research suggests that this is most easily accomplished where there is a commitment to 'innovative teaching approaches and self renewal' (Silver *et al.*, 1998). At a practical level there are useful outlines of the etiquette of approaching and talking to blind students and wheelchair users in Shepherd (2001) and Gardiner & Anwar (2001).

Perceived attitudes of staff and other students is one of the reasons for the reluctance of students to disclose the existence of disabilities. Such non-disclosure can, however, lead to staff inadvertently being insensitive to a disabled student's situation because of their lack of awareness of the situation faced by the student.

### **6.2.2 Institutional and organisational system barriers**

Institutional barriers to participation may include issues relating to the timetabling or scheduling of field visits (seasonally in relation to climate or weather, during the course of a day or a period of time, or the intensity of activities occurring in a restricted period of time). It may be specified that students have to work independently in the field (for example, mapping work in areas some distance away from the road network, medical facilities and toilets), without the reason for this being clarified. Sometimes the institutional requirements of completing paperwork may prove unnecessarily challenging (a need for health and safety paperwork to be done on site, for example). It may be viewed as a superfluous administrative or financial burden for additional helpers (signers, interpreters, note takers, trained medical carers) to be part of the field visit team, despite the availability of funds from the student's Disability Allowance. Or it may be institutional practice to make arrangements for fieldclasses relatively shortly before departure, thus not allowing the disabled student time to be adequately briefed on the likely demands of the visit, or to make any arrangements that they may require.

Other institutions or organisations involved in fieldclasses can also influence the students' experience through their own systems. Institutions or businesses may operate informal 'quota' systems for disabled students, with the intention of reducing pressures on their staff (for example the Higher Education Institution (HEI) itself, the residential accommodation or transport used during a field visit, or the sites visited such as show caves, government or local authority offices, or commercial premises). In the past this has frequently been cast as a health and safety issue, in relation to the need for emergency evacuation of premises, but the effect in excluding students is, nevertheless, very significant for the individuals directly affected. Quotas, formal or informal, are more likely to be encountered in some countries than others, and are no longer widespread in the UK (readers may recall the substantial discussions around the implementation of arrangements to accommodate wheelchair users in cinemas and theatres, for example), but other organisational issues, for example an apparent inability or unwillingness to respond to the need for a special diet, are similar in their impact.

Amongst the arrangements for the fieldclass that are within the HEI's remit, inflexibility about the nature of assessment can also create a barrier to the student's success. For example, the assessment specified may include the submission of a

personally-written logbook or field notebook completed in the field, or the presentation of a poster, both of which could be challenging for a student with a visual or mobility impairment and which might legitimately be recast as a verbal presentation for example, without detracting from either the intended learning outcomes or the challenge.

### **6.2.3 Physical barriers**

These are usually thought to relate principally to students with mobility impairments (wheelchair or walking stick/frame users being most commonly cited, although people using these aids are not the most common disabled students encountered). The most obvious barriers which disabled students on a fieldcourse might face include steps, doors, steep gradients or settings which are physically challenging and tiring even for able-bodied students (lengthy hikes, mountainsides, river channels, quarries, multi-level buildings without lifts or escalators). This can be compounded by phenomena such as:

- inaccessible or inflexible transport
- high or low ambient temperatures
- a lack of specialist accommodation or facilities.

But physical barriers can go far beyond this to include:

- difficulties with the legibility or comprehensible nature of the printed word
- jargon
- poorly visible or inadequately lit locations
- weak colour contrast or excessive complexity in text or diagrams and maps
- inaudibility of speakers or those giving instructions in locations not designed for addressing groups (outdoors in windy locations, indoors in crowds)
- lack of signers or induction loops for d/Deaf students
- poorly designed screen displays in introductory sessions or presentations.

Time-related problems, such as unusually long (or unspecified) intervals between mealtimes, or limited opportunities to visit lavatories or bathrooms, may also cause difficulties. Lack of mains electricity can create difficulties for students reliant on microcomputer-driven equipment. Wide open spaces, cliffs or high buildings, aeroplane flights, small underground passages, deep water, crowds and the possibility of encountering particular forms of wildlife can also be viewed as posing physical challenges for phobic students.

## **6.3 Overarching strategies embracing the whole curriculum**

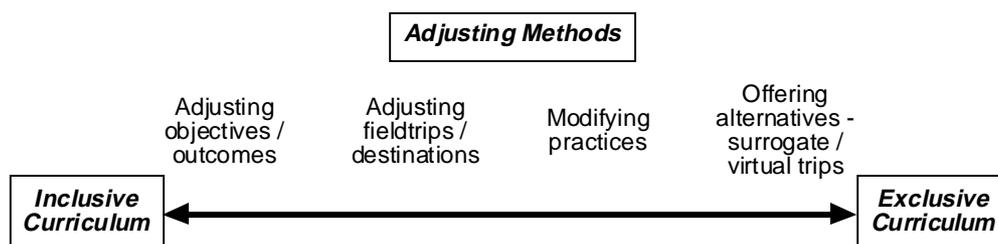
Silver *et al.* (1998, p.47) argue that accessibility issues should be placed 'as an integral component of all instructional planning'. With inclusivity at the heart of curriculum design, tutors would include into their curriculum, course delivery and learning environments many of the modifications that students with disabilities would typically request (Parker, 1999). Ideally this should occur either implicitly or explicitly when courses are at the design stage and their objectives are being agreed. Subsequent reflection of course objectives in the learning outcomes of individual modules, and in the assessment design, then follows. In theory this removes much

of the need for disability to be raised as an issue by individual students. However, in the face of the many influences on curriculum design (such as overall aims and objectives, linking teaching and research, the resources available and, in particular, staff time) (Jenkins, 1998), to establish an inclusive curriculum, some compromises may have to be made, or particular arrangements negotiated for individuals.

Facilitating access to the full curriculum needs to consider each key element of the formal and informal curriculum, so that discussion of appropriate arrangements and expectations can take place with full knowledge on both the part of the whole staff team, and the disabled student(s). Thus the formal curriculum might at present require students to carry out an analysis of river chemistry. Considering whether that activity is the only, or even the best way of achieving the disciplinary knowledge might suggest alternative exercises for all or some students. Offering students a degree of choice in the fieldwork, so that their particular needs can best be matched, is very helpful. Thus in the case of river chemistry a video or reading supported by laboratory or statistical analysis might provide a suitable alternative to physically collecting samples personally for some students. To go beyond this, the need for physical accessibility (in all of its manifestations) needs to be put higher up the planning framework for deciding on locations and activities for fieldwork. Sometimes it may be possible for large departments to offer a range of fieldclasses to all students, so they can choose the most suitable one for their discipline, domestic arrangements, financial situation or disability as appropriate. For individual elements of assessment a different type of activity may be made available. Other strategies include cooperative learning using a team approach, which draws on the individual team member's abilities. Thus it may be acceptable to devise an activity that requires some in the team to analyse the chemistry and for others to compare the published results from another location. Such 'alternative' arrangements might include the use of ICT and technological innovation, for example in producing accessible materials such a large format print, or extended handouts for reading and assimilating at a later stage (handouts are particularly helpful for students with dyslexia and d/Deaf or hearing impaired students – see Chalkley & Waterfield, 2001; Wareham *et al.*, 2001). The design of high-quality accessible courseware ([http://www.disinhe.ac.uk/resources/guides/accessible\\_courseware/](http://www.disinhe.ac.uk/resources/guides/accessible_courseware/)) is naturally not only a requirement for field-based studies, but responds to the needs of all students in all their learning activities.

The key is discussion between the fieldwork organiser and the student to establish what is critical, important and unimportant for both parties. It is important that the negotiation process is built into individual institutional practices, since individual students with disabilities of relatively low incidence (such as visual or hearing impairment) may only be studying occasionally in any one department, and the changes in staffing and institutional organisation may allow knowledge to be lost. The approach, nevertheless, needs to be embraced by all staff.

**Figure 1: Spectrum of approaches**



The curricula provided by individual departments vary in their starting positions on a spectrum from inclusive to exclusive (Figure 1). Some departments have already embraced diversity and inclusivity as part of their course philosophy, and have built curricula, including fieldwork experiences, around this concept. Disabled students are encouraged to apply, can be reassured that their disabilities will not be an impediment to fulfilment of the course requirements, and that appropriate physical and organisational support is available. For other departments there may be a longer journey, which may begin by offering disabled students surrogate or different field experiences, or providing physical support to particular styles of activity, whilst considering more fundamental changes to fieldwork expectations over a period of time. Many of the adjustments to be made will nevertheless benefit all students undertaking fieldwork, not only disabled ones.

#### **6.4 Virtual fieldcourse: part of the 'solution', or sidestepping 'the problem'?**

One approach that in particular may meet the needs of students with mobility problems is to provide access to fieldwork through virtual fieldwork courses (VFC) or environments. A VFC is where the computer creates virtual environments through static and/or moving images, and provides access to databases/resources. VFCs, though still somewhat experimental, are now taking an increasing role in many departments and a JISC/JTAP project developed a range of software and ideas on how to integrate VFC into the disciplines (Virtual Fieldcourse Project, 1999). In most cases VFCs are seen as complements to 'real' fieldwork. VFCs have several critical roles:

- a) preparing students by considering such virtual environments before they go into the field;
- b) while in the field they enable students to quickly analyse data and relate it to wider data sources; and
- c) on return from the field further analysis is enabled and the resultant projects can then be readily accessed by other students/departments.

VFCs also enable students and staff to analyse environments that are inaccessible to all because of distance or cost, the environment is in the past, or access is not possible (Jenkins, 2000) ([http://www.brookes.ac.uk/virtual/NewTF/48/tf\\_48jenkins.html](http://www.brookes.ac.uk/virtual/NewTF/48/tf_48jenkins.html)). As Roger Suthren, a geologist at Oxford Brookes, states:

I can't take any of my students to the crater of Mount St Helens or the mid-Atlantic ridge, or the Ice Age in Oxford, so virtual field trips become valuable for all students here.

(Suthren, 2001)

But do VFCs then offer a significant part of the solution to those with mobility (and also those for whom cost and/or domestic circumstances mean that they find going on residential fieldwork difficult)? Some courses/exercises do exist where students complete assignments on virtual environments that they never visit. Thus Mike Ritter has developed a VFC (<http://www.uwsp.edu/geo/projects/virtdept/ipvft/ipvftmod.html>) on the physical environment of the Colorado Front Range such that his students in Wisconsin (and students worldwide) can virtually visit and analyse these distant environments. The course does not require them to visit the 'real' location (Ritter & Lemke, 2000). To return to the case of the golfer Casey Martin and the Professional

Golfer's Association, no local or regional accrediting agent of his courses seem to be saying to Ritter's department that walking in the Rockies for four hours or days is a requirement for graduation!

### **Box 12: Virtual Learning Environments at Oxford Brookes University**

The Geology Department at Oxford Brookes does plan to offer a special programme – Geostudies – for students with restricted mobility by offering them a range of virtual learning environments. The course is still in preparation. They have:

designed a virtual fieldcourse for SW England, which is backed by laboratory specimens and exercises as well as virtual interactive exercises based on the locations we take the able-bodied students to. This is a stage 1 fieldcourse. In stage 2 the pathway will focus on development of laboratory skills with some visits to 'local' field sites that have good disabled access. At present we are looking to make the virtual fieldcourse available on CD-ROM to other universities.

