

# Case studies 17-21: disability

## 17 Delivering an inclusive curriculum using specialist software

**Institution** UMIST, Department of Computation

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### **Introduction**

The case study illustrates how a lecturer has taken positive action to improve student retention, which was a recognised problem with the original programme. By exploiting information technology designed for use by disabled students, a programme has been created that encourages all students to reach their full potential.

### Context

UMIST is a research-led, technology and engineering university based in the centre of the city. It has approximately 6,500 students of whom nearly 30 per cent are international students. About 3 per cent of students declare a disability. (Disability includes dyslexia and all disabilities and medical conditions classified under the UCAS codes.)

Promotion of disability issues is a gradual process supported by staff training events. These are primarily intended for academic staff, yet mainly attended by non-academic staff. The recent establishment of Departmental Disability Co-ordinators, self-assessment questions for auditing the curriculum, and four working parties to consider compliance with the latest legislation on disability have contributed to the overall increase in disability awareness.

The Department of Computation has approximately 1,100 students including postgraduates. Approximately 3 per cent have declared a disability, and a significant number of students with physical and sensory disabilities enrol on programmes. There is a moderate level of disability awareness within the department, promoted by the departmental disability co-ordinator and more recently by an increase in disabled students.

### Assessment policy and practice

There is no university-wide policy on examinations for disabled students, but support and provision for disabled students within the Department of Computation is high and assessment methods are totally flexible. There is a wealth of best practice in the department, though this is not documented.

The accepted informal procedure is that any modifications to examination and assessment procedures recommended by the university's disability and learning support adviser should be accepted and organised. As this role is undertaken by a senior lecturer from within the Department of Computation, there has been general acquiescence with this practice. Either

the Central Examination Office or the academic department pays for any additional costs for assessment modifications.

### Drivers for change

By far the most influential driver for change is the increasing number of disabled students studying at UMIST and the associated impact of a critical mass. Other internal drivers include the departmental disability co-ordinator and the university's disability and learning support adviser who is a 'champion' for disability issues. The main external driver is the legislation (SENDA).

### **The project**

Teaching of a module on machine learning within the artificial intelligence course has been designed and organised entirely around the needs of disabled students.

The rationale is to enable disabled students to receive comparable learning experiences with their contemporaries, and in the process make the coursework more usable to all students. An underlying assumption is that disabled learners do not have a separate learning style to non-disabled learners; they just fall along a continuum of learner differences. By providing a variety of flexible teaching methods this will accommodate learner differences.

Each three-hour teaching period is divided into lectures and reviews or small group discussions. Each lecture starts with a review of the previous lecture and the learning outcomes achieved. In light of this, the learning outcomes for the current session are agreed. A 30-minute lecture proceeds, followed by a 15-minute small group discussion to clarify understanding. There is a 10-minute break before the next 15-minute group sessions. Another 30-minute lecture is followed by a short group discussion to clarify understanding and the session is completed by a 50-minute group session, usually to undertake specific activities.

Handouts are provided to explain the learning outcomes and how they should be achieved. The handouts are available in alternative formats including electronic formats of any diagrams or lecture materials.

### Specialist software for dyslexic students

A specialist software package has been used, designed for dyslexic students. Called 'Inspiration', this presents an overview of course content as a diagram, with images and narrative. This can be particularly useful to many dyslexic students who rely on visual rather than auditory memory for learning. It is also an effective revision technique for many students.

Prior to this approach being adopted, there were general problems with students' low attendance. The module leader was concerned that the learning outcomes contained many implicit skills that needed to be made explicit. While developing the self-assessment questions for auditing the curriculum, the importance of explicit learning outcomes and different methods of achieving them became apparent. The new inclusive design and

delivery of the machine learning module is an attempt to break down barriers.

#### Links with institutional strategy

There is not a departmental strategy for teaching and learning or a widening participation. The approach has been developed independently, although it is linked to the new SENDA requirements and to the university teaching and learning strategy. This aims to 'enable students to develop their full potential...through providing a learning experience of highest quality' and to 'ensure that the student experience is more active and less passive, with a focus on managing diversity through student-centred learning, in order to help improve retention'. The dissemination of good practice is a feature of the strategy and therefore, if successful, this approach should be promoted throughout the institution.

#### Monitoring and evaluation

The success of the department's approach will be evaluated by quantifiable evidence such as any increase in attendance levels, and by qualitative evaluation gained from student feedback forms and focus groups of disabled students. Evaluation conducted so far indicates an increase in attendance levels and generally positive feedback from all students on the new format. The diagrammatic illustration of the structure of the course was particularly welcomed, and this software will be used more extensively in the remainder of the course.

