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Providing Learning Support for Students with Mobility Impairments Undertaking Fieldwork and Related Activities

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Liverpool John Moores University

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University of Gloucestershire

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About the Authors

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Naseem has over 14 years' experience of teaching, researching and management in both old and new universities. At Liverpool John Moores University he is Senior Advisor Equality and Policy Development, and co-delivers disability awareness training for staff. He is also currently the deputy chairperson of the Granby Community Mental Health Group. Naseem's research activities include providing consultancy to: Lancashire Social Services for a survey of disabled members of ethnic minority communities; the Open University on developing access; Lancashire LEA on education for all in pluralist society; and he co-authored material on employment and equal opportunities in local government.

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. The first '*Issues in Providing Learning Support for Disabled Students Undertaking Fieldwork and Related Activities*' provides an overview to the series, 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 field classes 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   Introduction

The need to provide learning support for students undertaking fieldwork is driven by **legislative**, **financial** and **moral** imperatives. When the 1995 Disability Discrimination Act (DDA) (http://www.disability.gov.uk/dda/dle/dle3/) came into force on 2nd December 1996, Higher Education Institutions (HEIs) were exempt from its **legal** requirements, but were required to record their commitment and services to students with a disability by producing a Disability Statement, available to all staff and students. Since the Special Education Needs and Disability Act was passed in May 2001 higher education is no longer exempt (see Healey *et al.*, 2001). In addition, the 1998 Human Rights Act (which came into force in October 2000) ensures equal human rights for all, including those with a disability. Although not having the status of law, but admissible in law, the precepts of the Quality Assurance Agency for Higher Education (QAA) also require HEIs to make adequate provision for students with a disability, most notably through its *Code of Practice for the Assurance of Academic Quality and Standards in Higher Education: Students with Disabilities* (QAA, 2000). Precept 11 of this sets out in no uncertain terms the need for institutions to consider how they can best facilitate the participation of disabled students in fieldwork:

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

> (QAA, 2000)

In **financial** terms, HEIs in 2000/2001 received for the first time mainstream funding 'disability premiums' to support provision for disabled students. This was based on the numbers receiving the Disabled Students Allowance (DSA) in each HEI, and is an important recognition that the existence of a disability carries a cost implication for the HEI as well as for the individual student. At the same time, the availability of DSAs was broadened, by the abolition of means testing, and by the inclusion of some postgraduate and part-time students within the scheme.

Finally, and perhaps most importantly, there is a strong **moral** imperative for the inclusion of all people in higher education, and disability should not be a bar to this. Social inclusion is a relatively new concept in higher education, although some would argue that it is merely making explicit that which was already the case in the best practice. It is used (for example by the European Union) to signify a commitment to equity in policy formulation. It is not, however, merely a re-packaging of the 'equal opportunities' concepts used previously, but is much more focussed on the processes and forces which embed groups or individuals in, or detach them from, the social and economic mainstream (Giddens, 1998):

> Inclusion refers in its broadest sense to citizenship, to the civil and political rights and obligations that all members of a society should have not just formally, but as a reality of their lives. It also refers to opportunities... access to work is one main context of opportunity. Education is another.

> (Giddens, 1998, pp.102-3.)

Social inclusion clearly embraces a wide range of factors, of which disability is just one. The Human Rights legislation can perhaps be viewed as the legal mechanism for enforcement of an undoubtedly moral obligation, conceptualised in terms of social inclusion.

Healey *et al.* (2001) provide a summary of models of disability and introduces appropriate terminology. Following the World Health Organisation's (2000) Web site for the International Classification of Functioning, Disability and Health (ICIDH-2) (http://www.who.int/icidh/), the present guide is about providing learning support for students with mobility impairments, and who experience disability as a result of the interaction between their impairment, the learning environment, and its social organisation. Some other forms of disability have national bodies recognised by Royal patronage, such as the Royal National Institute for the Blind (RNIB) and Royal National Institute for the Deaf and hearing impaired people (RNID). However, there is no similar over-arching body for mobility impairment, and there is arguably a greater degree of ignorance of such impairment amongst both the population as a whole, and amongst academics who might find themselves in the position of having to provide support for students with mobility impairments. A mobility impairment is one which effects the bones, joints, muscles or nerves that effect movement. The term mobility impairment does not only apply to students who use wheelchairs, but also to those with upper limb disorders such as repetitive stain injuries (RSI) and arthritis, and those with medical conditions limiting mobility. A wide range of conditions may limit mobility, including hand function. These include paralysis, cerebral palsy and amputation. This guide should be treated as applying to the widest definition of mobility impairments, ranging from limited manual dexterity to paraplegia.

To ensure an inclusive approach to the curriculum for students with mobility impairments demands considerable planning and consultation at all stages from validation, through fieldwork planning and execution, to follow-up work. This guide outlines broad strategies to be followed and gives suggestions as sources of further information and assistance. It, hopefully, identifies some of the issues which arise. What it cannot do in its limited length is to provide a ready answer to every problem likely to be faced. Each student and each situation is unique, and demands unique consideration. One of the difficulties facing academic staff is that the actual number of students with mobility impairments in one department is small, usually in single figures. Thus good practice developed and experience gained in catering for their needs is both to some extent idiosyncratic to specific students, and developed in isolation.

The guide is not prescriptive, nor does it aim to provide the 'right' answers. Instead it is a guide that should enable staff to develop learner support where it is needed, or to improve the quality of existing learner support. Since the impairments and related impact on the needs of the learners will vary, it is critical that direct communication is established with the student(s) concerned and that the support provided has the approval/consent of learners. The onus is how the learning environment can be enabled to become inclusive for meeting the needs of learners: whether it's to do with attitudes; improving physical access; introducing new forms of learning; or creatively using enabling technologies and raising self awareness through personal development opportunities.

This guide is also most assuredly *not* a collection of handy tips. We will not tell you how to get a student in a wheelchair up a mountain. But we will guide you in thinking about the issues which have to be faced in accepting a student who uses a

wheelchair on the course, in planning and executing fieldwork for that student, and in making appropriate arrangements, both academic and non-academic. This might involve getting the student in a wheelchair up a mountain…but it might not.

This guide is divided into five main parts, considering:

- the impact of mobility impairment on fieldwork
- issues before fieldwork, including validation and admissions
- strategies during fieldwork
- issues after fieldwork
- some general and practical issues.

2   The Impact of Mobility Impairment on Fieldwork

At one level, the impact of mobility impairment on the inclusion of students with mobility impairment in fieldwork activities might seem obvious. 'Students in wheelchairs or with cerebral palsy cannot climb mountains, ford rivers or cross rough terrain'. Yet this is a naïve view, for at least two reasons. First, and philosophically, it is an essentially medical approach based on exclusion rather than one which views disability from a social perspective, and hence takes working towards inclusion as the starting point. And secondly, people in wheelchairs or with cerebral palsy can do, and have done, all of these activities. As we will show, a mental attitude which emphasises what all people can do, and social inclusion, rather than what some can not do, and hence exclusion, helps overcome perceived physical barriers, and opens up mental horizons (see Case Study 1 – below. Note that throughout this guide, examples are real, but use fictitious names to preserve anonymity).