(Colley, 2001)

You can get a sense of what they are doing by virtually visiting the introductory web-pages for the 'Geostudies' pathway (<http://www.brookes.ac.uk/geology/geostudies/>). Yet Roger Suthren comments on this development provides a linked and questioning perspective:

My overall feeling is that we should be giving disabled students REAL fieldwork wherever possible, and that it IS possible to devise field trips to a range of accessible localities. ... Certainly this will mean additional expense in terms of specialist accommodation, transport, carers on fieldcourses etc. Many of the activities will be the same as on current field trips e.g. students sit on top of a hill and produce a labelled drawing of a cliff or quarry face. It doesn't matter whether this is done outside, or sitting inside a bus (and, on a wet day, it might be productive for ALL students to do it from the bus). And it might involve a lecturer with a radio mike, pointing to salient features, arm waving, bringing samples back to students etc. (even better with 2-way communication). All of this is much better than doing it all on a computer, because the students are actually getting a feel for real geology in the field, the spatial relationships of rock units etc. And there are many locations where disabled students will actually be able to get their hands on the outcrops.

(Suthren, 2001)

The main institutional/organisational obstacle to such activities is funding, not student mobility/access. Given the funding, one could, for example, devise some great field trips to US National Parks, many of which are very accessible.

Another way of using VFCs to meet the needs of disabled students would be for the three disciplinary communities to co-operate nationally and internationally (Solem, 2000; Stainfield *et al.*, 2000) to create VFCs and linked course materials that enable disabled students (including partially sighted students) to have access to a whole range of virtual environments.

So where do you and your department stand on the role of VFCs and disability; are they part of the 'solution' or do they sidestep 'the problem'?

## 7 Legislation and Regulation

*Abstract: The context of anti-discrimination legislation is discussed by firstly looking at the historical background and practice in other countries. This section goes on to consider the impact of the Disability Discrimination Act (DDA), the Special Educational Needs and Disability Act (SENDA) and other legislation on providers of education. Legal definitions of disability and discrimination are covered. Issues of identifying disabled students, provision of information and making reasonable adjustments are identified as important. Health and safety legislation is discussed in relation to disabled students.*

### 7.1 Context

In these sections the focus is on the legislation and regulatory framework in the UK. However, it is important to note that the UK has lagged behind countries, such as Australia, Canada and the USA in bringing in anti-discrimination disability legislation (Box 13).

#### **Box 13: UK disability policies: comparisons with other countries**

Higher education institutions in Australia, Canada and the USA have disability policies underpinned by strong equal opportunities and human rights perspectives. A number of features can be highlighted in the disability statements of universities and colleges in these countries, which will become increasingly relevant to the UK as education becomes more fully covered by disability rights legislation:

- Clear links between national legislation and the institution's policies
- A setting out of the rights and responsibilities of disabled students
- An explanation of the rights and responsibilities of staff
- A statement of what can be funded by whom
- Guidelines on confidentiality issues
- Clarity that disabled students are to be included within mainstream activities
- An emphasis of removing disabling barriers
- Statements of intention to combat discrimination and harassment of disabled students and to promote awareness of disability issues throughout the institution
- A description of the Appeals Procedure that may be initiated by students who feel they have been treated unfairly

For examples of disabilities policies in higher education in other countries see:

#### **Australia**

<http://www.services.unimelb.edu.au/disability/laws/index.html>

[http://www.qut.edu.au/pubs/disabilities/national\\_code/code\\_4.html](http://www.qut.edu.au/pubs/disabilities/national_code/code_4.html)

#### **Canada**

<http://students.ubc.ca/drc/>

[http://www.ciph.umontreal.ca/eng/politi\\_eng.html](http://www.ciph.umontreal.ca/eng/politi_eng.html)

#### **USA**

<http://dsp.berkeley.edu/BerkAcomPolicy.html>

<http://www.sa.ucsb.edu/dsp/Services/psych-guidelines.htm>

Legislation relating to disabled students access to Further and Higher Education in the UK has been in place since 1992, when the Further and Higher Education Act (1992) required all institutions to 'have regard' for students with learning disabilities. As a result of this legislation, institutions were required to produce a Disability Statement, to appoint or identify an Advisor with responsibility for assisting disabled students studying at the institution, to state what specific provision existed currently in the institution, and to explain the future plans for developments in this arena. Various organisations were also established over the next few years, including 'Skill: The National Forum for Students with Disabilities' (<http://www.skill.org.uk/>), 'Disforum' (a web-based information exchange for disability officers) (<http://www.jiscmail.ac.uk/lists/dis-forum.html>), and the 'TechDis' website (previously 'Disability in Higher Education') (<http://www.techdis.ac.uk/>).

The Disabled Students' Allowance scheme has also been put into place to enable full-time, and some part-time students to benefit from financial assistance towards the cost of specialised equipment, non-medical personal assistance and other provision. Some of these resources can naturally be used by disabled students to support them undertaking fieldwork.

The Disability Discrimination Act (DDA) (1995) addressed issues of discrimination in employment and the provision of goods, facilities and services. It established that disabled people were entitled to equal treatment and adjustments to their working conditions to enable them to participate fully. Initially, education was exempt from this legislation, but this is no longer the case (see Section 7.2). The QAA also already requires minimum standards to be observed in the provision of education (see Section 8). Health and safety legislation also needs to be considered when planning field trips involving disabled students. The associated risk assessments may need particular attention.

## **7.2 The impact of the Disability Discrimination Act (DDA) (1995) and the Special Educational Needs and Disability Act (SENDA) on providers of education**

### **7.2.1 Background to the DDA and SENDA**

As mentioned in the discussion on models of disability (Section 5), there has been a shift from an emphasis on charity and care, towards civil rights and social and economic inclusion for disabled people. In the USA the large numbers of disabled Vietnam veterans joined together as a cohesive group with other disability groups, organisations and agencies to fuel civil rights campaigns, resulting in the 1990 Americans with Disabilities Act. In the UK disability rights campaigns have been mounted since the 1970s. A bill to ensure civil rights for disabled people was put forward by Roger Berry MP in 1992. This was rejected by the then Conservative government, who brought in their own measure, the Disability Discrimination Act (DDA) (1995). The DDA went some way towards recognising disability as a social issue, but has been criticised for stopping short of guaranteeing enforceable civil rights. The incoming Labour Government of 1997 described the Act as 'fundamentally flawed' and pledged itself to make improvements. Education did not come under the DDA until the passing of the Special Education Needs and Disability Rights Act in May 2001.

In April 2000 the Disability Rights Commission (DRC) was established. The DRC has a role in the enforcement of the DDA, which up to then relied upon aggrieved individuals bringing cases before tribunals. The DRC also picked up the work of the

former Disability Rights Task Force (DRTF) in making recommendations for further anti-discrimination legislation. In their report 'From Exclusion to Inclusion' published in December 1999 the DRTF states:

Disabled people must have the right to pursue their education without unfair discrimination. What value do we place on education when a disabled person has rights against discrimination under the DDA when going to the cinema, but not whilst at school or college? We have recommended a range of new legal rights against unfair discrimination and duties on education institutions to make reasonable adjustments to allow access for disabled people.

(DRTF, 1999, p.42)

The Government's Special Educational Needs and Disability Rights in Education consultation published in March 2000 demonstrated their commitment to follow these recommendations:

The provision of many educational services to the public is currently exempted from Part III of the Disability Discrimination Act (DDA) 1995 (access to goods, facilities, services and premises). The Government believes that this exemption is unjust and indefensible. The Government therefore proposes that new duties should be applied to education in schools (including nursery schools), further education, higher education, adult education, youth service provision and, in Scotland, community education. The new legislation is intended to ensure that people in education receive protection from unfair discrimination as disabled people in other areas of society now enjoy.

(DfEE, 2000, p.3)

The resulting Special Education Needs and Disability Act, passed in May 2001, states that:

The responsible body for an educational institution must take such steps as it is reasonable for it to have to take to ensure that –

- a) in relation to the arrangements it makes for determining admissions to the institution, disabled persons are not placed at a substantial disadvantage in comparison with persons who are not disabled, and
- b) in relation to student services provided for, or offered to, students by it, disabled students are not placed at a substantial disadvantage in comparison with students who are not disabled.

(HMSO, 2001, p.27)

The provisions of the Act are being phased in:

- From 1 September 2002 it will be unlawful to discriminate against disabled students by treating them less favourably than others. Responsible bodies are required to provide certain types of reasonable adjustments to provision where disabled students might otherwise be substantially disadvantaged.
- From 1 September 2003 responsible bodies are required to make adjustments that involve the provision of auxiliary aids and services.

- From 1 September 2005 responsible bodies are required to make adjustments to physical features of premises where these put disabled students at a substantial disadvantage.

The Act consists of a series of amendments to the 1995 Disability Discrimination Act and applies to all Further and Higher Educational Institutions in England, Scotland and Wales. This being the case the rest of this section is given over to exploring the implications of the DDA for educational institutions.

## 7.2.2 DDA definitions of disability and discrimination

### *Disability*

The DDA defines a person's 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' (Box 14).

#### **Box 14: Disability definitions**

**Impairment** – The definition covers physical and mental impairments. These include:

- physical impairments affecting the senses, such as sight and hearing
- mental impairments including learning disabilities and mental illness (if it is recognised by a respected body of medical opinion)

**Substantial** – For an effect to be substantial, it must be more than minor.

#### *Examples*

- inability to see moving traffic clearly enough to cross a road safely
- inability to turn taps or knobs
- inability to remember and relay a simple message correctly

**Long Term** – these are effects that:

- have lasted at least 12 months or are likely to last at least 12 months or are likely to last for the rest of the life of the person affected.

*Long-term effects include those which are likely to recur. For example, an effect will be considered to be long-term if it is likely both to recur, and to do so at least once beyond the 12-month period following the first occurrence.*

**Day-to-day activities** – normal activities carried out by most people on a regular basis, and must involve one of the following broad categories:

*mobility – moving from place to place; manual dexterity – for example, use of the hands; physical co-ordination; continence; the ability to lift, carry or move ordinary objects; speech, hearing or eyesight; memory, or ability to concentrate, learn or understand; being able to recognise physical danger.*

Source: HMSO (1995)

*Question: Casting your mind back to Section 5, to what extent do the definitions in Box 14 encompass a social model of disability?*

As you may recall, advocates of the social model describe 'disability' as a social condition, the result of a society which does not cater for the diverse needs of people

with impairments and which creates barriers to their participation. In contrast, the DDA defines 'disability' as substantial impairment, and does not include the broader area of barriers and discrimination within the definition. However, the content of the Act itself does recognise the disabling effect of environments and organisational arrangements that exclude disabled people.

The DDA definition can be criticised for not taking into account other peoples' reactions to a person. In contrast, the American's Disabilities Act includes being regarded as having an impairment within its definition of disability. In this country someone who has HIV infection, but is not showing symptoms, would not be protected from discrimination under the Act. Terms such as 'substantial' and 'normal day-to-day activities' do not give precise indications of who is disabled and who is not.

The Disability Rights Task Force stated that 'the current definition of disability in the DDA has significant flaws' (DRTF, 1999, p.24) and hopes that it will be reviewed by the Disability Rights Commission. The DRTF recommends a number of interim amendments including the following measures:

- The DDA definition of disability should be extended to cover both people with HIV from diagnosis and cancer from when it has significant consequences on people's lives.
- The Government should review and consult on aspects of the DDA definition of disability with a view to ensuring an appropriate and comprehensive coverage of mental health conditions.
- The Government should consider whether to extend coverage to those with severe conditions which are not long-term, as can sometimes be the case with some heart attacks, strokes or depression. The wider implications of this proposal would need to be explored to avoid covering temporary or readily curable conditions, such as broken legs, where the chances of recurrence were not significantly increased by them having happened once.
- The Government should improve and clarify the statutory guidance on the definition of disability.