#### **Reflections**

The modifications made in the design and delivery of the module will hopefully benefit all students as well as disabled students. However it is too early to provide any conclusive evidence, which will be gained following a summative evaluation.

Adapting the programme is not an onerous task – it just takes a little more thought. The delivery method is more intensive and requires a higher level of concentration from the lecturer. However, the benefits gained – with instant feedback from students and much more participative interaction – outweigh the extra effort required.

## 18 Developing an accessible distance-taught MSc.

**Institution** The University of Salford, School of Construction & Property Management

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### **Introduction**

This case study illustrates the potential of e-learning in encouraging disabled students to participate in programmes that otherwise may have been inaccessible. By actively designing a distance-taught programme with disabled students in mind, other students benefit from the new accessibility features. The pro-active approach illustrates how institutions can comply with the spirit of the latest legislation (SENDA).

### Context

The University of Salford has approximately 21,700 students, with around 5 per cent declaring a disability.

A number of institutional strategies and policies include or refer to disability issues directly or indirectly, such as the equal opportunities policy and the widening participation strategy. The current strategic plan and learning & teaching strategy do not directly mention disability, but the forthcoming strategies include equality and disability issues.

An Equal Opportunities Committee, reporting to the Academic Board, has been established at university level to consider, among other equality issues, disability-related strategy. This will include provision for disabled students such as alternative examination arrangements. The committee monitors the effectiveness of the university's dedicated Disability Service, which is within the Equalities and Diversity Office. The university also supports the promotion of disability issues through a programme of staff training, partly organised through a Manchester and Salford universities' consortium.

### Disability awareness

The School of Construction and Property Management has approximately 670 students including postgraduate students, of whom 4 per cent have declared a disability. The distance-taught MSc in Inclusive Design has 10 students, five of whom have a disability. The programme director was aware the programme would attract a high percentage of disabled students.

There is an increasing level of disability awareness within the school. This has been promoted by the SURFACE project (Salford University Research Focus on Accessible Environments); the development of the accessible distance-taught MSc; and the subject matter of many courses offered by the school, which consider physical access as an integral aspect.

Although there are no school policies or strategies that specifically incorporate disability issues, the school's five-year academic plan does refer to access and inclusivity. The school follows the university's equality and diversity policy and liaises closely with the university disability advisers. Additionally the school, through the LTSN Centre for Education in the Built Environment, is leading a special interest group on widening participation.

#### Drivers for change

The main drivers for encouraging the school to create an effective learning environment for disabled students include disability legislation, in particular SENDA, and the directive from the Council of Europe stating that all courses on the built environment should incorporate inclusive design.

One output from the subject centre special interest group will be a document to disseminate good practice in incorporating an inclusive approach within course design. The MSc in Inclusive Design will be used as an exemplar.

Disabled students on school programmes provide helpful feedback and advice on special provision.

#### **The project**

Following extensive research into best practice in accessible learning and e-learning, the research team at SURFACE decided to apply the findings by incorporating inclusive teaching methods into an on-line distance learning programme. This differs from standard distance learning programmes in many respects.

Admission is possible through an accreditation of prior experiential learning (APEL) route, with application forms available in alternative formats. Staff help individual applicants through the APEL process if required.

The programme includes an optional two-day welcome and induction event based at Salford, which has also been designed using an inclusive approach. For instance, the team-building exercise is designed to ensure visually impaired students can participate and benefit. Tasks are carried out in groups of three, focusing on the strengths of each member of the team. Emphasis is placed on how the task is experienced as opposed to just seeing the outcome.

A compulsory five-day residential summer school provides the opportunity for students, working in teams, to conduct an access audit as part of the programme assessment.

Teaching and learning materials have been made more accessible by improving the layout, including only essential technical language, reducing visual images, and ensuring all diagrams and images have a text description to explain the meaning. At regular intervals there is an activity followed by a discussion point via e-mail deposited in the common area of the e-learning 'Blackboard' programme.

In general the course is kept as simple as possible and avoids complicated learning techniques. A key factor in the success of the programme's accessible design is the development of exercises for measuring learning outcomes and choosing the best way to achieve this outcome for disabled students.

Assessment is kept to a minimum, with only one piece of assessed work per module. A conscious decision was made to exclude formal examinations as they create unnecessary barriers. The programme director strongly believes that examinations only assess students' capacity to recall, not their knowledge, and are therefore disadvantageous to certain people including some disabled people.