Case Study 1

Michael is a first year student on the Palaeobiology and Evolution pathway who has serious medical problems. He has a rare genetic defect which means that he develops malignant cancers. He has had total body irradiation in addition to powerful medication, and has to administer intravenous gamma globulin injections to himself every three weeks. He is as keen as mustard and the University is determined that we give him the education he wants. We have a local GP who monitors him and we have two trained first-aiders in the school who are appraised of the situation. It may well be that they will have to be given some specialist training in support of this student (and John Radcliffe Hospital have offered). This is an ongoing situation and we have not taken him on a residential fieldcourse yet; he is physically mobile but gets a bit tired!

From Dr M. Barker, Portsmouth University

At another level, the impact of students' mobility impairments on fieldwork is not so obvious. Academic staff might readily anticipate difficulties of access and terrain. What is not so obvious is the need for careful consideration of other aspects of activities, such as toilet facilities, timing changes necessitated by the need to load and unload wheelchairs from vehicles, and meal arrangements, such as ensuring that wheelchair users can cope with self-service cafeteria.

In addition, inclusion really does mean inclusion. There is little point in devising arrangements whereby a student with mobility impairment can take part in a day's activities if he or she is excluded from other academic activities associated with fieldwork, including preparatory and follow-up work, let alone the domestic and social life associated with it. Thus for residential fieldcourses, there is a whole raft of issues associated with domestic arrangements, including sleeping, eating and washing, as well as access to social facilities. Finally, consideration has to be given to other academic facilities which might be used during the fieldwork, such as lecture rooms, libraries or laboratories, or public buildings. An all-inclusive approach to fieldwork is exemplified by Case Study 2.

Case Study 2

An excellent example of a truly inclusive approach to field-based activities is the Kepplewray Centre. The Kepplewray Centre is a renovated Victorian mansion with a new extension built in 1997, and established by the Kepplewray Trust to provide activity-based education to mixed ability groups. The Centre is situated in the south of the Lake District National Park. The Trust began in the early 1990s, and is committed to making sure that people of all abilities have the opportunity to be included on activities and educational visits alongside their friends and colleagues. At its heart is the belief that all individuals are specially created and of equal infinite value, and hence should have the same opportunities to be included in the challenges and activities of life. At the Centre, both disabled and abled students are catered for, ranging from primary school children to business management courses and from weekends to longer courses. Although Kepplewray is a Christian-based project, it welcomes everyone, whatever their faith or background.

The keynote of the Centre is inclusion. Its facilities have been planned with inclusion in mind throughout. The building is wheelchair accessible, with level access from the car park, and internal ramps where necessary. A lift with audible announcements, Braille and tactile numbers, connects to the first floor. Stairs have handrails and colour contrasting edges. The Centre is decorated in colours and tones to aid those with visual impairment. Furnishings and facilities have been designed to cater as far as possible for a wide range of physical impairments, with, for example, beds allowing hoist-leg access, and beds being provided at a correct height to ease bed-to-wheelchair transfer, and a mattress elevator for guests who have difficulty in moving from lying to sitting posture. There are level-access and step-in showers, shower chairs, a bath with hoist, and a wide range of accessible toilets with either side transfer.

But even more important than the physical provision of facilities is the ethos of inclusion which underpins all of the Centre's work. Whatever the nature of the impairment, staff work to ensure that this does not become a disability which leads to exclusion from any part of the experience. The staff has a wealth of experience and training in enabling access, and includes an occupational therapist, and access to nursing and medical staff.

Contact details are:
Tel: +44 (0)1229 716936
Fax: +44 (0)1229 716938
Web: http://www.kepplewray.org.uk/

3   Before Fieldwork

Mobility impairment has an impact on fieldwork even before fieldwork is carried out. It is an issue which should be considered in relation to fieldwork during course validation, students admissions, and fieldwork planning.

3.1   Course validation

The Quality Assurance Agency (2000) *Code of Practice* includes as precept 8:

> Programme specification should include no unnecessary barriers to access by disabled people.

Which has guidance that:

> Institutions should consider establishing procedures which ensure that:
>
> - The setting and/or amendment of academic and other programme requirements during approval and validation processes includes well-informed consideration of the requirements of disabled students
>
> - Programme specifications and descriptions give sufficient information to enable students with disabilities and staff to make informed decisions about the ability to complete the programme.

It is better to attempt to design a programme which is accessible in the first place than to try to make one accessible later as an afterthought. During the programme specification stage all possible barriers should be identified with a view to determining, first, whether they are actually necessary, and secondly, whether they can be designed out. The QAA's recommendations suggest that consideration of the requirements of disabled students be well informed. Such informed advice might be made available by, for example, including the institution or Student Union's Equal Opportunities Advisor on planning teams, by buying in professional advice, or from a member of staff who has received appropriate staff development.

Some practitioners might argue that some aspects of geography and associated field sciences must require students to have undertaken fieldwork in order to prepare them for employment in which field experience is essential. This argument is particularly persuasive in some areas of physical geography, for example hydrology. However, the pattern of employment is gradually changing, and many earth and environmental science graduates now find employment which does not involve fieldwork, and is often largely computer-based, for example in the interpretation of geophysical information, or in hydrological modelling. The solution in some cases might be to offer alternative pathways through a programme, with a professional route requiring more fieldwork than others (see Case Study 3).

Case Study 3

I have been aware for some time that there was a sector within the geoscience undergraduate cohort that was being disadvantaged by their inability to participate in fieldwork. I was also aware that the pattern of employment in the geoscience sector was changing and that many of our graduates were finding vocational employment that actually involved no fieldwork and was often computer-based. Therefore why exclude people with disabilities?

In rewriting our definitive course documents, I decided that our 'flexible pathway' – Earth Sciences (which involves a lot of student choice) could be restructured to include those students who could not participate fully or even at all in fieldwork. I included the phrase 'Students will normally be expected to study XXX (the unit with fieldwork) unless there are extenuating circumstances such as a medical condition or other compelling reason'. This prevents students opting out of fieldwork because they say that they cannot afford it.

In practice, it is always evaluated on an individual basis. The student comes to us with a known condition. We have a very good disability unit here and they are very supportive. If we have a student who can do no fieldwork at all then this is no problem. They just go onto the Earth Science pathway and select options that do not include fieldwork. The problems arise when the disability is such that they can (and want to) do some fieldwork but are not capable of undertaking all of it. All fieldwork is subject to a Health and Safety Appraisal and this consideration overrides any other. I then sit down with the student concerned and the Undergraduate Tutor and we go through the fieldcourse and decide what components the student can or can't do. We then assess whether it is feasible for the student to attend, if it is financially viable and if the student will be doing enough for us to make a meaningful assessment at the end. We certainly do not have sufficient funds or staff to allow the luxury of additional helpers on a fieldcourse just to aid one individual. Where alternate transport can be sensibly arranged we will do so. Certain medical conditions need to be monitored and all fieldcourse leaders have a manifest that details medical conditions and if necessary appraises staff of what to do if emergencies arise.

All students must do an independent 4 week field based project in the long vacation between their 2nd & 3rd years. Clearly we monitor that very carefully.

From Dr M. Barker, Portsmouth University

The QAA (2000) Code of Practice also demands that programme documentation gives sufficient information to allow those concerned to make informed decisions. This means that at least brief details will have to be included on activities, travel and accommodation.

For example, a fieldcourse description might be:

> A one-week residential fieldcourse in Beijing. Travel will be via coach to Heathrow and scheduled flight to Beijing. Accommodation will be in an international standard hotel. During the fieldcourse students will visit locations in and around Beijing by coach, and will carry out projects in the urban area, in groups. Some visits will include a considerable amount of walking at popular tourist locations. Some locations, including the Great Wall of China, have many steep sections, and stairs or steps. During projects students will walk or travel by taxi, bicycle or metro.