(DRTF, 1999, p.25)

It is important to note that a person is only covered by the employment conditions of the Disability Discrimination Act, if their employer knows that they are disabled. This is would also be the case within educational institutions. So if a student does not declare their 'disability', and the institution could not reasonably be expected to know that the student is disabled, a discrimination case would not stand up before a tribunal.

### *Discrimination*

To avoid discrimination under the terms of the DDA, you must not treat a disabled person less favourably than someone else, because of the person's disability, unless there is good reason to do so. The Special Education Needs and Disability Act (SENDA) states that less favourable treatment of a person could be justified if it was necessary to maintain academic standards. This leads to consideration of circumstances under which it is justifiable to exclude a disabled person from an activity.

*Question: Can you think of any situations under which it might be reasonable to exclude a disabled person from an activity?*

If the nature of someone's impairment means that, even with the use of aids and adaptations they would not be able to carry out essential functions, it would be regarded as permissible to exclude them from an activity. If someone could be shown to be likely to jeopardise their own or the safety of others, they could be excluded. However, you must be careful not to exclude anyone on the basis of assumptions; physically disabled people have climbed Everest. Another situation might be where technically it is possible to overcome the effects of someone's functional limitations, but in practice it would be very difficult and expensive. You would need to show that, despite trying to get the necessary resources, it has not been possible to accommodate that person's needs.

### **7.2.3 The Special Educational Needs and Disability Act Code of Practice**

The SENDA is being backed up by a Code of Practice. At the time of writing this is in draft form and runs to 67 pages. It can be accessed at the Disability Rights Commission's web-site (<http://www.drc-gb.org/drc/default.asp>). Although it is a lengthy document it contains many useful examples of how the Act could relate to higher education. Not many of the examples are specific to field trips (see below for two which are). However, the Code relates to many aspects of planning and running courses, as well as the general provision of services and support within institutions, and it is worth reading at length.

#### **Example 5.8E**

As part of an Earth Science course, students are required to undertake a field trip involving an overnight stay in a mountain hut. A student who needs regular dialysis cannot go on the residential field trip without missing her dialysis. A reasonable adjustment might be for the tutor to arrange for her to take part during the days but for someone to return with her to a nearby village at night so that she can have dialysis.

DRC Draft Code of Practice Post 16 Education p.38.

#### **Example 5.10A**

A student with a heart condition goes on a field trip as a compulsory part of her geography course. The student has not told the college about her condition although she had been given the opportunity to do so in private on several occasions including when the field trip was announced. Part of the trip involves walking around the town counting shops and residential housing. During the day, it becomes apparent that she cannot complete the assignment although some last minute adjustments are made. Because it could not have known about the disability in advance, the college is unlikely to have been acting unlawfully.

DRC Draft Code of Practice Post 16 Education p.39

The draft COP has been put out for discussion and feedback and will be followed up by a more permanent document.

Commentaries on SENDA can be found at <http://www.skill.org.uk/> and at <http://www.natdisteam.ac.uk/>.

## **7.3 Extension of DDA principles on employment and provision of goods and services to educational provision: practical implications for field studies courses**

### **7.3.1 Identifying disabled students**

Under the DDA, a disabled person is one who fits the definition of having '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'. This raises the interesting question as to whether ascending a mountain or undertaking sub-aqua diving is a 'normal day-to-day activity'. The chances are that such activities would not be so classed. So a student who is merely unfit but can carry out more normal daily activities would not be classed as disabled. Also a student who has a short-term illness, e.g. flu would not be classed as disabled. The definition would include a wide range of impairments, some more obvious to academic staff than others. Some of the more obvious ones include:

- visual impairment
- hearing impairment
- loss of limb
- mobility restrictions
- Multiple Sclerosis.

*Question: What other impairments might be significant, but not so obvious, if you don't know the student well?*

Some examples include:

- angina
- arthritis
- asthma
- epilepsy
- mental ill-health
- Myalgic Encephalitis (ME) also known as Chronic Fatigue Syndrome (CFS).

The point of this exercise is not to make you feel that you must become an expert on medical conditions, but to be aware that it is not always obvious when you have disabled students in your group. Educational institutions need to give thought to how they identify disabled students and how that knowledge is shared with the staff who need to know. Students are more likely to share information if it is focused on the practicalities of how to enable their participation in academic and related activities.

### **7.3.2 Provision of information**

Before enlisting on courses students should be made aware of any fieldwork assignments and what physical and mental demands this might make on participants. This will enable time to explore how, if possible, the effects of any impairment might be overcome or reduced. This early provision of information will also enable students to choose a course more suited to their situation if the difficulties cannot be overcome.

*Question: Are there any issues you would like to note about how your institution collects information on disabled students and their needs, and how it provides disability related information to students?*

### **7.3.3 Making reasonable adjustments**

The aim of reasonable adjustment is to minimise disadvantage in the environment and *not to provide competitive advantage to students with a disability.*

(University of Newcastle, 2001, Part I, p.2)

Following the model of the employment provisions of the DDA, educational institutions will be expected to make 'reasonable adjustments' in order to allow students access to their courses. The Government's consultation paper stated that:

An education provider would discriminate against a disabled person if he (sic) failed to make a reasonable adjustment to any arrangements, including physical features of premises, for services that place the disabled person at a substantial disadvantage in comparison to persons who are not disabled. In judging whether an education provider needs to consider making a reasonable adjustment, a disabled student is compared to his (sic) peers. This is a more appropriate test, when considering access to public sector education, than asking whether the disabled student finds it 'impossible or unreasonably difficult' to access education (which would be the test in Part III of the DDA). This does mean that education providers might have to consider making adjustments in more circumstances than if they had been covered by Part III.

(DfEE, 2000, p.18)

The same paper set out what is meant by 'reasonable adjustment' in this context:

There are a number of factors which, in particular, education providers will have to consider when assessing whether an adjustment or additional equipment or service is 'reasonable':

- whether the adjustment would affect the maintenance of academic and other standards
- the cost of the adjustment and the financial resources available
- whether making the adjustment or additional provision is practical
- the effectiveness of the adjustment or additional provision
- the disruption caused to others
- whether the student, or others, should provide the additional provision or services, and
- the importance of the service to which access is being sought.

(DfEE, 2000, p.21)

SENDA requires institutions to anticipate the needs of potential disabled students. Institutions should not merely react to meet the needs of individual disabled students, but should be reviewing how their policies, procedures and practices will impact on the experiences of a range of disabled students.

Disabled students are sometimes excluded from particular courses because they cannot meet the 'essential course requirement', but there are cases where students have successfully appealed against such rulings (Box 15). What is 'reasonable' in terms of cost has been interpreted by Tribunals in employment cases as suggesting that large organisations with large budgets are expected to make adjustments that smaller organisations could justifiably claim to be too expensive. Just where this leaves a small department with a devolved budget, within a large university is not clear. But there is a strong argument for central funding to be made available for the costs incurred in making provision for disabled students.

### **Box 15: Essential course requirements**

Where a student's disability directly affects their capacity to undertake the essential and central components of a course there may be grounds for excluding the student from the course.

An example is a case where a student whose capacity to speak was severely curtailed by a respiratory disability but who wished to enrol in a counselling course. She was advised that it was unlikely she would be able to comply with the essential requirements of the course, which included simulated crisis counselling, and that it would be in the interests of those taking the qualification if she were to be exempted from these.

There is a need to review courses to establish whether all compulsory activities and components are really essential to the particular qualifications. Situations have arisen where a student is unable to comply with a specific compulsory aspect of a course due to a disability, but the student has argued that this aspect is not one which will hinder them from working in that field after graduation.

(Based on University of Newcastle, 2001, Part I, pp.2-3)

*Question: In your institution would the inability of a student to fully participate in a compulsory fieldcourse prevent them from taking the course? Is the time spent in the field the essential requirement? Could the learning outcomes of the fieldcourse be achieved in a different way? Could adjustments be made to the fieldcourse programme to remove the barriers which are preventing the student participating? Could the student obtain a job in the field after graduation without that field experience?*

The fear which many tutors have is that if they accept that a fieldcourse is not an essential component for a disabled student then administrators may argue that therefore it is not essential for non-disabled students and the financial support for this element of the course will diminish.

*Question: Is this a fear that you share? In which case are there ways in which this fear may be overcome, for example, by adding the word 'normally' in the regulation about the compulsory nature of the fieldwork?*

On the other hand, if this was seen as an easy way out to exclude a disabled student from a fieldcourse it may reduce the need to examine critically the nature of the barriers preventing the student participating and how they could be reduced or overcome.

If the student is eligible for the Disabled Student's Allowance, this may go some way to covering the costs of any necessary aids, adaptations or adjustments. The Disabled Student's Allowance has recently been extended to post-graduate students (see Box 16).

**Box 16: Disabled Student's Allowance, 2001-2002**

Full time undergraduates

- Specialist equipment Allowance: up to £4,255 for whole of the course
- Non-medical Helper's Allowance: up to £10,755, a year
- General Disabled Students' Allowance: up to £1,420

For part-time undergraduates (on at least 50% of an equivalent full time course)

- Specialist equipment Allowance: up to £4,255 for the whole of the course
- Non-medical Helper's Allowance: up to £10,755 a year (as a percentage of the full time rate, e.g. £5,378 if doing 50%)
- General Disabled Students' Allowance: up to £1,065 (as a percentage of the full time rate)

For full-time and part-time postgraduate students

- One allowance to meet all costs up to £5,120 a year

*Question: What sort of reasonable adjustments are likely to be needed to help disabled students participate in fieldwork connected with your course?*

As previously discussed disabled students can have a wide range of impairments, so there can be many answers to this question. Adjustments are about overcoming barriers, so you might like to refer to the Section 6 to help you consider the range of options possible.

*Question: Are there any aspects of fieldwork for which you think it is not possible to make reasonable adjustments for students with certain types of impairment?*

There will be some areas in which it is clearly not possible, for example to accommodate a blind student or a wheelchair user. However, before reaching this conclusion you need to have consulted the student to find out what they know they can and can't manage and if necessary to get advice from others who may have relevant experience or knowledge. These other sources of advice and information could include:

- disabled people who have experience of fieldwork
- your institution's Disability Officer/Advisor
- staff running similar courses in other institutions
- specialist disability organisations such as the Royal National Institute for the Blind (RNIB) or the Royal National Institute for the Deaf (RNID)
- your local Disability Information and Advice Line (DIAL).

There can be some creative solutions to overcoming the barriers faced by disabled students and as well as learning from others you may well be able to share good practice developed within your own area. The key lesson is to never make assumptions about what is or is not possible when including disabled students in your activities. Make good use of your research and problem solving skills and don't be afraid to seek the advice of anyone who can offer a fresh perspective, especially disabled students themselves.

## **7.4 Health and safety legislation**

Academic staff arranging field visits and Heads of Department carrying institutional responsibilities for health and safety matters in academic programmes often feel that the burden they carry is unreasonable, even without the potential for further complications introduced by more diverse student groups. Interpretation of the UK's health and safety legislation remains a matter partly for judgement, not least because of the (fortunately) limited amount of case law relating to students and staff on fieldcourses. Accidents with serious consequences to date have been few. The Disability Discrimination Act (1995) states explicitly that:

The Act does not require a service provider to do anything which would endanger the health or safety of any person. A service provider can justify less favourable treatment or a failure to make an adjustment if it is necessary in order not to endanger the health or safety of any person, including the disabled person in question.