Disability awareness training is incorporated into the programme via a link to the "Self Direction Community Project", a group of disabled people in Cornwall offering disability awareness training package in an electronic format.

#### Funding and evaluation

Funding for developing the modifications to this programme came from a successful bid for £15,000 to the university's internal allocation of widening participation funds. However, once an accessible programme has been planned and validated there should be no additional running costs.

The programme will be evaluated through feedback from users, by external bodies in the UK and the US, and by external examiners.

#### Advantages

The programme is acting as a pilot prior to dissemination throughout the university and beyond to encourage the design of further accessible distance learning programmes. It is also impacting on professionals in the built environment by raising awareness of access issues.

No, or few, adaptations have to be made to the programme to ensure students with disabilities are included, as these considerations are planned into programme design. This saves lecturers' time.

#### Problems

Key challenges for the team were illustrating inclusive design using non-visual representations, and trying to show hypothetical issues. The solution was to focus on analysing why inclusive design is not always present, and on illustrating the barriers. Disabled students are ideally placed to undertake this type of activity within the learning programme.

Technical access to on-line materials initially created problems, but these have generally been resolved. The speed of the internet can inhibit use of resources and quality of materials displayed. There were some difficulties with using Blackboard as a learning environment; this may be overcome by changing to WebCT in the future.

Changing the approach of some lecturers has been a challenge – for instance in encouraging the use of plain English, reliance on more than just visual representations to explain a concept, and using fewer technical terms.

### **Reflections**

The ideal times to ensure that a programme is accessible are at the outset and when material is updated. Much of the good practice is common sense and benefits everyone, although there are less obvious features – such as screen-reader software needing double inverted commas before a quotation to distinguish it from the body text. As technology advances, the use of video streaming and synchronous discussions will necessitate alternative means of communication for those students who cannot hear the speech, see the visual cues, or keep up with the speed of typing into an electronic live debate.

E-learning has great potential to encourage disabled students to participate in programmes that otherwise might have been inaccessible. However, it should not be used to isolate them from the rest of the student population. There is a steep learning curve for academics to make sure that the e-learning material they produce is inclusive. In front of a class it is easy to explain in a variety of ways what is happening. The same level of variety needs to be incorporated into the virtual learning environment.

There are many web-sites offering advice on making electronic material accessible. As a starting point the following would be worth visiting:

[www.surface.uk.co](http://www.surface.uk.co)

[www.design.ncsu.edu/cud/univ\\_design/princ\\_overview.htm](http://www.design.ncsu.edu/cud/univ_design/princ_overview.htm)

[www.techdis.ac.uk/](http://www.techdis.ac.uk/)

[www.w3.org/WAI/](http://www.w3.org/WAI/)

[www.webaim.org/](http://www.webaim.org/)

## **19 Identifying the factors that support disabled students**

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### **Introduction**

This case study illustrates the inclusion of disability issues as a core element of the programme, ensuring that disability awareness is raised for all staff and students.

### Context

University College Worcester (UCW) has approximately 3,600 full-time students, about 4 per cent of whom declare a disability. It has an equal opportunities policy that incorporates disability as an integral aspect of all the institution's work. All key institutional strategies and policies include or refer to disability issues either directly or indirectly.

UCW has a dedicated disability service operating under the auspices of the Equal Opportunities Centre. As well as the full-time head of the centre and a disability co-ordinator, there are five other staff at the centre, and six hourly-paid academic support tutors providing support for disabled students.

To promote greater understanding of disability issues and the functioning of the disability service the team has:

- employed targeted and generic staff development sessions
- engaged in research and published its outcomes
- distributed guidance on equal opportunities, disability and dyslexia to all staff at induction, during staff development and on request
- been successful in competitive bidding for six externally funded disability projects
- liaised with disability representatives from other departments (such as early childhood studies, the IT service and the library).

In anticipation of the implementation of new disability legislation in September 2002, UCW reviewed an audit of provision and practices against the Quality Assurance Agency's (QAA) code of practice for students with disabilities. The code was distributed in a revised format as a self-assessment tool. On the basis of this review, the majority of UCW's mainstream disability funding from the HEFCE for 2001-02 is devolved to departments, who take responsibility for developing provision against their own identified action plans linked to the QAA code of practice.