This will not give all of the information necessary for mobility impaired students, but it is a basis upon which detailed consultation can begin.

3.2 Admission processes

Before students enter the course they should be made aware of any potential difficulties which might be encountered, and discussions entered into. Any potentially mobility-impaired student should be invited for an interview. They could be shown

the facilities (with their limitations/restrictions) and have explained to them what is required of them within the curriculum, including any fieldwork component. This interview and preliminary discussion might also benefit from the involvement of other staff, including specialist staff with responsibility for fieldwork, the institution's Disability Adviser and the local Health and Safety representative. Students might be asked how s/he feel about what is being proposed. It is helpful to seek factual examples as to how their learning needs are currently being met, and to leave the choice over whether to study at your department with the student. The emphasis must all the time be upon the negotiation with the student as an individual, with specific and unique circumstances. Students should be asked what barriers they perceive to exist, and how they believe the department can reduce or remove them. If they decide to apply, it is very important that the student understands the need to apply for a Disabled Students Allowance.

3.3   Fieldwork planning

Before embarking on fieldwork it is necessary to carry out a great deal of detailed planning work. This might involve establishing the precise details of any mobility impairments of students, consideration of the fieldwork programme as a whole, consideration of specific activities, discussion with students, and, if possible, reconnaissance of the provisional locations and itineraries. It cannot be over-stressed that discussion with students is vital at this stage. Only they can judge what is possible and what is not, although they will have to make some of the judgements on the basis of your knowledge of the area and of any physical limitations likely to be encountered. It is important to remember that students with mobility impairments might be able to cope with accessing field locations, but will often take longer to do so. Precept 2 of the QAA (2000) *Code of Practice* could reasonably be interpreted as applying to field locations here:

> informed timetabling arrangements which ensure that there is enough time between classes to enable students with mobility impairments to travel between them.

In addition, students with mobility impairments might tire more easily than other students, and this will need to be taken into account in planning (see Case Study 4). Ideally, someone familiar with the problems should carry out a reconnaissance, preferably under the same conditions as students will be working. Part of the planning process might involve consultation with others, including operators of transport facilities and sites to be visited. Some might have specific policies with respect to access for students with mobility impairment, and some might even be able to offer help and assistance.

Case Study 4

This institution has had several students with ME, and has had to structure fieldtrips so that they do not get over-tired. This has been done, either by shortening the trips, or by ensuring that the students get a rest in the afternoons, and that their companions do not keep them awake at night. In each case the student has told the institution what they can do, and the programme has been designed accordingly.

Source: Hall *et al.* (2001)

It is important to remember at the planning stage that, as emphasised above, inclusive means inclusive. This cannot be stressed too often. Whilst there is a clear temptation to concentrate on mobility impairment in terms of access to field sites, for the students other aspects of the fieldcourse might be just as important, or even more so. Thus social and domestic considerations need to be planned, to ensure that students with mobility impairments have access to the whole of the fieldwork experience. Questions concerning washing and toilet facilities are perhaps fairly obvious, but others concerning dining arrangements and access to social facilities are less so. In some cases it might be necessary to ensure that someone meets the student on arrival at the fieldcourse venue, and to secure a disabled car-parking space (see Case Study 5).

Case Study 5

Mary is a mature student with chronic back injury caused through lifting patients when nursing, before becoming a student. She is allowed to make her own way to field sites in her own vehicle. When on residential courses she provides her own bed support. She carries out fieldwork within her physical capabilities, and alternative activities may be provided where necessary.

Provided by Dr Richard Howell, Bolton Institute

3.3.1 Confidentiality and disclosure of personal information

An important source of information for planning purposes is students' self-declared expressions of any medical conditions or impairment. These should be sought in such a way as to ensure that students feel confident in revealing all that is necessary, including not only the more obvious physical impairments, but less obvious conditions such as vertigo, which can limit mobility. In planning, the allocation of staff numbers and devising of alternative activities should always take into account the worst-case scenario which is likely to develop (see Case Study 6 for a nightmare!), whilst balancing likelihood and impact as is done in risk assessment procedures. This can only be done on the basis of accurate knowledge. Students have to be confident that information will be kept in strictest confidence, and confined to specific staff only. Any discussions with students have to be held in a spirit of trust, and with a view to inclusion rather than exclusion.

Case Study 6 – A faction, illustrating what might go wrong…

During a fieldcourse you are leading a day which requires a group of thirty students to traverse a ten kilometres stretch of coastline, including cliff paths, beaches and scrambling over clay slopes and some rocky outcrops. This is in a remote area, and the group is dropped off by coach in the morning, and picked up at the other end of the traverse in the evening. One other member of staff and a demonstrator accompany the party. You have checked carefully, and no students in this group have declared any mobility problems on the form which they have to complete before the fieldcourse.

Before lunch time, three students are clearly suffering from dehydration and gastric disorders (possibly self-inflicted the previous evening in the bar and nearby curry house) and you send them off under the escort of your colleague to the nearest bus route and hence back to the hotel. Shortly after lunch, when the route gets to the cliffed section of the coast, three students state that they cannot go any further.

They had not realised that the day involved walking along a cliff path with a vertical drop below, and they suffer from vertigo. Your demonstrator escorts them from the coast to the evening pick-up point, via an inland route. You are left with twenty-five students. In mid-afternoon, halfway up a steep clay slope, a mature student named Maria sits down in tears, saying she cannot go any further. She has been determined to join in the fieldcourse to the full, but a combination of extreme obesity, lack of fitness and heavy smoking means she has limited strength in her legs, and just cannot make it up the slope. She is sobbing uncontrollably, gasping for breath, and becoming hysterical. She cannot go on. You realise that because the tide has come in, the party cannot go back...

What do you do now? What might you have done to try to avoid this situation developing?

Travel arrangements will usually need very careful consideration. Fortunately, there is much detailed guidance available from various organisations, as detailed further in Section 6.

4   Strategies for Fieldwork

The QAA (2000) *Code of Practice* provides a clear challenge, and a possible answer, to those planning fieldwork. Precept 2 (The Physical Environment) states:

> Institutions should ensure that disabled students can have access to the physical environment in which they will, study, learn, live and take part in the social life of their institution.

The guidance goes on to say, *inter alia*:

> 'Institutions should consider:
> - flexible and imaginative approaches to enabling alternative means of participation where physical access is impossible or unreasonably difficult;
> - flexibility regarding where classes are held, including moving teaching from inaccessible lecture theatres/classrooms to more accessible ones.

Whilst most of the guidance accompanying this precept is concerned with the physical environment of the institution itself, it would be unreasonable to assume that off-campus activity should not be subject to the same guidance in principle.

Given the scenario that a particular fieldwork exercise normally involves a particular activity, at a specific location, and that the group of students on this occasion includes a student or students with mobility impairments which means that they cannot readily access the site, and/or cannot readily carry out the activity, there are perhaps five broad strategies that can be followed:

- facilitate the activity so that the student can participate in it
- facilitate the activity so that the student can participate in it, but at a different location
- substitute an alternative activity with the same learning outcome(s)
- provide additional time for the activity, and/or for gaining access
- don't do real fieldwork, do virtual fieldwork instead.