(Disability Discrimination Act, 1995, Section 6.10)

However, the Act goes on to emphasise that spurious health and safety reasons provide no defence for institutions which refuse to meet the reasonable needs of disabled students. Two useful examples are set out in the Act. The first relates to an outdoor venture centre providing training weekends involving some physical effort and some personal risk. Participants are required to undergo a medical examination before they are admitted, and clients who are disabled as a result of high blood pressure or heart conditions are judged to be justifiably excluded under the terms of the Act. However, it is suggested that the venture centre might make adjustments to its policy by admitting disabled clients to parts of the course which do not create a safety risk, either to themselves or other participants. There are some clear resonances here with fieldclass participation in challenging or risky settings by students with known medical conditions, but the onus would be on the institution to justify an exclusion following discussion with the disabled student. It would also be incumbent upon them to provide a reasonable alternative fieldclass or experience, if this were the only venue on offer. In most cases, the student would presumably also not wish to expose themselves to excessive risk anyway, and other students might legitimately object at the programme on offer.

The second example illustrates Section 6.17 of the Act, namely:

A service provider can justify refusing to provide (or deliberately not providing) a service to a disabled person if this is necessary because the service provider would otherwise be unable to provide the service to other members of the public.

(Disability Discrimination Act, 1995, Section 6.10)

The scenario outlined concerns a tour guide who refuses to allow a person with a severe mobility impairment on a tour of old city walls because he believes that the help he would have to provide would prevent the party from completing the tour. This is agreed to be justifiable, but only on the grounds that other people (students, for example) would be effectively prevented from using the service (or experiencing the fieldclass) at all, unless the disabled person were treated less favourably than others. Mere inconvenience to others is insufficient grounds for refusing to allow participation, provided the appropriate arrangements to minimise the risk to the disabled person (student), and to others, can reasonably be made. In this case, the provision of a helper would probably be judged to be reasonable, or permitting the student to examine the urban morphology from some other more accessible vantage point, with or without personal support. The example in the Act continues by suggesting that the provision of an additional or auxiliary guide should be considered, if this could be done without fundamentally changing the nature of the service. For higher education students, a helper could be provided (see Box 16), thus removing the health and safety-related issues.

One further example is provided in the Disability Rights Task Force (DRTF, 1999) recommendations on post-16 Education (Annex 2), Section 25. This concerns students allowed to work unsupervised in a laboratory, where after a proper assessment the institution decides that there would be significant health and safety risks attaching to a blind student working alone. In the view of the Task Force, if no reasonable adjustment could be made to allow sole working, this refusal to allow participation would be judged reasonable. The given example does raise a further interesting issue however, which is whether any student should be permitted to work in specific types of laboratories without supervision of some kind. In the case of laboratories covered by COSHH regulations, the answer would certainly be no, and in this situation the blind student might be little differently placed to other students. Supervision would be required, and the financial entitlement of the disabled person could be used to facilitate an additional helper to work alongside them, taking guidance from the laboratory supervisor in the normal way.

## 8 The Quality Assurance Agency's Framework

*Abstract: This section provides a brief review of the QAA's 'Code of Practice for the Assurance of Academic Quality and Standards in Higher Education; Section 3: students with disabilities' (QAA, 2000c) is presented, highlighting those areas where good practice in relation to fieldwork and related activities is particularly relevant.*

The Quality Assurance Agency (QAA) has recently published a suite of inter-related documents forming a full Code of practice for the assurance of academic quality and standards in higher education (October 1999). The objective of *Section 3: Students with Disabilities* is 'to assist institutions in ensuring that students with disabilities have access to a learning experience comparable to that of their peers'. This is seen as part of the general philosophy embracing equality of opportunity and widening access for students, which is becoming more widely accepted internationally. Although the details of the QAA Code are specific to institutions of higher education in the UK, the general approach should be applicable everywhere.

The QAA Code includes a series of precepts relating to monitoring and evaluating performance in relation to disability against targets, and promotes the requirement to incorporate the needs and views of disabled students into core elements of overall service, and academic development planning at institutional level. Each precept has associated guidance notes which, although not expected to be prescriptive, nevertheless constitute good practice. The practical advice included is intended only to be introductory. The Agency also expected that all HEIs would be able to demonstrate compliance with the precepts by Autumn 2000. Both Institutional Reviews and Academic Reviews (or their successors) of courses must therefore assume that broad adherence should be demonstrable by departments, even without the pedagogic and moral imperatives which underpin the philosophy of these guides. It might be anticipated that most institutions will build these considerations into their normal internal review processes, anyway.

Only one precept, Precept 11, relates specifically to field trips and study abroad, and states:

Institutions should ensure that, wherever possible, disabled students have access to academic and vocational placements including field trips and study abroad.

(QAA, October 1999, Precept 11)

However, many of the other precepts also suggest appropriate methods of ensuring the move towards an inclusive curriculum, including learning and teaching in the field and related activities. A brief overview will highlight some of the practical interpretations which may be made specifically in relation to fieldwork.

Precepts 1 and 2 are concerned with the principle of inclusivity, and stress the need for both academic and social inclusion, in all parts of the physical environment of the institution (see Section 6). Precept 2 also raises the point that:

flexible and imaginative approaches to enabling alternative means of participation where physical access is impossible or unreasonably difficult

must be a consideration. For some departments and particular fieldclasses, the exploration of what is *impossible or unreasonably difficult* will be a matter for

continuing debate and the establishment of precedent, but the exhortation to be imaginative should nevertheless be seen as encouraging and positive, and acted upon. The key word 'reasonable' is critical, and some guidance on this is available from the DDA itself. Following the example given in the Act, a student with a mobility impairment visiting a quarry to inspect a particular sedimentary sequence and associated structures *in situ*, may not be able to approach all parts of the exposure or quarry face because it would be *unreasonable* to expect ramps and or lifting apparatus to be provided for this short visit. It would be entirely *reasonable* however, to expect that the student could remain on the quarry floor at an accessible point (perhaps even inside the transport) and have hand specimens brought to them for examination. Building upon this, it might be possible for the student and the assistant to communicate with walkie-talkies, such that the assistant could be directed to particular points for sampling. Similarly it might be *unreasonable* to expect a range of group fieldclasses to different destinations in order to address the learning outcomes of a single course element for an individual or small group of students. But it might be *reasonable* to expect them to provide academic tutorial support for a disabled student to undertake self-managed field study close to their home. Sharing good practice between departments will be necessary in order to develop corporate understanding of what is possible and impossible, reasonable and unreasonable, but the Code provides a clear steer to departments increasingly to ensure full participation.

Precept 3 refers to ensuring accessible facilities and equipment in institutional settings, but naturally the same principles apply to work and residence beyond the campus, albeit if temporary. Transport, accommodation, access to sites and buildings, use of technical or scientific equipment and personal or technological assistance, would all be embraced. The requirement for appropriate and timely published information is covered in Precept 4, which emphasises the requirement that 'information on placement opportunities, where relevant, is available at an early stage'. The same consideration must relate to advance information on fieldclasses, where generic issues about living and working in groups, plus detailed information on facilities, potential physical constraints, and special needs for particular locations and settings will need to be explained and explored at the appropriate point.

Precepts 5 through to 7 are concerned specifically with the selection and admission of students, and their subsequent enrolment, registration and induction. Institutions are specifically reminded to

ensure that the criteria and procedures used for selecting students are relevant to the requirements of the programme, including any professional requirements, and do not unjustifiably disadvantage or debar applicants with disabilities.

For students on BEd or PGCE programmes involving geography, earth or environmental science, there are medical requirements which usually need to be met by applicants planning a career in school teaching (though in practice not all students on these programmes do plan to teach). But for the majority of programmes to which reference is made in this guide, professional requirements will not debar disabled candidates (although the Geological Society are currently reviewing their requirements for Chartered Geologist status). As Hall *et al.* (2002) have demonstrated, many departments do nevertheless need carefully to consider the imagery and descriptions they use in recruitment, to avoid deterring some groups of prospective applicants by suggesting subliminally that successful fieldclass

participation inevitably requires students to be young, physically strong and (usually) male. There is also some guidance in the notes accompanying the Precept relating to the collection of information from students, and the measures taken to ensure confidentiality. These will impact upon information held by fieldclass organisers perhaps for health and safety reasons, or for reasons associated with access to additional specialist support needs. Specific guidance may also need to be taken from the host institution's Data Protection Act specialist.

Learning and teaching at undergraduate and postgraduate level are covered by Precepts 8 to 12, which relate to planning the detailed curriculum (including research programmes) to be inclusive and accessible, minimising the barriers to participation by disabled students, and flagging up areas of potential challenge. Adapting programmes to render them appropriate for particular individuals is clearly an expectation of the QAA, for example through the provision of information in different formats, by accommodating the needs of interpreters, and through flexible timetabling; all of these are highly significant for fieldclass planning. The guidance notes for Precept 11, to which reference has previously been made (see above), refer specifically to re-locating fieldclasses and trips to alternative sites, or providing alternative experiences where opportunities to satisfy the learning outcomes can be provided. The QAA make no suggestion about the appropriate balance between relocating all classes, and provision of alternative locations (that is, multiple runs for different groups or individuals) or experiences (for example by using teaching methods which do not require students to go off-campus, but achieve the same outcomes), a matter which may be a fruitful area for debate for departments with small numbers of students.

Precepts 13 and 14 concern assessment and progression, again stressing flexibility and the need for consideration of alternative but equivalent methods for students to demonstrate their competencies and achievements. Timing, and the need for adaptable approaches to course or assignment completion within restricted periods, are a clear area for consideration when planning assessment of the learning outcomes of study in the field. Staff development needs (Precept 15) embrace provision both for general awareness of disability amongst all staff, and the use of specific training for individual staff with particular responsibilities when needs arise. This latter might naturally relate to the management and operation of fieldclasses and related activities including approaches to assessment, and could be undertaken at group or departmental level. The former is almost certainly a generic matter for institutions to address, but within which the addressing of specific tasks and responsibilities will be placed.

The remaining precepts, 16 through to 24, contain a range of considerations concerning access to support services (which should include those available to students studying off-campus either for the day, or over a longer period), provision of specialist skills relating to disability at institutional level, and understanding and communicating individual disabled student's specific needs to staff. The effectiveness of provision for disabled students should be automatically and regularly reviewed, thus providing opportunities for enhancement (Precept 24) for all students. Some process for recording and acting on complaints is also indicated (Precept 23), but this should be a normal part of most fieldclass evaluations, either in general terms, or in relation to specific events.

## 9 Creating an Inclusive Fieldwork Curriculum

*Abstract: This section provides a range of questions for course teams to consider when planning fieldcourses to ensure that issues of disability are centrally addressed with respect to the whole curriculum and with particular respect to fieldwork. It addresses pre-, during, and post-fieldcourse activities.*

### 9.1 Planning the whole curriculum

In my view teaching is teaching, regardless of the range or needs of pupils, and an essential prerequisite of integration ... is the acquisition of commitment of teachers to work with all (students), whether they have special needs or not. Only when teachers acquire this commitment can integration truly be achieved.

(Oliver, 1996b, p.87)

The curriculum on paper is only a script: the real curriculum is acted out and lived through. Thus, in a sense, we can say that the lecturer is also a kind of content, and so are the methods he or she uses, the department he or she works in and, last but not least, the assessment that is made.