### **The project**

The programme of Early Childhood Studies (ECS) has approximately 240 students, of whom 7 per cent have declared a disability in year one and 15 per cent have declared a disability in year three. All ECS activity is against a background of substantial disability awareness within

the department, primarily because tutors have worked on different aspects of disability. Disability awareness is also promoted by a system of small peer groups and personal tutor groups, where individual needs become apparent. Equal opportunities issues are a standard agenda item at team meetings, with disability issues featuring as the most regular topic.

#### Departmental/subject equal opportunities co-ordinator

There is an equal opportunities co-ordinator within the ECS course, who attends the Equal Opportunities Centre meetings and reports back to each ECS team meeting. The co-ordinator supports disabled students and tutors within the programme, drives disability issues forward, and helps with any communication difficulties within the modular system. This has produced ideas for practical strategies – such as the creation of a bullet list of assistance required, for disabled students to issue to each module leader. The centre staff and the co-ordinator at programme level jointly produce these lists.

Institutional updates and disability staff development programmes are well attended by programme staff. Specific disability training sessions have been provided for programme staff at away days, for example on marking the work of dyslexic students.

Although there are no specific departmental policies that incorporate disability issues, the department operating statement does mention disability issues and outlines how institutional policies will be implemented at departmental level within the context of UWC's strategic plan and widening participation strategy. Specific targets are identified yearly.

#### Drivers for change

The main drivers for creating an effective learning environment for disabled students include the departmental equal opportunities co-ordinator system, and the general course culture with its emphasis on disability awareness. The share of mainstream disability funding, provided to conduct a departmental disability audit to assess compliance with SENDA, has significantly contributed to change at programme level. However, by far the most influential driver for change is the success of previous disabled students, which encourages staff to identify specific needs and offer appropriate support. There have been huge identified improvements in assessed work following the identification of a particular disability and provision of appropriate support.

#### Early Childhood Studies programme

The factors within the programme that predispose it to supporting disabled students include recruitment, staffing, the curriculum, teaching methods and ongoing support.

#### *Recruitment*

Every student on the programme is normally interviewed by a member of the teaching team. An important part of the selection process is exploring the student's awareness of equal opportunities and disability issues. Applicants are actively encouraged to disclose any disabilities during the selection process so that they can be offered appropriate support. Students are reassured about the confidentiality of such information.

### *Staffing*

Multi-disciplinary tutors come from different professional backgrounds and usually from professions that consider people's needs. There is a high level of staff-student contact which enables identification of individual needs.

### *Curriculum*

Disability is a core theme throughout the programme. Every module contains an element of equal opportunities, usually focusing on disability. For instance, the developmental play module explores different approaches, resources and adaptations appropriate to meeting the needs of disabled children. There is an optional specific module on quality and equality.

The validation team would expect equal opportunities issues to feature in course design and content.

### *Teaching methods*

A substantial amount of collaborative group work is incorporated into the programme, so students are supported by a peer group and work on the strengths of each member.

A diversity of teaching methods is used and therefore there is less need to make adjustments for disabled students – good practice in teaching disabled students is simply good practice.

Handouts are presented in large print and provided before each lecture for all students. All teaching is conducted in relatively small groups.

A wide range of assessment methods is available, with scope for students to choose modules with their preferred assessment method. There are no formal examinations within the programme.

### *Ongoing support*

A personal tutor system operates, with two compulsory appointments per semester to monitor personal and academic progress, and any additional appointments provided on request. Tutors are allocated a small amount of additional time to undertake this role. This is supplemented by support through the equal opportunities co-ordinator and the disability service.

Students have to monitor their own progress and identify their own strengths and weaknesses, thus providing a further opportunity to identify specific needs.

### Advantages

Providing an inclusive learning environment enables all students to reach their full potential. Focusing on the needs of disabled students has created best practice in teaching methods and styles for the whole course team.

### Problems

The only problems encountered have been practical ones connected with physical access, but these have all been resolved.

### **Reflections**

The appointment of an academic member of staff as a departmental equal opportunities and disability tutor has been vital to liaise between departmental staff, students and central services for disabled students. This system must have an effective selection, training and reward process for staff, and be evaluated.

It is also important to encourage all programme staff to see the connection between equality and quality issues in promoting best practice in teaching.

## **20 Role of departmental disability tutor in meeting students' needs**

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### **Introduction**

This case study shows that having a member of academic staff with responsibility for the progress of students with disabilities can ensure that the department not only responds to but also anticipates the needs of these students. With simple modifications to the teaching and learning activities, the learning experience, retention and success are improved for all students.

### Context

The University of Hull has approximately 12,700 students at the main Hull campus (5 per cent of whom declare a disability), and a further 1,200 students at the Scarborough campus (10 per cent of whom declare a disability).