4.1   Facilitate the activity so that the student can participate in it

This includes both facilitating access to the location, and making the activity itself possible. The former might include seeking an alternative route, or providing some assistance for a wheelchair user to cross rough terrain, perhaps even by using slings. However, a balance has to be struck here, in remembering that the wheelchair user is a person, and not a package to be delivered at any cost! The latter includes, for example, providing a helper to take notes whilst the student makes observations, or to take samples or measurements, under the student's direction. Some note-taking aids might be useful for some students, including the use of a tape recorder. For students with multiple impairments voice transcription software with direct input into a word processor, such as IBM's ViaVoice, has been found useful by some people. For example, Gerald Gold, a quadriplegic anthropologist, reports using IBM ViaVoice and Dragon NaturallySpeaking software (Gold, 2001).

4.2 Facilitate the activity so that the student can participate in it, but at a different location

If it is not possible to use the location which would normally be used, an alternative is to find a more accessible location. QAA (2000) explicitly recognises this as an approach to enabling access, in their guidance to precept 11, as:

> re-locating fieldtrips to alternative sites or providing alternative experiences where comparable opportunities are available which satisfy the learning outcomes.

The whole party should use the new location, not just students who have mobility impairment, to avoid any sense of exclusion. Cooke *et al.* (1997) describe the process of creating accessible introductory geology trips at Stanford University, USA, as a pragmatic approach to open up earth science careers to talented students with mobility impairments. They found that the redesign of the field exercises resulted in a better learning experience for all students. One strategy they adopted in selecting sites was to evaluate possible sites for geological exercises using accessibility criteria, developed from discussions with students with mobility impairments (Table 1). These could, of course, only be a guide, as actual access depends on a combination of both site conditions, which might vary seasonally, and the student's disability.

Table 1: Approximate access requirements for mobility-impaired persons (after Cooke *et al.*, 1997)

Kerb cuts/ramps	Necessary for all wheelchairs
Gradient:	
Power chair	Less than 1:6
Manual chair	Less than 1:8 to 1:12
Walking mobility-impaired	Less than 1:10 to 1:16 (depends on person)
Loose sand or gravel	Unacceptable except for power chairs
Packed Gravel and Dirt Roads:	
Power chair without knobbly tyres	Less than 1.5cm diameter gravel, no mud
Power chair with knobbly tyres	Most road surfaces
Manual chair	Less than 1cm gravel, no mud (depends on person)
Walking mobility-impaired	No gravel, no mud

4.3 Substitute an alternative activity with the same learning outcome(s)

In some cases it might be possible to substitute an alternative activity, which does not involve access to a specific field location. For example, a field project might involve making measurements of stones on bars within a river channel, in order to investigate the processes connected with downstream sediment transport, such as attrition and sorting. If the learning outcome involves field sampling, then it is perhaps necessary to visit field locations. But if the learning outcome is only in terms of making measurements and analysing data, the field visit is not strictly necessary. Samples of bedload from bars could be provided and measured in an accessible location. Similarly, if it is impossible to access a location at which questionnaires are to be carried out with members of the public as respondents, it might be possible to persuade some individuals to come to the student at a nearby accessible location so

that the questionnaire can be conducted. Cooke *et al.* (1997) adopt this approach in an imaginative alternative to a geological field mapping exercise, in which rock samples are arranged on tables in the laboratory as a small-scale substitute for the field. Students measured the attitudes of the rocks, identified them, and drew contacts between them, before drawing an interpretative cross-section. Other illustrations of this kind of approach can be found in the Case Studies 7 and 8.

Case Study 7

The Open University attempts to provide field experience in geology during its residential summer schools for any student who wishes to benefit from it, subject to safety considerations. Students may be requested to attend during a particular week when additional support resources, such as additional tutors, demonstrators and helpers, can be concentrated. Most students travel by coach, but some may use their own, adapted, transport. Some localities are wheelchair-accessible, others require additional helpers or the use of, for example, crutches. Access is to some extent governed not just by absolute accessibility, but also by safety considerations, especially when sites are working quarries, where some operators are reluctant to allow disabled access. In cases where locations cannot be accessed, alternative learning experiences are provided, for example by using videos, slides and overhead projector transparencies of localities, along with samples of rocks and fossils, as appropriate. These can also be used for all students on days when weather conditions make sites inaccessible for all. A virtual fieldcourse is also being developed on CD-ROM.

Based on telephone interview with G. Easterbrook of the Open University

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Case Study 8

Moira is a mature (35-ish) female student with mild disability – an extra sacral vertebra and limited mobility in her left arm. She cannot walk very far and so she has done no fieldwork and is on the Earth Sciences pathway. However, she is very interested in palaeontology and so a field study for her project was devised that allowed her to obtain vehicular access to Whitecliff Bay on the Isle of Wight. She collected her samples for micropalaeontological analysis and a member of staff who lives on the island transported them back to the laboratory.

From Dr M. Barker, Portsmouth University

4.4 Provide additional time for the activity, and/or for gaining access

In some cases simply providing more time, for either gaining access or carrying out the task, or both, might be all that is necessary. This will of course demand careful planning for a group of mixed ability to ensure that those who have completed the task do not become bored.

4.5 Don't do real fieldwork, do virtual fieldwork instead

One of the possible advantages for the so-called virtual fieldwork is that it removes the need for students to visit the field. Instead the field experience is, to at least some extent, replaced by information and communication technology (ICT)-based simulation of the field, usually but not exclusively based on Internet technology. A full survey of

virtual fieldwork is beyond the scope of this guide, and only brief guidance can be given here. Virtual fieldwork can range from simple use of live cameras relaying their images on Web sites (webcams), to fully-blown virtual fieldcourses. There are thousands of webcams now operating, although few have any real geographical significance. They range from the potentially useful, such as those monitoring environmental hazards or city centre locations, to the frankly bizarre sites enjoying cult status, such as the eponymously-named Jennicam (http://www.jennicam.com/). Any list would date quickly, so the best source is portal sites such as the Earthcam listing (http://www.earthcam.com/). Some sites now have streaming video, and it should be possible to construct a virtual field project at least partly around the use of a webcam, although we know of no cases where this has been done.

Virtual fieldcourses offer a more realistic alternative than webcams to conventional fieldwork. They can be used for briefing or follow-up work in addition to conventional fieldwork, or more arguably as a substitute for fieldwork itself. For example, the JISC-funded Virtual Fieldcourse Project (http://www.geog.le.ac.uk/vfc/) developed a range of hardware and software tools to address learning outcomes across a range of field-based disciplines, with the aim of enhancing rather than replacing the field experience. A more radical step is to use virtual fieldwork to actually replace work in the field. Again, however, careful consideration needs to be given to the learning outcomes of the fieldcourse. Virtual fieldcourses may be quite effective at imparting predictable factual information, but it is more challenging for them to be effective at imparting a full range of sensory information, information on views and attitudes, or in facilitating the personal development of individuals. It is also difficult for them to provide genuine experience of carrying out techniques of primary investigation, whether it be making physical measurements, or carrying out social surveys. Thus a learning outcome of 'to be able to give an account of the geography of xxxxx' would be more likely to be more reasonably addressed by a virtual fieldcourse than would a learning outcome of 'to be able to use appropriate field techniques to test hypotheses concerning the geography of xxxxx'. Phipps (2000) briefly discusses some of these issues.

The same principles apply, in general, not just to activities actually in the field, but also to other activities associated with the fieldcourse. Thus activities such as computer- or laboratory-based analysis sessions need also to be considered in the context of participation of students with mobility impairments.