(Squires, 1987, p.10)

In this section we are addressing the responses of individual departments to specific needs of disabled students in relation to fieldwork and related activities. We take as given an encouraging institutional environment that in theory embraces the needs of all students and welcomes their diversity, and we look here specifically only at how those aspects relating to the departmental curriculum can be operationalised. This process ideally has to begin before any individual student presents him or herself.

In considering how the fieldwork curriculum can be 'inclusive' we start by setting out a general model of the curriculum and then address issues of inclusiveness in fieldwork. For some the term '*curriculum*' just signifies content – *what* is to be studied. We take the curriculum at its widest, and we think most useful sense, to mean *the way that student learning is structured*. So this definition leads to concern not only with content, but also with teaching methods and assessment. It also directs our attention to what some call the '*hidden curriculum*', those subtle messages that staff and students send as to what is valued, for example that climbing high mountains in big boots and tee-shirts is a 'good thing', or that exploration of alien cultures and landscapes overseas is inherently of greater value than careful analysis of local and perhaps more familiar and accessible settings. This wider view of the curriculum also directs us to consider the '*co-curriculum*', the wider student life and learning outside the formal curriculum – i.e. that students need to earn money may impact on their ability to engage with the fieldwork programme, and the informal curriculum of student behaviour on the fieldcourse, e.g. that evenings are typically spent in the bar. This wide view of the curriculum we believe is valuable to all teaching, but it is particularly pertinent to fieldwork for here the boundaries between the '*formal curriculum*' that is written down and the wider, but no less real, '*lived curriculum*' are clearly blurred.

There are a number of models of curriculum design, some of which specify a particular approach – for example, starting with the learning outcomes. Jenkins (1998) thinks of the variety of influences on curriculum design as being like a ouija board, where the curriculum is continually shaped and reshaped by a variety of forces, each of which at various times is recognised and prioritised. Student needs, attractiveness to potential applicants, linking teaching and research, professional imperatives, resource constraints, all exert their own influence. Here we are focusing on inclusivity, and the set of questions which need to be asked by the designers of the curriculum when this force is prioritised, but it has to be recognised that the other forces will still be exerting their own influences.

In this and the following sections a number of suggestions are made and a range of questions are posed to stimulate discussion. Inevitably they are not comprehensive and some suggestions are more appropriate for some groups of disabled students than others. More specific advice is given in the other guides on particular types of disability. A key principle is that before any decisions are made the options should be discussed directly with the students involved. After all, many disabled students have lived with their disability for 20 or more years and they are the expert about what it is possible for them to do and how they can best be supported. This principle lies behind the mutual adjustment model discussed in the guide for supporting blind and visually impaired students (Shepherd, 2001) (Box 17).

**Box 17: Some questions about designing the curriculum for the course team to discuss**

- Why do we have fieldwork in the curriculum?
- How can fieldwork learning be organised in ways that are most inclusive to students (and staff) with disabilities?
- What degree of flexibility is possible in designing an inclusive curriculum?
- Is there a choice of destinations from which students can select the one which most matches their needs?
- Does the level of learning required specify minimum periods of time or particular locations in the field?
- Does the level of learning required specify particular time periods for completion of the study?
- How does the department inform potential applicants or current students about the approach taken to render fieldwork accessible for all its students?
- How can the information about fieldwork made available to students be improved to better empower them?
- How can staff be trained to be responsive to the special needs of students in the department?
- How does the rest of the curriculum inform and empower all students to understand and confront issues of disability?

## 9.2 Planning field experience, travel, sites, activities

Ensuring equal opportunities in the admissions process has no purpose if students do not have full access to the curriculum of the course they are studying.

(Skill, 1997, p.53)

Starting from the principle of inclusivity means that the first approach is to try and ensure the fullest possible participation of disabled students in fieldwork. Only if this is not possible should other types of experience be explored. Any disabled students on the course need to be identified well before the fieldwork starts (Box 18):

- Ensure that there is discussion/negotiation with students about any special needs they have vis-à-vis the likely course challenges and requirements.
- In these discussions consider both the formal curriculum of the fieldcourse and the more informal learning and social 'event' – e.g. which local pubs are accessible?
- As ever seek mutually acceptable ways of ensuring participation.
- Ensure effective liaison with the higher education Disability Advisor. Ensure such discussion considers the potential need for specific equipment, and brokering of technological or personal assistance, for example the resources required, and how these will be managed.
- Link with local authorities and organisations to ensure access.

### **Box 18: Some questions for the course team to discuss at the planning stage**

- Why do we have this type of fieldwork in this particular location? Are there alternatives we can envisage which will better ensure a more inclusive curriculum?
- Is there full information available about the destination at an early stage?
- Does this type/location of fieldwork advantage or disadvantage particular groups of students?
- What are the threshold requirements or demonstrated learning that are required from this experience?
- Could the same outcomes be achieved through visiting more accessible locations or through different tasks or over a longer period?
- Could the destination and/or activity be made accessible, or more accessible to disabled students, through specific access or transport strategies?
- Has the financial planning for the course ensured that sufficient resources are available to meet the special needs of disabled (and other) students?
- Have the fieldwork opportunities been discussed with the disabled student(s) to establish specific mutual expectations?
- What support and specific facilities will particular students require to ensure that they have full access to the learning offered? Who else needs to be informed to ensure such support will be put in place?
- If the fieldwork appears after discussion to be inaccessible, what alternative experiences could be planned? Could the experience be appropriately mimicked by the use of video, film or 'virtual reality fieldwork'?

### 9.3 Preparatory meetings, discussion, explanation and materials

Accessibility can be achieved in two different ways. A 'product' or 'service' is directly accessible if anyone can use it as it stands. However, this will not always be possible, so some products or services may only be directly accessible by, for example, working with some external enabling technological devices or with the help of a personal assistant.

Preparatory or briefing meetings with any disabled students on the fieldcourse are usually sensible to ensure that they achieve the most from the experience, and that they understand what both the group and they as individuals will be doing. This may be the last occasion on which students undertaking free-standing fieldwork are seen before they start their study, so it is important in this case for the tutor to establish how any further communication will take place.

It is useful to have all the relevant support materials available in written or other appropriate form prior to departure, to allow the disabled students to prepare themselves fully. Provision of detailed daily plans – including such things as timings of activities, what the students will be expected to do at different points in the day and the availability of toilets – will help reduce anxiety and is a key approach, particularly for helping students with mental health difficulties (Birnie & Grant, 2001). A multimedia approach may be helpful for the production of support materials. In other words, consider the use of all types of materials in an integrated way expressed as much as possible in the form of text, diagrams and audio. For example, the essence of a diagram could be captured in text (which could be spoken as well as written) (Box 19).

Several actions may be suggested at this stage:

- In particular for certain students/activities, exploit the capabilities of new technologies, where these can be used either as part-substitute, as preparation, or in the field and/or follow-up activities.
- In written materials use simple clear language, large font sizes.
- Think about sequencing and layout of materials in explanations – non-linear approaches may be more difficult to access, or confusing for some students (while recognising that for some students this may be their cognitive style).
- Adhere to consistent agreed standards regarding materials and activities; while being flexible where appropriate.
- Discuss these and related issues with other staff involved in the field trip.
- Ensure that any training needs are met, and that all parties understand the proposed arrangements.

#### **Box 19: Some questions for fieldcourse teams to discuss at the preparation stage**

- How familiar is the destination and specific sites to staff accompanying, or responsible for, the fieldwork?
- Does the chosen location and sites present particular challenges in relation to mobility, visual impairment or other disabilities? If sites are not all accessible, can alternative arrangements be made that will not unreasonably disadvantage students?

- Does the chosen accommodation ensure that all students have full access to facilities?
- What are the particular requirements (including accommodation and transport) for helpers that will support particular students?
- Has the nature of any group work been appropriately explained to the student group? Is it possible that some students can watch or direct particular investigations in operation (for example, the measurement of river flow, the questioning of local residents, or the sketching of an exposure) so that they understand the process but not be required to demonstrate that they can do it themselves?
- Are there opportunities for students and other staff to suggest different tasks or other ways of doing those tasks that meet the required learning outcomes?
- Are there strategies in place to accommodate the unexpected turn of events?
- Does the proposed assessment raise particular problems to students with specific disabilities? Could it be altered in ways that develop and test the required learning but do not discriminate against such students?
- Do the disabled students understand what is intended to happen on the fieldcourse?
- Should the evaluation strategy focus on particular issues regarding disability? Should there be, say, a three year cycle where particular issues are addressed over that time period?

#### **9.4 During the field trip**

- Ensure that sufficient time is being allowed for the various elements of the fieldwork to meet the needs of specific students, and that certain students have adequate opportunities for rest/meeting any medical requirements.
- Use oral/visual briefings to reinforce written materials prepared in advance.
- Ensure clear instructions/communication to meet varied needs – e.g. not turning away when introducing features of interest, maximising ability to be seen and heard by students.
- Use teaching and learning methods that require students to learn actively and in varied ways, to act cooperatively, and to support each other's learning and welfare.
- Develop a supportive environment in which the diversity of students' skills is recognised and celebrated.
- Ensure that health and safety matters are clearly addressed, and are not just the responsibility of one member of staff. (One reason is that s/he may become ill!) (Box 20).

**Box 20: Some questions for the fieldcourse team to discuss for planning the day-to-day running of the fieldcourse**

- Does the social programme, including informal activities, providing opportunities for all students to benefit from the informal and social learning it provides?
- Are there particular transport and/or accommodation issues that need to be addressed for some students?
- Do students for some activities need peer or specialist/dedicated assistance?
- Does the timing and/or pace of activities need to be considered?
- Are there particular weather conditions that need to be considered (e.g. pollution impacts on students with asthma, sun effects on students with dermatological conditions)?
- Over what can and should there be flexibility and over what should there be inclusive requirements?

## 9.5 Post field trip follow-up and assessment

- Should there be particular arrangements for students who have experienced particular difficulties to discuss how the experience could be made more effective in future?
- In particular were there particular issues regarding assessment that need to be addressed?
- Should there be staff discussions, including with student support officers, to discuss particular (unexpected) issues?
- Do staff and/or students now consider changes need to be made to, for example, departmental policies (Box 21)?

**Box 21: Some follow-up questions for the fieldcourse team and the department to consider**

- Has the assessment allowed disabled students to demonstrate their level of learning appropriately?
- How might the experience of the disabled students undertaking fieldwork have been enhanced?
- Have the disabled students been given an opportunity to feedback their views on their experience?
- How is the fieldwork programme periodically evaluated to ensure a more inclusive curriculum, including meeting career/vocational needs of disabled students?
- How are course objectives progressively being adapted to become more inclusive?

## 10 Examples of Good Practice in Higher Education Institutions Offering Field Classes

This section is structured around the same headings as Section 9, and provides selected examples of good practice which are worthy of consideration by other departments.

### 10.1 Planning the whole curriculum

The specific reasons given for undertaking fieldwork as part of the curriculum in geography, earth and environmental sciences have been set out in Section 4.2. The perceived significance and centrality of fieldwork for these disciplines explains the importance of making field experiences more accessible and inclusive. However, some departments have stepped back from a focus only on fieldclasses and embraced a more holistic and inclusive approach to curriculum design for the whole programme of study. In the case of geography courses, this may have been facilitated by the inclusion of human diversity as part of the formal curriculum, whereas in the case of the earth and environmental sciences the imperative has more usually been ethical, including strong environmental/social justice concerns.