The five broad strategies outlined above are not, of course, exclusive, in that it might be necessary in the case of a particular student to, for example, both change the location and provide additional time. The most important point is to consider very carefully what the learning outcomes of the activity actually are. There is no point in going to enormous lengths to get a party of mixed ability to a specific location simply for them to stand in the cold and rain (or blazing sun!) and listen to a lecture which could have been delivered elsewhere, and more effectively. There is no point, at least as far as fieldwork is concerned, in going to a location simply because it is there. Access to a location must be coupled with some meaningful activity which is enhanced by being at that specific location. This is not to deny, however, that great personal development, satisfaction and self esteem can be gained by students with physical impairments who overcome physical barriers to do things like climb peaks, abseil, canoeing or whatever, simply in their own right.

The above strategies have been presented implicitly in the context of staff-led day or residential fieldcourses, but in essence the same strategic principles apply to independent fieldwork, for example in fieldwork leading towards a dissertation or

project. In these cases the student will usually have more freedom to choose a topic and/or area which are accessible to them, and will have a greater degree of control of timing. Safety will always be an important issue, and consideration might have to be given to providing field assistance on this ground alone.

Whatever the strategy adopted for fieldwork, it is important to check periodically with the student that everything is satisfactory, in terms of both the nature of the arrangements made, and whether the student is coping with them. It is best not to wait for the student to flag up issues, which will probably result in crisis management. It might be advisable to assign a named tutor or member of staff, or a student mentor, providing personal support to the disabled student(s) and with whom a rapport can be developed. This would need to be in addition to any personal assistance/helper the student brings.

4.6   Wheelchair considerations

The most well-known global image that invokes awareness of disability is probably that of the wheelchair, despite the actual percentage of wheelchair users amongst those with disability being small. For example, of the 22,500 undergraduate students in the UK who self-assessed themselves as having a disability in 1998/9, less than 5% were wheelchair users or had mobility difficulties (Source: Higher Education Statistics Agency (HESA) Statistics. See also Healey *et al.*, 2001). Despite this, wheelchair users will probably form an important proportion of students with mobility impairments likely to be encountered by many academics facilitating fieldwork.

Wheelchairs come in many shapes and forms, from basic self-propelled models to powered ones, and many types of optional attachments are available, including trays that fit over the arms to provide a writing surface. A wheelchair user may need to have access to a different variety of wheelchair for field use from that used normally. Wheelchairs appropriate to a variety of purposes may be obtained on loan or hired. Most wheelchairs require additional assistance to cross rough terrain, for example by additional helpers, and/or by using slings. So-called all-terrain wheelchairs are being developed. For example, the Landeez all-terrain wheelchair was designed specifically to roll easily over sand, snow and gravel, using soft plastic pneumatic tyres (http://www.natural-access.com/press.htm). It can be dismantled for transport in seconds, as the frame uses quick release pins, so tools are not necessary. However, such wheelchairs are not widely available as yet. Information on wheelchairs, including powered wheelchairs, scooters and buggies is available from RICA (http://www.ricability.org.uk/).

In planning fieldwork which includes a wheelchair user there is a whole range of other considerations which need to be made, including:

1. Time. It might not always take longer for a wheelchair user to make a specific journey, but it will certainly take longer to load and unload vehicles.

2. Breaks. Understand the need for appropriate breaks, particularly where there are long sessions, to allow for movement and change of physical position. Access to toilets also needs to be carefully planned in advance.

3. Weather. Wheelchair users may need to wear more or different clothes, as they can get cold sitting down all or most of the time. If it rains, an umbrella helps only a little, and wheelchair users can get very cold, wet and uncomfortable.

4. Carrying possessions is not always easy, especially if trying to manage a clip board, field notes and so on. Bumbags and totebags or rucksacks which hang on the back of the wheelchair can be useful – but the later can pose a security risk if potential thieves might be about. An alternative is to provide storage place where books and other equipment can be left by the student rather than carrying these all the time, perhaps in a vehicle, parked in a convenient location.

5. Space. It is necessary to ensure that suitable space for a wheelchair and/or appropriate seating is available, for example during visits to external organisations, or in classroom sessions. The height of laboratory or computer benches is critical. Where helpers in the form of personal assistants provide support to the student, ensure allowances are made for accommodating additional members in a classroom or during a fieldcourse.

Note that not all wheelchair users necessarily use their wheelchair all of the time. Students are not 'confined' to wheelchairs. They often transfer to cars and furniture. Using a wheelchair for only some of the time does not mean that the student is faking a disability. It may, for example, be a means of conserving energy or moving more quickly. There is also a protocol associated with wheelchairs (see below), with which staff and abled students might need to become familiar.

Wheelchair Protocol

A wheelchair is part of the user's personal space. Some do's and don'ts (after the British Red Cross, undated) are:

DON'T:

- Hang or lean on the chair – it's similar to hanging or leaning on the person

- Pat the person on the head. A pat on a child's head is a gesture of affection. Some people are inclined to do the same to a wheelchair user because a person in a wheelchair is at about the same height as a child. This is demeaning and patronising

- Lift a wheelchair except in case of emergency, or unless trained to do so

- Assume that a wheelchair user can't understand what you are saying

- Be embarrassed or apologetic – the person in the wheelchair has every right to be there, and is not embarrassed.

DO:

- Talk to a wheelchair user normally, face to face if possible, in an appropriate manner, and not to their helper!

- Ask the user for an opinion, even if they have a communication impairment as well as a mobility one, and listen to their views

- When talking to a student in a wheelchair for more than a few moments, sit down, kneel or squat if convenient. This is not only courteous, but helps protect the wheelchair user from neck strain due to looking upwards constantly

- Remember when helping a user to cross roads that the wheelchair is in front of you. Don't wait too near the edge of the road. Allow time to cross, and be aware of problems like potholes, cobble or dog faeces

- Make sure doors, aisles in shops, lift entrances and so on are wide enough for the wheelchair

- Remember that the person in the wheelchair is a person, and not a package to be pushed around. You don't need be over-protective

Habitual wheelchair users will be aware of how the wheelchair should be used, and are the best source of advice for helpers. If students have to use a wheelchair exceptionally, guidance is available from, for example, the British Red Cross.

An interesting innovation is the introduction of service or independence dogs (see below). They are much more common in the United States, but could be encountered in the UK, and the needs of the dog (e.g. accommodation, food, exercising) would need to be taken into account in making arrangements, in a similar way to those of guide and hearing dogs.

Dogs and Mobility

An assistance dog is any dog which helps a person with a disability and includes (but is not limited to) guide dogs, hearing dogs, and service or independence dogs (definitions are adopted from US Americans with Disability Act). A service dog is a dog that has been intensively, though lovingly, trained to meet the individual requirements of a specific human partner with a physical disability involving mobility. They provide all the physical, psychological, and therapeutic support a person with a mobility impairment needs to lead a full, productive, independent life, in much the way a guide dog aids a blind partner. At least three types of primary dog can be trained: Wheelchair Dogs, Walker Dogs, and Quad Dogs, although frequently a dog serves the dual role of Wheelchair and Walker Dog. A *Wheelchair Dog* has been especially trained to aid persons with limited to full upper body strength, who are confined to a manual wheelchair. They pull their partners up ramps, they stand and brace enabling their partner to change from a wheelchair to another chair, car or bed and in the event that there is a fall from the chair this last manoeuvre will help the person to get back into their wheelchair. They retrieve articles which their masters may drop, and even bring articles as specified by colour. They turn light switches off and on, open heavy doors, pick up and bring a telephone receiver. They perform high counter transactions such as in banks, and carry packages in their especially constructed backpacks. A *Walker Dog* is trained to assist a partner who has difficulty walking, needing, perhaps, a cane, crutches, or human assistance because of cerebral palsy, muscular dystrophy, multiple sclerosis or Parkinson's Disease. They can discard one or both crutches or canes and by leaning on the dog, with the use of a specially designed harness, be assisted up and down stairs, over kerbs, out of chairs, over uneven or rough terrain, and in many cases they enable their partners to walk, not only more correctly, but farther than ever before. These dogs will, of course, perform all other tasks such as retrieving etc. which are done by Wheelchair Dogs. *Quad Dogs* are trained to assist people who are quadriplegic, having very limited upper body strength. These people must use electric wheelchairs. Quad Dogs help their partners by turning light switches on and off and pressing lift buttons, retrieving dropped articles, opening heavy doors, picking up and bringing telephone receivers, and carrying packages and notebooks in their specially constructed backpacks.

See Case Study 9.

Adapted from web page of Independence Dogs (US)
(http://www.independencedogs.org/success.htm)

Case Study 9 – Matt P.

Matt first came to IDI back in 1989, when he was 10. Born with TAR Syndrome, Matt had no arms or knee joints. If he fell, he couldn't get back up on his feet without assistance; once while he was playing alone, he waited 30 minutes for someone to come and help him. Matt needed a dog to give him the independence and confidence he needed to go through a normal day without assistance. Because Matt was not expected to grow, we selected a collie-mix to be his partner. Ginger was trained to stand and brace while Matt pressed his back against her shoulder and worked his way back up into a standing position. She also learned to help Matt up kerbs and stairs, turn lights on and off, push elevator buttons, and carry Matt's school books and supplies home in her saddle bags. At last, Matt could go to school like everyone else and not have to depend on anyone for help. In Matt's words, Ginger had become his arms.

To everyone's surprise, Matt defied his doctor's prognosis and did grow over the next three years – enough to outgrow Ginger! So Matt came back to IDI for a bittersweet pairing with another, larger dog. Rocky, a pure-bred Golden Retriever, was selected for his size, temperament, and ability to better accommodate Matt's taller and heavier stature. In 1991 Matt graduated again, this time at the age of 13.

Today Matt is 20. About two years ago, his mother sent us a copy of his high school graduation picture, and told us in her letter that Matt and Rocky had just gone to the senior prom with Matt's date. Matt is a Junior at nearby University of Delaware. He plans to become an attorney – and we all know who will happily carry his law books.

Adapted from web page of Independence Dogs (US)
(http://www.independencedogs.org/success.htm)

5   After Fieldwork

The planning of fieldwork for students with mobility impairments does not stop with the fieldwork itself. Consideration also needs to be given to any issues arising from follow-up work, either during periods of residential fieldwork, perhaps in the evenings, and later. Students with some forms of mobility impairments might need additional time to complete tasks. This might be for at least two reasons. First, the nature of their impairment might mean that they can only do tasks requiring physical dexterity, such as use of a keyboard or laboratory equipment, more slowly. It might be necessary in some cases to arrange special resources, such as an under-sized computer keyboard which will fit on a wheelchair tray. Secondly, they might be less able to access resources such as libraries as quickly as other students. This might mean that during fieldcourses they need more time to carry out visits to resources such as libraries, or that after the fieldcourse the deadline for submission of work resulting from the fieldcourse must be extended. Forms of assessment also need to be considered, although this is largely outside the scope of the present guide (see the Case Studies 10 and 11). In seeking updates and feedback on the day's activities it is important to be inclusive, by asking the disabled student(s) to contribute as much as any other student.

Case Study 10

All students (disabled or not) are invited to inform staff of any mobility/fitness problems they may have. Several members of staff suggested that alternative, low level/easy terrain routes were arranged. This did lead to some students to miss some sites, in which case assessment was amended to miss out questions on these.

Source: Hall *et al.* (2001)

Case Study 11

A first year geomorphology fieldcourse requires walking up and down steep terrain for part of an exercise. Each student is asked to fill in a form where they have the opportunity to identify dietary requirements or health and disability issues of which they think that staff should be aware. Where asthma is declared as a problem, the likely effect on their ability to cope with steep terrain and long walking distances is discussed with each student. If they feel that they cannot cope, they are allowed to remain with the bus and read relevant literature on the site, supplied by staff. At both locations to which this applies, only part of the day requires strenuous activity, and so all students can participate in some of the day. Students who do not visit all field locations are assessed on the sites they have visited, and any additional notes made from the literature provided. The procedure generally works well, although it is reliant upon the students assessing their own abilities accurately. On occasions when they have underestimated the strength and stamina required, they have been escorted safely back to the bus in the company of another person.

Provided by Dr Tim Brewer, Cranfield University

An important part of fieldwork is its subsequent evaluation. Most institutions now carry out some form of evaluation on courses, typically by student questionnaire. This might be appropriate for aspects of the course shared by all students, whereas aspects related to overcoming barriers to access might be better evaluated in one-to-one discussions with the students concerned, possibly carried out by a 'neutral' person. It is important to ensure that on return student feedback is encouraged for all planned and unplanned activities, so that future generations benefit from best practice. Any concerns raised and/or complaints must be taken seriously and resolved in a timely fashion. In some cases evaluation during the event might be more appropriate as some changes might be made immediately, and communicated clearly with the student as to how the matter is progressing. Consideration should be given as to whether students with mobility impairments might be able to contribute to the enhancement of the experience for later generations of students by a more detailed additional form of evaluation of their experience. This does, however, need to be handled sensitively to avoid any sense of different treatment. One means is simply to conduct a very informal interview, perhaps in the bar, stressing the intention to learn from the experience in order to improve the quality of experience for future students.

Whilst it is true that one cannot be responsible for what happens once the student has graduated or transferred between studies to a different HEI, it is reasonable and sensible to maintain contact at graduation and beyond. This can aid: learning from the student's experience; seeking contribution towards future course publicity; involving students in developing better practice such as participating as a guest speaker or involved with the preparation for the fieldwork; inviting students as a role model for future students; and assisting with alumni works. Much of what has been said above applies equally of course in the general sense to all students, not just those with mobility impairments.

6   Practical Matters

In this section we gather together some guidance on some essentially practical matters, including:

- travel

- legal considerations

- resources

- staff development and training

- obtaining information on living with disability

- hiring or loaning equipment

- minibuses.

6.1   Travel

Students using their own vehicles will usually be aware of the financial assistance they can receive, and the practical issues involved. They may possess an Orange Badge (now being replaced by Blue Badges) for parking in disabled parking spaces. The badge can be used throughout most of Great Britain, but there are some areas of central London which have their own schemes for people who live and work in the area. Access to certain town centres may be prohibited or limited to vehicles with special permits. The Orange Badge scheme does not apply to private roads or at airports. Blue Badges have not yet been introduced in Wales, where they continue to issue Orange Badges. More comprehensive information is available from the Department for Transport, Local Government and Regions (DTLR) (http://www.mobility-unit.dtlr.gov.uk/#concessions). For information on reciprocal parking schemes with Europe see http://www.crossd17.freeserve.co.uk/ reciprocal%20park%20Europe.htm.