All HEIs are now required to have institutional policies in place describing the arrangements that are made to accommodate the needs of disabled students. Consequently individual departmental arrangements will nest within those policies, and will need to emphasise the arrangements to cover specific distinctive features of programmes of study which they provide, rather than the generic.

Examples of good practice are included in Boxes 22 and 23.

#### **Box 22: Dundee University Department of Geography Student Disability Policy**

This three page published statement for staff and students states initially that:

The Department of Geography is committed to providing access to full teaching and learning programmes for those with physical impairments, mental health problems and medical conditions.

It explains what is embraced by the term 'disability' and refers to the institutional support available through the University's 'Disability Support Centre' (DSC).

It also outlines the extensive previous experience that the department has had in this area, and stresses the requirement for students to approach staff to make their needs understood. Particular aspects of the provision are described, one section of which relates to field trips. They also explain that their basic policy statements are the foundation for developing responses specific to individual disabled students, and record that a consultation exercise with students with different impairments was being undertaken by the DSC at the time the guidance was being drafted. The document is positive and supportive without being intrusive.

The field trip section emphasises what has previously be done by the department to accommodate specific needs, noting that:

In the past, students with physical impairments and mental health problems have carried out fieldwork assisted by staff in terms of supported access, flexible working and resting arrangements and

flexible transportation. The department is very aware of the unique access difficulties which studying geography at university can present. If for some reason a student cannot directly access the field as a result of a physical, mental or medical condition, the department will always provide academically rigorous alternatives in terms of teaching and learning. The department will also seek to be flexible in terms of implementing fieldwork in generally accessible locations.

Dundee summarise this section by highlighting:

**We will provide field-based teaching and learning that is sensitive to, and flexible in terms of, the needs of students with physical impairments, medical conditions and mental health problems.**

### **Box 23: Edge Hill University College's Validation Document**

Provision for disabled students can be planned from the outset, and at Edge Hill this is effected through the validation documents for their geography programmes. A simple but effective summary statement notes that:

Students with disabilities are encouraged to participate as fully as possible in fieldwork. Students should consult module tutors regarding the physical demands of specific fieldwork and, where appropriate, an alternative mode of activity will be negotiated with the module tutor. The Head of Subject will be informed by the module tutor of the agreed substitute activity. Module tutors will seek to respect the equal opportunities of all participants in the module concerned and ensure a comparability of learning and assessment experience.

The emphasis on negotiation is clear, and the availability of alternative equivalent activities is highlighted.

## **10.2 Planning field experience, travel, sites, activities**

Having established the overall context within which a department operates its fieldwork requirements, specific arrangements will need to underpin the selection of fieldclass destinations and sites, associated travel and activities. Students may need to be reminded to complete declarations of their particular needs. This will alert tutors to specific needs which will require accommodating somewhere, and the data from which will increasingly inform the general practice in considering the advantages and disadvantages of particular destinations, travel arrangements and sites. The general characteristics of the activities which will be undertaken on arrival will also need careful consideration. There are many examples of good practice in this area, and authoritative guides on meeting particular needs (Boxes 24 and 25).

### **Box 24: The Open University approach to advising students on the availability of fieldwork options**

The Open University is one of the largest providers of courses in geography, earth and environmental sciences in the UK and routinely runs sets of fieldclasses involving hundreds of students. Since the majority of these are mature entrants who chose to participate in a distance learning degree course, the number of disabled students tends to be disproportionately high. As a consequence the University is

experienced and has a positive and supportive approach to disability, and clear policies on inclusion. It has developed an extensive range of guidance notes for course tutors, and excellent documentation which goes out to students considering their attendance at a residential school. The University will also provide (and pay for) personal helpers, who may be family members if this is most appropriate (see Box 2), and has a range of equipment available at many destinations. Many of the supporting learning materials are available, or can be made available, in a variety of formats such as audiotape and Braille.

The book *'Students with Disabilities: Some Guidelines for Tutorial and Counselling Staff'*, part of the Open Teaching Toolkit series compiled by Deborah Cooper and staff of the Open University Office for Students with Disabilities, includes information on how students can effect choice on the location of their residential school. A list of the possible destinations is provided, which includes details such as (for the Durham location) 'Earth Science students with severe mobility problems should be advised about the high percentage of fieldwork which takes place over very rough terrain'. The characteristics of the domestic arrangements are also set out, for example students contemplating a residential school based at Bath University campus are advised that 'blind students should be accompanied because of open, projecting concrete staircases', whereas at Sussex 'A special unit can accommodate two severely disabled students in a week'.

Disabled students themselves receive a larger guide *'Meeting Your Residential School Needs: A guide to services for disabled students and others who have special needs at residential school'*. The Open University's policy is set out clearly, namely that:

The University is committed to offering disabled students and anyone who has special needs the opportunity to attend residential schools. It will take all practical steps to offer this opportunity, making special allocation to residential schools and providing support and facilities. The University must, nevertheless, be satisfied that:

- Facilities and equipment are sufficient and suitable so that each student can gain the full educational value from the school and benefit from the experience as a whole.
- Students with special requirements can attend in safety and in reasonable comfort.

Guidance is given to staff and students with specific impairments, including a wide range of medical conditions, and these are supported by anecdotes provided by disabled students which explain how they approached arrangements to facilitate their study outside their normal domestic situation, and how much they benefited from their experience. Details of both the domestic and educational facilities of different destinations are given in detail. Students are able to request excusal from residential schools if they feel they would be unable to cope, or that attendance might exacerbate their medical condition. Whilst for most geography, earth and environmental science departments the choice of field destinations on offer from the Open University for foundation level courses (and some higher level courses) cannot be matched, the principles underlying the production of support materials are worthy of emulation. In particular the careful description of destinations and their limitations for students with specific impairments, combined with the availability of specific equipment (visual and acoustic aids, mobility support equipment) represents exceptionally good practice.

**Box 25: University of Gloucestershire's approach to offering choice in destinations**

Where the number of students in a department is relatively large, or fieldclasses with similar learning outcomes can be run jointly to create larger group sizes in total (either in relation to the formal academic programme or for domestic reasons such as shared accommodation), it is sometimes possible to offer students different fieldwork options. Several different destinations may be offered, with a choice of cost, facilities and timing. The additional flexibility provided for students is helpful, as they can consider the advantages and challenges and make the optimum choice.

The School of Environment at the University of Gloucestershire offers seventeen degree programmes and three Higher National Diplomas in cognate disciplines including geography, environmental science, geology, rural planning, heritage management, environmental management, landscape architecture, garden design and local policy. Second level students are required to choose from a range of classes typically including some eight or nine destinations; the range has included Andalucia, Catalonia (Barcelona), Hungary, Belgium, Scotland, Uganda, and New York. By arrangement a student may also join a different class, for example to Berlin, Poland, North Wales or Patagonia, where they will study alongside students in a different level, but working to an agreed set of learning outcomes. A small number of students have also chosen to undertake a locally agreed independent study option, done over a period of time and supervised individually.

Inclusivity is intended to permeate the design of the curriculum, including fieldwork. Individual destinations are planned with specific themes (for example as water and environmental management in Andalucia), and are suitable for students from a particular range of fields – in this case, geography, natural and water resource management, environmental management and geology. The Barcelona destination has focused on urban design and society, and has supported students studying degrees in human geography, landscape architecture and local policy. The majority of students will have a choice of at least two, and possibly three or four destinations, according to their interest and any constraints on their activity. Project work is planned to allow individual students to meet individual course objectives, and part of the students' planning process is demonstration that their work will meet their required outcomes. Individual students, including disabled students, may discuss particular needs and aspirations with the destination tutors, and the optimum destination for each one can be identified.

There is additional complexity in arranging classes and ensuring that all student needs can be accommodated, but the academic benefits of this system have been significant. The facilitation of the needs of disabled students has had benefits for all students in offering choice to those with family, financial and other constraints. Students have enjoyed exercising this choice, and feeling a sense of commitment to their chosen destination. Standards of achievement have been high, and no student has been prevented from attending because of an impossible logistical challenge.

### **10.3 Preparatory meetings, discussion, explanation and materials**

The importance of early contact, negotiation between the academic staff and the disabled student about the intended learning outcomes and the optimum way of facilitating the student to achieve them, and agreement on the assessment arrangements, is critical. The tutors and the student will need to share their understanding of what is possible, impossible and reasonable. Tutors may not initially realize the most significant issues for particular students, but conversely may be surprised by the experience of their own condition which the student can bring positively to bear. The student will normally have the greatest understanding of their capabilities and this experience will need to be harnessed in planning. Provision of material on video or imagery based on previous visits may be particularly helpful at this stage, for example showing access points to proposed sites, previous groups of students undertaking activities such as field sampling or recording, or the general characteristics of the accommodation previously used.

This will be a good time to review the general guidance provided by departments on the expected conduct and responsibilities of students and staff on fieldclasses, and mutual expectations about behaviour. Sufficient time should be allowed to do this, and to assess any medical needs. The standard health and safety guidance should be explored, and any specific points about activities reviewed. The same general approach is applicable to the provision of documentation as to other areas of the curriculum, namely that it should be as accessible as possible, and made available in different formats if necessary. Excellent practical guidance on this is contained in HEFCE's 'Guidelines for Accessible Courseware' (February 1999) ([http://www.disinhe.ac.uk/resources/guides/accessible\\_courseware/](http://www.disinhe.ac.uk/resources/guides/accessible_courseware/)), which explains both the barriers to accessibility, and gives extensive practical advice on overcoming them, particularly through the use of technology. Bold typefaces, large print, or audio-based instructions are examples. Specific issues relating to different impairments are also contained in the other guides in this series. Detailed planning will then be underpinned by appropriate understanding. A general discussion of the extent to which it is reasonable to expect the student to make arrangements, and those matters which will be covered by the department or tutor's plans, will reduce any later misunderstandings. This should include the breakdown of costs between the two parties, general principles of which are covered by the provisions of the Disability Discrimination Act (1995).

This is also the appropriate time to discuss any specific equipment needs, personal assistance requirements, and medical issues. It might be appropriate to include the institution's Disability Advisor who will be able to provide guidance on the financial support which the student can obtain to support their attendance. Any modifications to the transport arrangements will need exploration, for example the provision of an adapted minibus for a student with a mobility impairment, or the use of a subsidiary vehicle and driver to provide a ferrying service, or maintain equipment close to hand. Arrangements for parking (space, displaying an orange-badge, directions), and maintaining contact between vehicles may be important. In the case of students who work with personal assistance from a helper (or from a guide dog, in the case of blind students), discussion of their optimum deployment will be necessary, and a clear understanding developed of what the student will be expected to undertake personally, and what can be assisted. The Expedition Advisory Centre at the Royal Geographical Society also holds useful information, particularly on physically challenging destinations (exploration, mountains, the tropics) but also on more general matters. The accommodation and social arrangements will need similar analysis to the field sites.

**Box 26: University of Brighton School of the Environment's document sequence, flow charts and review**

The School publishes (and maintains on an information server) a comprehensive set of documentation relating to student declarations of special needs, health and safety management (both for staff and for students), guidance on completing risk assessments, a field survey safety code of conduct, health surveillance, an overseas visit code of conduct and accident report forms. Brighton also publish an interesting, comprehensive and well-illustrated A5-sized *Safety Handbook* for students and staff, dealing with fieldwork and laboratory safety, although printed with a rather small typeface. The identification of students with disabilities and special needs, based on their early declaration, is followed through by actions which follow a published flow chart. The chart identifies responsibilities, places where documentation is to be lodged, information found, and specific courses of action to be followed in particular circumstances. The lines of responsibility leading from the Head of Department to course leaders and other supporting staff, are also clarified.

The discrete needs of disabled students are flagged up specifically in most of the documents but in the fieldwork safety code of conduct a useful check list is given to students who may declare in confidence any disabilities, whether or not they are registered as disabled.

This documentation has been supported recently by an extensive review of 'Special Needs and Disability' in the School of the Environment, one of the outcomes of which was to move the School from being largely reactive to specific situations arising (a student with a disability presenting themselves for inclusion in a fieldclass, for example), to a more planned and proactive stance. The review was appropriately self-critical, and provided a basis for development of additional services and a stronger pastoral commitment. It also flagged up a desire for clearer guidance at institutional level, for example from the Registry in the form of a University Guidance paper dealing with admissions, and procedural matters.

**Box 27: University College London prepare their students for fieldwork through a series of classroom familiarization exercises and lecture**

University College London prepare their students for fieldwork through a series of classroom familiarization exercises and lectures.

Geology at University College London has moved away from introducing the use of items of field equipment exclusively in the field. The emphasis has shifted towards careful preparation based either in a laboratory, or done through self-tutoring using a Web-based guide. First steps in the environment beyond the classroom can be undertaken by drawing on the 'exposures' found in city streets and buildings, rather than students having to cope both with unfamiliar terrain as well as new technology.

In addition, prior to the fieldcourse a short health and safety workshop, including first aid training, is provided by St John's Ambulance Brigade (a voluntary agency) and students are taught how to do risk assessments in an appropriate way.

These preparatory sessions allow all students to appreciate what will be required during the actual fieldclass, and disabled students and tutors will be able to explore appropriate ways of proceeding safely and effectively.

Based on King (1997)

## 10.4 During the field trip

Staff need to pay particular attention to communication in unfamiliar areas, for example for d/Deaf students (see Wareham *et al.*, 2001). Ensure sufficient time is available for moving around, at and between sites. Guidance should be given in relation to risk assessment at particular sites, for example in relation to hazards, which will impact differently on students with impairments.

A paper by Cooke *et al.* (1997) provides excellent examples of the issues involved in running accessible geology fieldclasses from Stanford University, paying specific attention to mobility impairments and accessibility for students who use wheelchairs. An earlier paper by Travis (1990) explains some of the issues relating to visual impairment, but the section on fieldwork is rather less developed than those relating to laboratory classes.

## 10.5 Post field trip follow-up and assessment

Planning for the completion of assessment is best considered at the outset of the class, when the learning outcomes are discussed with the student. It should be seen as an integral part of the course. Careful consideration should be given to any requirement for assessment to be completed in the field, as this may pose particular problems for students who tire easily, or for whom sustained engagement is challenging. The medium of assessment is also worthy of consideration; the completion of a field notebook, for example, may prove impossible for a blind student working without personal assistance, but a taped record with a subsequent conversion to a written report may fulfil the same objectives of promoting immediacy and accuracy in recording.

After the course has finished, it is important that the experience of the student and the staff involved is captured and recorded. In any one department, the number of disabled students is likely to be relatively limited, and staff changes (and student graduation) may mean that valuable experience is lost unless measures are taken to ensure otherwise. Placing an evaluation of the event itself into Departmental files, at a minimum, and on the Geography Discipline Network Resource Database (details from <http://www.glos.ac.uk/gdn/>), will ensure that the experience can be drawn on by other colleagues and institutions too. Considerations of particular strategies, transport and equipment adaptations, and the use of support services will be invaluable for later reference. Commentary on what was successful, and what worked in a less satisfactory manner, should be recorded both from the perspective of the student (albeit anonymously), and the department.

## 11 The Role of Institutional Disability Advisers

*Abstract: This section examines the role played by the Disabled Students Adviser (DSA). It is argued that awareness and knowledge of disability issues should be spread throughout the institution, supported by the DSA, rather than being concentrated in a few hands. An example of one institution's strategy for achieving this is given.*

Most HEIs employ at least one person with special responsibility for disabled students. Within this post there can be a tension between the roles of a) providing individual support and advice to disabled students and b) acting as an adviser to other sections of the institution. The danger is that the first of these roles becomes extremely time-consuming and leaves little space for the second. If academic staff automatically refer disabled students to this person, their caseload can become overwhelming. However, there is a move towards a broad range of academic and other staff becoming responsible for ensuring that courses and facilities are accessible to disabled students. This requires the Disability Officer/Adviser to be a resource to those staff who need information and ideas on how to make their courses as open as possible to students with a diverse range of needs (Box 28).

### **Box 28: Balancing specialist provision with more general responsibility for disabled students throughout the organisation: the case of Oxford Brookes**

Responsibility for co-ordination of support for disabled students rests with the Disabled Students Adviser (DSA) and the Head of Student Services. A network of special tutors is being developed, one in each Academic School. These tutors provide liaison between the DSA and the School, and are expected to become a source of expertise on the learning needs of disabled students in a particular range of disciplines and to supplement the support provided by the student's own personal tutor.

The DSA is often the first point of contact for disabled applicants and the DSA provides advice, information and co-ordination of support for disabled students from this pre-application stage, through the application process and throughout the course:

- In the case of those with mobility difficulties this may involve a full investigation of physical access issues, assistance with recruiting personal carers and purchasing suitable equipment, and negotiating study methods with academic staff.
- The support of d/Deaf students is co-ordinated by the DSA and usually delivered by Teachers of the Deaf employed on a casual basis by the university to interpret and note-take for students. The DSA offers advice and training for academic staff in teaching strategies appropriate for d/Deaf students.
- Students with visual impairments are assisted with the recruitment of readers, applications for Disabled Student Allowances and negotiation with teaching staff. There is a small resource base in the Library on the main campus housing a text scanner and computer. Exam papers can be provided in enlarged print or Braille.

- There is a well-developed support service for students with dyslexia provided by a Dyslexia Support Tutor. She offers support pre- and post-diagnosis, with study skills problems, on an individual basis and within a group workshop. On registration with Student Services, students with dyslexia become eligible for a range of provision, including special marking and assessment arrangements.
- Students with other impairments, for example epilepsy, diabetes, mental health difficulties, are assisted by the DSA as appropriate. This may include liaison with tutors, special exam arrangements and help with the purchase of equipment.

Services such as those provided at Oxford Brookes University have to look beyond the academic departments in order to ensure that staff in libraries, computing support, catering and residential accommodation, make their facilities accessible to disabled students. An institution-wide approach to disability is likely to be much more effective than one-off 'fixes' for individual students. For examples of disability policies and practices in UK higher education institutions visit the CANDO Web site at <http://cando.lancs.ac.uk/scripts/d/start.idc>.

## 12 Conclusion

Fieldtrips are journeys that can be difficult and challenging, but at their best they develop high quality learning and intellectual and transferable/key skills. Fieldwork and fieldcourses are activities that shape students appreciation of the whole curriculum and for many disciplines this is central to our fascination with its concerns and its pedagogy.

Writing this guide has also been a journey – which has brought together the concerns of those for whom fieldwork is central to our discipline, with those for whom issues of inclusivity and the particular needs of that diverse students with disability are central to their professional concerns and responsibilities. Both 'groups' of us have learned from each other on this journey. As we have made it we have also seen how society's understanding of issues of disability is also a journey. As we have said earlier in this guide, this debate or intellectual journey is moving from how can disabled people be best cared for, to how can they attain civil rights and achieve social and economic integration. This is reflected in a move from institutional to community care, from segregated to integrated education and flexible and imaginative approaches to enabling alternative means of participation where physical access is impossible or unreasonably difficult. We have also shown how internationally states are developing legislation that reflects such changing perceptions and enshrining that in the responsibilities of disciplinary communities, institutions, departments and individual staff.

For those of us for whom fieldwork is central this will mean rethinking and developing much of our practices and policies. Other guides in this series deal in detail with particular 'disabilities' and how fieldwork might be reshaped to address these issues. This will not be easy, and no doubt we have still much to learn. But this guide has hopefully given us a map to start the journey, and offers the prospect that the result will be a more inclusive and enriching experience for us all – and in particular opening up fieldwork to people for whom that experience has previously been marginal or non existent.

## 13 Web Sites

CANDO (<http://cando.lancs.ac.uk/scripts/d/start.idc>) – Gives examples of disability policies and practices.

Disability Rights Commission (<http://www.drc-gb.org/drc/InformationAndLegislation/InformationAndLegislationMenu.asp>) – includes Code of Practice for Special Education Needs and Disability Act.

Disforum (<http://www.jiscmail.ac.uk/lists/dis-forum.html>) – A discussion list for disabled students and their support staff.

Geography Discipline Network's Annotated Fieldwork Bibliography (<http://www.glos.ac.uk/gdn/disabil/fieldwk.htm>).

National Disability Team (<http://www.natdisteam.ac.uk/>).

National Subject Centre for Geography, Earth and Environmental Sciences (GEES) (<http://www.gees.ac.uk/>).

Ozcan Konur's Web pages (<http://www.student.city.ac.uk/%7Ec639/swd.htm>) – Includes a section entitled 'Disability page for students with and without disabilities'.

Quality Assurance Agency's Benchmarking Statements (<http://www.qaa.ac.uk/crntwork/benchmark/benchmarking.htm>). (See also the Geography Discipline Network's Web pages – <http://www.glos.ac.uk/gdn/qaa/index.htm>.)

Quality Assurance Agency's Code of Practice Section 3: Students with disabilities (October 1999) (<http://www.qaa.ac.uk/public/COP/codesofpractice.htm>).

Ritter's Virtual Department Web site (<http://www.uwsp.edu/geo/projects/virtdept/ipvft/ipvftmod.html>).

SKILL – National Bureau for Students with Disabilities (<http://www.skill.org.uk/>).

Teachability (<http://www.ispn.gcal.ac.uk/teachability/>).

TechDis (<http://www.techdis.ac.uk/>) – JISC service aimed at enhancing access for those with learning difficulties and/or disabilities to learning and teaching, research and administration across higher education through the use of ICT.

University of Newcastle, NSW's Disability Resource Kit for Academic Staff ([http://www.ccc.newcastle.edu.au/student-support/lindas\\_project/Index.html](http://www.ccc.newcastle.edu.au/student-support/lindas_project/Index.html)).

Virtual Geography Department (<http://www.colorado.edu/geography/virtdept/contents.html>).

Virtual Fieldcourse Project (<http://www.geog.le.ac.uk/vfc/>).