If travelling by train, fare concessions are available with a Disabled Person's Railcard. Details of discounts and who qualifies are in the booklet *Rail Travel for Disabled Passengers*, available from stations and travel centres. If help is needed in transferring between car and train or other special arrangements, it can be provided, but one should give at least two day's notice of the journey. Many main-line stations have accessible toilets for wheelchair users, opened with The Royal Association for Disability and Rehabilitation (RADAR) (http://www.radar.org.uk/) National Key Scheme, which provides access to over 4,000 public toilets. Most Inter-City trains now have wide access doors, automatic interior doors and handrails, and are accessible to wheelchair users by ramps kept at all stations. Most Standard Class coaches have a space for a wheelchair at one end, and space can be made in First Class, given advance notice. There are usually trolley refreshment services. Some trains have wheelchair accessible toilets. Sleeper compartments are not wheelchair-accessible, but Eurostar services are fully accessible to wheelchair users.

An increasing number of bus routes are served by low floor buses which are wheelchair accessible and much easier for anyone who experiences difficulty with steps. Regulations are being introduced under the DDA which will eventually require all public transport (including buses and coaches, trains, trams and licensed taxis) to

be fully accessible by 2017 for disabled people, including wheelchair users. Some areas already have wheelchair accessible taxis and/or door to door transport services such as 'Dial-a-Ride'. Travel costs on local public transport may be free or subsidised by local authorities, some of which may have schemes such as taxi cards or vouchers for people, usually residents, unable to use public transport. Further information about accessible transport and concessionary fares may be obtained from County Council Public Transport Information Officers or the local Passenger Transport Executive (PTE). For London, a useful guide is the *Access Guide Book for Disabled People*, published by RADAR. Also useful is *Access to the Underground: a step-by-step guide to each station for elderly and disabled people*, from London Transport.

Other sources of information on travelling include:

- Tripscope (http://www.justmobility.com/Tripscope/contact.htm), for free advice and information, for disabled and elderly people planning local, long-distance or foreign holidays, including airport transfers and transport at the destination. (Helpline Tel: +44 (0)345 585641).

- Ramp (http://www.edinburgh.gov.uk/HEBS/UK_Health_Advice_Groups/ uk_health_advice_groups_DISABLED_MOTORISTS_FEDERATION.html), a free service from the Disabled Motorists' Federation, providing route maps with attended filling stations, accessible WCs, wheelchair access, meal stops and bed and breakfast accommodation, given three days notice (Tel: +44 (0)1743 761181).

- The British Red Cross (http://www.redcross.org.uk/), who provide a trained escort service for elderly or disabled people. Travel is by private car, Red Cross Ambulance or public transport. Expenses are charged. Contact a local branch for details.

- The Department Transport, Local Government and Regions' Mobility Unit (http://www.mobility-unit.dtlr.gov.uk/) has produced a booklet, *Door to Door: a Guide to Transport for People with Disabilities*, giving information on all forms of transport for disabled people together with contact addresses. Flying High – a practical guide to air travel, is available from the Disabled Living Foundation (http://www.disabledliving.org.uk/).

- Holiday Care (see below).

- Finally, an invaluable and comprehensive source of guidance on mobility for the disabled, as well as on other matters, is the mobility pages of the Focus on Disability Web site (http://www.focusondisability.co.uk/) on which much of the above information is based.

Holiday Care

Holiday Care is a national charity, and UK's central source of travel and holiday information and support for disabled and older people, their families, friends and carers. They provide the information which enables disabled and older people to make independent holiday and travel arrangements, where possible in an integrated, mainstream environment. It is supported by the UK's national and regional tourist boards and a number of leading travel companies, and works closely with the tourism industry in the UK to encourage greater awareness of the needs of disabled travellers and better access provision.

Providing clear, accurate information on various aspects of travel is central to the mission of Holiday Care. Its Information Unit has nearly 120 different information packs on various holiday and accommodation ideas for people with special needs. These include accessible hotels, self-catering and farm accommodation as well as activity holidays, holiday centres and accessible attractions. They also have a comprehensive database of respite care facilities in the UK where disabled people can stay with or without their carers, and holds information on accessible venues in over 40 overseas countries, including the USA, Scandinavia and Israel. Working with Britain's national and regional tourist boards, Holiday Care is accredited to inspect accommodation in the UK against agreed *Tourism For All* National Accessible Scheme standards. They hold a unique composite database of all establishments in the UK inspected under the scheme comprising over 1,000 hotels, self-catering properties, bed & breakfast establishments and farms. All these have been assessed and given one of the following access categories:

Category 1:   Suitable for an independent wheelchair traveller.

Category 2:   Suitable for a wheelchair user travelling with a helper.

Category 3:   Suitable for a wheelchair user who is able to walk a few paces and up a maximum of three steps.

Specific information packs on a range of services are also available including companies advising on oxygen, escort and companion services and the hiring of equipment.

Adapted from the web page of Holiday Care (http://www.holidaycare.org.uk/).

6.2   Legal considerations

All HEIs have to comply with the requirements of the 1995 Disability Discrimination Act by producing a Disability Statement which outlines the kind of support a disabled student can reasonably expect at the institution. It is suggested that this should be checked against departmental provisions, and a brief outline should be produced which complements the HEI's Statement, and makes specific reference to fieldwork.

All fieldwork activities must be subject to risk assessments. Each HEI has its own procedures for this, which should be followed. The presence of student(s) with mobility impairment might significantly affect the assessment of risk, and the control measures necessary. Local Health and Safety Officers should be involved as appropriate in making such assessments. Personal Egress Plans (PEPs) will normally be provided for students with mobility impairments within the HEI, and consideration will have to be given as to whether similar procedures need to be prepared for other locations.

Staff must be familiar with emergency evacuation procedures for premises used during fieldwork, and must ensure that all students are made aware of these. They should be aware that in the case of students with mobility impairments, including those in wheelchairs, emergency procedures might not involve evacuation but instead the use of refuges within the building, the locations of which should be established and made known not only to students with impairments but also any others who may need to know, such as their helpers or room mates.

Details of the Special Education Needs and Disability Act (2001) can be found in the Overview guide to this series (Healey *et al.*, 2001).

6.3   Resources

Students with an impairment are normally eligible for the Disabled Students Allowance (DSA), the details of which are given in Healey *et al.* (2001). The regulations are available from the Department for Education and Skills (http://www.dfes.gov.uk/studentsupport/uploads/Bridging2001.doc). Since September 2000 a similar provision is also available for postgraduate students and part-time students. In outline, the allowance is to cover additional costs incurred by a student undertaking a course because of the disability. There are no specific limits within the maximum (at present £5,000) on how the grant may be spent, but it is awarded depending on recommendations from a needs assessment carried out by an Access Centre or similar body. It is important that any additional resources and cost implications arising from the need to do fieldwork are recognised, and included in this. If any proposed additional costs are to fall on the HEI, these should be brought to the attention of colleagues and senior management as soon as possible.

6.4   Staff development and training

For the reasons mentioned above, most academic staff have little experience of familiarity with catering for the needs of students with mobility (or other) impairments. It is important that all members of the fieldwork team appreciate some of the difficulties and the likely demands for change. Some staff training could be organised in advance of the fieldwork to bring about a base-level of knowledge and understanding. Stefani (2000) discusses the implications of the QAA (2000) *Code of Practice* for educational developers.

A word of caution is necessary here. In the past some training events have attempted to familiarise people without impairments what it is like to experience life with an impairment by means of various kinds of simulation, such as spending time in a wheelchair, or using vision-restricting goggles. Although there is still a diversity of views, this approach is now regarded as being unacceptable by many people with impairments, on both conceptual and practical grounds. They argue that we do not teach what it is like to be a person of a different ethnic background by using make-up or boot polish, or what it is like to be a member of the opposite sex by cross-dressing. Physical impairment should therefore not be treated differently. In practical terms, the objection is that a short-term experience of a particular impairment is not particularly meaningful when the 'trainee' cannot experience the full range of social and physical barriers, and knows that in a short time the experience is over.