## 14 References

- Adams, M. (2000) *Changing the Culture: addressing the needs of disabled students*, unpublished paper.
- Adams, M. (2001) Guidance and support for GEES staff making changes to their programmes of study to accord with CoP and SENDA legislation, *Paper presented to National Subject Centre for Geography, Earth and Environmental Sciences conference on 'Special Education Needs and Disabilities'*, Coventry, 19 October.
- Adams, M. & Brown, P. (2000) 'The times they are a changing': developing disability provision in UK higher education, paper presented to *Pathways 4 Conference*, Canberra, Australia, December 6-8.
- Barnes, C. (1991) *Disabled People in Britain and Discrimination* (London: Hurst & Co.).
- Birnie, J. & Grant, A. (2001) *Providing Learning Support for Students with Mental Health Difficulties Undertaking Fieldwork and Related Activities* (Cheltenham: Geography Discipline Network). Available at <http://www.glos.ac.uk/gdn/disabil/mental/>.
- Boyd, W.E. (1993) The blind leading the blind? Teaching geography to students with vision impairment, *Australian Geographical Studies*, 31(1), pp.91-96.
- Caroll, J. (1999) *Policies to Support Equal Opportunities*, unpublished paper.
- Chalkley, B. & Waterfield, J. (2001) *Providing Learning Support for Students with Hidden Disabilities and Dyslexia Undertaking Fieldwork and Related Activities* (Cheltenham: Geography Discipline Network). Available at <http://www.glos.ac.uk/gdn/disabil/hidden/>.
- Colley, H. (2001) *Personal communication*, 13 February.
- Cooke, M.L., Anderson, K.A. & Forrest, S.E. (1997) Creating accessible introductory geology fieldtrips, *Journal of Geological Education*, 45, pp.4-9.
- Cottingham, C., Healey, M. & Gravestock, P. (2000) *Fieldwork in the Geography, Earth and Environmental Sciences Higher Education Curriculum: An Annotated Bibliography*. Available at <http://www.glos.ac.uk/gdn/disabil/fieldwk.htm>.
- Crow, L. (1996) Including all of our lives, in Barnes, C. & Mercer, G. (Eds.) *Exploring the Divide: Illness and Disability* (Leeds: The Disability Press).
- Desforges, H. (1999) Inclusive geography fieldwork, *Teaching Geography*, January, pp.14-16.
- DfEE (Department for Education & Employment) (2000) *Consultation Paper on Special Educational Needs and Disability Rights in Education Bill* (London: DfEE).
- DRTF (Disability Rights Task Force) (1999) *From Exclusion to Inclusion: A report of the Disability Rights Task Force on Civil Rights for Disabled People* (Sheffield: Disability Rights Task Force/Department for Education and Employment).
- Finkelstein, V. (1993) Disability: a social challenge or an administrative responsibility, in Swain, J., Finkelstein, V., French, S. & Oliver, M. (Eds.) *Disabling Barriers – Enabling Environments* (London: Sage).

- French, S. (1993) Disability, impairment or something in between?, in Swain, J., Finkelstein, V., French, S. & Oliver, M. (Eds.) *Disabling Barriers – Enabling Environments* (London: Sage).
- Gardiner, V. & Anwar, N. (2001) *Providing Learning Support for Students with Mobility Impairments Undertaking Fieldwork and Related Activities* (Cheltenham: Geography Discipline Network). Available at <http://www.glos.ac.uk/gdn/disabil/mobility/>.
- Gleeson, B. (1998) *Geographies of Disability* (London: Routledge).
- Gold, J., Jenkins, A., Lee, R., Monk, J., Riley, D., Shepherd, I. & Unwin, D. (1991) *Teaching Geography in Higher Education: a manual of good practice* (Oxford: Blackwell). Available at <http://www.glos.ac.uk/gdn/gold/>.
- Golledge, R. (1993) Geography and the disabled: a survey with special reference to the vision impaired and blind populations, *Transactions of the Institute of British Geographers*, 18, pp.63-85.
- Golledge, R. (1997) What's so spatial about special? Geographic learning and special populations: the case of blind or vision impaired people, in Boehm, R.G. & Petersen, J.F. (Eds.) *The First Assessment: research in geographic education* (Texas: Gilbert Grosvenor Centre for Geographic Education, Southwest Texas State University, San Marcos) pp.200-224.
- Gosden, R. & Hampton, G. (2000) Academic standards versus disability rights, *UltiBASE*, 14 December. Available at <http://ultibase.rmit.edu.au/Articles/dec00/gosden1.htm>.
- Grant, A. & Higgitt, M. (1994) *Students with Special Needs*, unpublished draft section of a report on fieldwork
- Hall, T., Healey, M. & Harrison, M. (2002) *Fieldwork and disabled students: discourses of exclusion and inclusion*, paper in submission.
- HEFCE (Higher Education Funding Council for England) (1995a) *Quality Assessment of Geology 1994-5, Subject Overview Report – Geology* (Bristol: HEFCE). Available at [http://www.hefce.ac.uk/pubs/hefce/1995/qo\\_14\\_95.htm](http://www.hefce.ac.uk/pubs/hefce/1995/qo_14_95.htm).
- HEFCE (Higher Education Funding Council for England) (1995b) *Quality Assessment of Environmental Studies 1994-5, Subject Overview Report – Environmental Studies* (Bristol: HEFCE). Available at [http://www.hefce.ac.uk/pubs/hefce/1995/qo\\_10\\_95.htm](http://www.hefce.ac.uk/pubs/hefce/1995/qo_10_95.htm).
- HEFCE (Higher Education Funding Council for England) (1995c) *Quality Assessment of Geography 1994-5, Subject Overview Report – Geography* (Bristol: HEFCE). Available at [http://www.hefce.ac.uk/pubs/hefce/1995/qo\\_11\\_95.htm](http://www.hefce.ac.uk/pubs/hefce/1995/qo_11_95.htm).
- HESA (2000) First Year UK Domiciled HE Students by Level of Study, Mode of Study, Gender and Disability 1998/99. Available at <http://www.hesa.ac.uk/holisdocs/pubinfo/student/disab89.htm>.
- HMSO (1995) *DL 60 – The Disability Discrimination Act – Definition of Disability* (London: HMSO).
- HMSO (2001) *Special Educational Needs and Disability Bill (HL)*, <http://www.parliament.the-stationery-office.co.uk/pa/cm200001/cmbills/055/2001055.pdf>.

- Imrie, R. (1996) *Disability and the City: international perspectives* (London: Paul Chapman).
- Jenkins, A. (1997) *Fieldwork With More Students* (Oxford: Oxford Centre for Staff Development).
- Jenkins, A. (1998) *Curriculum Design in Geography* (Cheltenham: Geography Discipline Network).
- Jenkins, A. (2000) Virtually Interesting Fieldwork, *Teaching Forum*, Oxford Brookes University, Summer, p.48. Available at [http://www.brookes.ac.uk/virtual/NewTF/48/tf\\_48jenkins.html](http://www.brookes.ac.uk/virtual/NewTF/48/tf_48jenkins.html).
- Kent, M., Gilbertson, D.D. & Hunt, C.O. (1997) Fieldwork in geography teaching: a critical review of the literature and approaches, *Journal of Geography in Higher Education*, 21(3), pp.313-332.
- King, H. (Ed.) (1997) *Proceedings of the UK Geosciences Fieldwork Symposium*, held at University of Leicester, November.
- Kitchin, R. (2000) *Geography and Disability* (Sheffield: Geographical Association).
- Lawrence, D. (1997) Geography within our community – disability studies, *New Zealand Geographical Society Conference Proceedings*, University of Waikato, Hamilton, New Zealand, 6-9 July.
- Livingstone, I., Matthews, H. & Castley, A. (1998) *Fieldwork and Dissertations in Geography* (Cheltenham: Geography Discipline Network).
- Low, C. (1993) The social model of disability, *Rehab Network*, Spring 1993, pp.5-7.
- NCIHE (The National Committee of Inquiry into Higher Education) (1997) *Higher education in the learning society, Report 6: Widening participation in higher education by students from lower socio-economic groups and students with disabilities* (Norwich: HMSO).
- Oliver, M. (1990) *The Politics of Disablement* (London: Macmillan).
- Oliver, M. (1996a) Defining impairment and disability, in Barnes, C. & Mercer, G. (Eds.) *Exploring the Divide: Illness and disability* (Leeds: The Disability Press).
- Oliver, M. (1996b) *Understanding Disability: From Theory to Practice* (London: Macmillan).
- Parker, V. (1999) Thinking about disability access to HE, *New Academic*, 8(2), pp.19-21.
- QAA (Quality Assurance Agency) (2000a) *Benchmark Statement for Earth Sciences, Environmental Sciences and Environmental Studies* (Gloucester: QAA).
- QAA (Quality Assurance Agency) (2000b) *Benchmark Statement for Geography* (Gloucester: QAA). Available at <http://www.qaa.ac.uk/crntwork/benchmark/earthscience.pdf>.
- QAA (Quality Assurance Agency) (2000c) *Code of practice – students with disabilities* (QAA, Gloucester). Available at <http://www.qaa.ac.uk/crntwork/benchmark/geography.pdf>.
- Ritter, M.E. & Lemke, K.A. (2000) Addressing the 'seven principles for good practice in undergraduate education' with Internet-enhanced education, *Journal of Geography in Higher Education*, 24(1), pp.100-108.

- Ryan, J. (1997) *Equal Opportunities in the Curriculum: Good Practice Guide* (Oxford: Equal Opportunities Group, Oxford Brookes University).
- Ryan, J. (2000) *A Guide to Teaching International Students* (Oxford: Oxford Centre for Staff and Learning Development).
- Shakespeare, T. (1996) Disability, identity and difference, in Barnes, C. & Mercer, G. (Eds.) *Exploring the Divide: Illness and Disability* (Leeds: The Disability Press).
- Shepherd, I. (2001) *Providing Learning Support for Blind or Visually Impaired Students Undertaking Fieldwork and Related Activities* (Cheltenham: Geography Discipline Network). Available at <http://www.glos.ac.uk/gdn/disabil/blind/>.
- Silver, P., Bourke, A. & Strehorn, K. (1998) Universal Instruction Design in HE: an approach for inclusion, *Equity and Excellence in Education*, 31, pp.47-51.
- Skill (1997) *Coordinator's Handbook* (London: Skill, National Bureau for Students with Disabilities).
- Solem, M.N. (2000) The Virtual Geography Department: assessing an agent of change in geography education, *Journal of Geography in Higher Education*, 24(3), pp.353-364.
- Squires, G. (1987) The curriculum, in: T. Becher (Ed.) *British Higher Education*, pp.155-177 (London: Allen & Unwin).
- Stainfield, J., Fisher, P., Ford, B. & Solem, M. (2000) International virtual field trips: a new direction? *Journal of Geography in Higher Education*, 24(2), pp.255-262.
- Suthren, R. (2001) *Personal communication*, 22 January.
- Travis, J.W. (1990) Geology and the visually impaired student, *Journal of Geological Education*, 38, pp.41-49.
- University of Newcastle (2001) Disability resource kit for academic staff. Available at [http://www.ccc.newcastle.edu.au/student-support/lindas\\_project/Index.html](http://www.ccc.newcastle.edu.au/student-support/lindas_project/Index.html).
- University of Strathclyde (2000) Resource 7: Placements, study abroad, and field trips, in *Teachability: Creating an accessible curriculum for students with disabilities* (Glasgow: The University of Strathclyde).
- UPIAS (Union of the Physically Impaired Against Segregation) (1976) *Fundamental Principles of Disability* (London: UPIAS).
- Virtual Fieldcourse Project (1999) <http://www.geog.le.ac.uk/vfc/>.
- Wareham, T., Clark, G. & Laugesen, C. (2001) *Providing Learning Support for d/Deaf and Hearing Impaired Students Undertaking Fieldwork and Related Activities* (Cheltenham: Geography Discipline Network). Available at <http://www.glos.ac.uk/gdn/deaf/>.
- White, P. (2000) *See it my Way* (London: Warner Books).
- WHO (World Health Organisation) (1980) *International Classification of Impairments, Disabilities and Handicaps: A manual of classification relating to the consequences of disease* (Geneva: World Health Organisation).
- WHO (World Health Organisation) (2000) *ICIDH-2 International Classification of Functioning, Disability and Health* (Geneva: World Health Organisation). Available at <http://www3.who.int/icf/icftemplate.cfm>.