Some people with mobility impairments have written very effectively on their experience. For example, in *Life On Wheels* (http://www.lifeonwheels.net/ author.html) Karp (1999) gives a general overview of the experience of using a wheelchair as an active, independent adult. He demystifies the lives of people with mobility disabilities, explains how they adapt, and how present-day society is at odds with the truth of the disability experience, and shows how wheelchair users are increasingly full participants in their communities, the workplace, and their families. The book has many quotations from vibrant, involved and active people.

6.5   Obtaining information on living with disability

An invaluable source of practical guidance is the Disabled Living Foundation (DLF) (http://www.dlf.org.uk/). The DLF is a national charity providing practical up-to-date advice and information on many aspects of living with disability, for people with

disabilities, older people and carers. A subscription gives access to its Directory of Disability Equipment, which contains very full entries and supplier details for a full range of equipment. It also has a range of publications, including some helpful fact sheets, for example on choosing wheelchairs and general disability issues, and consultancy services. However, the most important source for occasional enquiries is its helpline, which is a telephone information service for the general public. The telephone number is +44 (0)870 603 9177, Minicom: +44 (0)870 603 9176, between the hours 10am and 4pm. E-mail is sales@dlf.org.co. Another excellent general source of information is the Focus on Disability Web site (http://www.focusondisability.co.uk/).

6.6   Hiring or loaning equipment

It is impractical for the student to bring some of the larger items of equipment which enable independent living, and unrealistic to expect the residential centre to provide it. This might include, for example equipment facilitating patient handling from wheelchair to bed or toilet, or a shower tray. Most can however be hired. One supplier of equipment which operates a hire service is Arjo Ltd. (http://www.arjo.com/), St Catherine St, Gloucester, GL1 2SL. Tel: +44 (0)1452 50 60 50.

6.6.1 British Red Cross – Medical Loan Service

The British Red Cross operates a Medical Equipment Loan Service in some areas of the UK. This provides 'on a short term basis, at times of personal crisis, a range of equipment to assist with mobility, personal care and independent living, for vulnerable people living in their own homes'. Equipment is usually available within 24 hours in an emergency, and there are over 900 outlets around the British Isles. Students doing fieldwork might not at first sight seem to fit into this mission, but in practice the Red Cross do help those who need limited access to equipment in order to facilitate a visit to an area, for example for holidays, and fieldwork needs might also be treated sympathetically. The equipment which can be loaned includes wheelchairs, including transit, self-propelled and heavy-duty chairs (for people over 16 stones/102kg), commode chairs, various toilet and bathroom aids, and bed cradles and rests. In most areas, equipment is loaned free of charge. Some areas may make a nominal charge. The British Red Cross also offers its equipment loan service on a service agreement or contract basis to health authorities and social services departments. More information is available from the local Branch of the British Red Cross. Contact details of the nearest British Red Cross (http://www.redcross.org.uk/) office can be found through the *Where to find us* section of their Web site.

6.7   Minibuses

There are specific regulations governing the transport of wheelchairs and their users in minibuses. These govern, for example, how they may be carried and secured. For example, chairs must be carried in a forward or rearward facing position, not sideways. All passengers must have access to two exits which are not blocked by luggage or wheelchairs. If a trailer is towed, this must not block a wheelchair exit. The detail of these regulations is beyond the scope of the present guide, but details may be sought from MIDAS, the Minibus Driver Awareness Scheme, operated by the Community Transport Association (CTA) (http://www.communitytransport.com/). This promotes a nationally recognised standard for the assessment and training of

minibus drivers. Aspiring Driver Assessor/Trainers (DATs) must participate in a two day course on minibus driving, and a further half-day course for wheelchair accessible minibuses. The CTA holds a list of all member organisations and registered DATs, and can offer advice and information on all aspects of minibus and accessible transport operation, as well as training. They publish a Minibus Charter, a reference book which includes a section on wheelchair restraint. Contact details are:

Community Transport Association, Highbank, Halton St., Hyde, Cheshire, SK14 2NY
Tel: +44 (0)161-366-6685
helpline: ctauk@communitytransport.com

Another source of information is Minibus Options Ltd. (http://www.minibusoptions.co.uk/index.html), a specialist supplier of wheelchair accessible minibuses, who have an informative Web site.

7   References

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Web sites

Many sites have been linked in elsewhere in this guide. This section brings together an annotated listing of a few of the most useful, informative and illustrative sites.

British Red Cross (http://www.redcross.org.uk/).

Community Transport Association (CTA) (http://www.communitytransport.com/), which operates MIDAS, the Minibus Driver Awareness Scheme.

Department for Education and Skills (http://www.dfes.gov.uk/).

Disabled Living Foundation (http://www.dlf.org.uk/), an invaluable source of information.

Disability Resource Kit for Academic Staff (http://www.ccc.newcastle.edu.au/student-support/lindas_project/Index.html). A University educational development site which gives lots of useful teaching advice, largely in bullet point form. It covers both disability in general and specific forms, including mobility disability.

Earthcam (http://www.earthcam.com/) – A portal site providing access to many webcams.

Higher Education Statistics Agency (http://www.hesa.ac.uk/).

Holiday Care (http://www.holidaycare.org.uk/) is a national charity, and UK's central source of travel and holiday information and support for disabled and older people, their families, friends and carers.

Independence Dogs (http://www.independencedogs.org/success.htm) (USA) – an organisation which trains and provides independence (service) dogs for people with mobility impairment. This Web site provides access to a number of case studies of how service dogs have provided independence for their partners.

The Kepplewray Trust (http://www.kepplewray.org.uk/) – a charitable trust with an inclusive philosophy of residential fieldwork and outdoor education, based in the Lake District.

Minibus Options (http://www.minibusoptions.co.uk/index.html). Suppliers of specially adapted minibuses, with a particularly informative Web site.

The Quality Assurance Agency for Higher Education Web site (http://www.qaa.ac.uk/), which contains the complete Code of Practice for the Assurance of Academic Quality and Standards in Higher Education, and much else.

The Royal Association for Disability and Rehabilitation (http://www.radar.org.uk/), a national organisation of and for disabled people. Its key areas of activity are supporting over 500 local and national disability organisations, campaigning for improvements in disabled people's lives, and providing information to support independence and equality for disabled people.

Ricability (http://www.ricability.org.uk/) is the trading name of the Research Institute for Consumer Affairs (RICA), a national research charity dedicated to providing independent information of value to disabled and elderly consumers. It researches and publishes consumer guides, based on rigorous testing and research, and covering such products as domestic appliances, community alarms, stairlifts, cars, wheelchairs, and mobility and bath hoists.

The site of the Royal National Institute for the Blind (http://www.rnib.org.uk/ dda/education.htm), which contains good information on the Disability Discrimination Act (1995) and Higher Education.

TechDis (http://www.techdis.ac.uk/) – a JISC (Joint Information Systems Committee) service set up to provide information and advice on the use of new and existing Communication and Information Technologies (CIT), to enhance access to learning and teaching, research and administration activities for students and staff with disabilities.

Virtual Fieldcourse (http://www.geog.le.ac.uk/vfc/) – the JISC-funded Virtual fieldcourse Project, based at Leicester University.