The university provides a comprehensive staff training programme to support the promotion of disability issues, including:

- specific disability training aimed at targeted groups, for example on the implications of new legislation for learning and teaching staff
- as part of the university's Higher Education Teaching Certificate, the module on dealing with diversity covers the needs of students with disabilities. All new lecturers are expected to participate in this programme. Completion of the certificate contributes towards accreditation for the Institute for Learning and Teaching
- general disability awareness sessions for all staff.

The university has nine staff in the dedicated disability service within the student support services. In addition, the Miriam Hebron Centre, a disability resource facility, is based in the library and provides specialist equipment and software to assist students with disabilities.

The university has a disability policy, which is currently under review in the light of the SENDA code of practice on post-16 education and related services.

Key institutional strategies and policies include or refer to disability issues, either directly or indirectly, in relation to staff and to students' recruitment, admissions (including monitoring), learning and teaching. The estates strategy outlines the estates budget for compliance with disability legislation. There are also university guidelines for alternative examination arrangements for students with disabilities or health problems.

As supporting structures, the university has established a Disabilities Committee (reporting to the Teaching and Learning Committee) to consider strategic issues and monitor plans and

provision for disabled students, and a Disabilities Forum to generate new ideas for improving procedures and provision. The latter is a larger group including departmental disability tutors and central support staff.

The Disabilities Committee has asked the Learning and Teaching Committee, as part of the curriculum review, to comment on compliance with the QAA code of practice for quality assurance in relation to students with disabilities. It is anticipated that following this curriculum review a systematic procedure for validation and approval of course programmes will ensure that disability issues are considered.

### **The project**

The Department of Psychology has approximately 400 students – including postgraduates – of whom 4 per cent have declared a disability.

Although there are no specific departmental policies or strategies that incorporate disability issues, the department adheres to policies and strategies at institutional level. However, two effective departmental support mechanisms exist. The dean of each faculty nominates a departmental disability tutor – a member of staff within each school or department to take responsibility for the progress of students with disabilities. The tutor has promoted a substantial level of disability awareness within the Department of Psychology. Disability issues are a standing agenda item on both the departmental Staff Committee and Learning and Teaching Committee.

Secondly, a student service workshop has been established within the department to provide additional photocopying, and enlargement of handouts and overheads.

### Drivers for change

By far the most influential drivers for improvements are current students and feedback from previous disabled students. Other internal drivers are the university's corporate strategy, learning and teaching strategy, the departmental disability tutor system, and the university's disability officer. The main external drivers are the QAA code for disabled students, and disability legislation.

### A pro-active approach

Following the experiences of the department's first visually impaired student, staff realised that a reactive approach was not adequate to promote the inclusion of disabled students and enhance the quality of provision. The disability tutor system and the student service workshop have since adopted a much more pro-active approach. The role of disability tutor is on a par with that of admissions tutor: the additional workload is taken into consideration, and the role is well promoted in university and departmental handbooks.

The department's disability tutor aims to ensure disabled students are not excluded from any learning and teaching activities. As preparation for the role, he attended training offered by the university and continues to attend disability training events run internally but with

contributions from external organisations. He feeds back information from such events to departmental staff, and considers the implications for all teaching staff.

The disability tutor regularly liaises with the university's disability service to establish a balance between academic expertise and central expertise and knowledge.

### Supporting students

The disability tutor regularly sends memoranda outlining student needs to appropriate staff within the department. The student may be identified by name, but if he or she requests confidentiality then the disability tutor will act as the go-between to send modified handouts or copies of overheads from the lecturer to the student. Anonymity is also offered to students requesting examination concessions if they do not want to disclose their disability to all teaching staff.

The student service workshop within the department provides alternative formats of teaching and learning materials supplied by lecturers. The department provides free photocopying for students with visual impairments and for dyslexic students. It also offers additional secretarial support during admissions and examination periods for those students who need it. The disability tutor holds a budget for disability-related modifications that cannot be financed through other channels. The department is currently considering purchasing a second large screen monitor for visually impaired students.

### Peer support

One specific modification was introduced by the disability tutor to enable a visually impaired student to undertake data collection as part of their third-year assessment. An agreement was reached with a year two group running a project to include the visually impaired student. The group collected the data and analysed one part at the lower level; however the visually impaired student analysed all the data at a higher level. This method worked extremely well for all concerned.

### Model of disability

The disability tutor is an academic member of staff with additional expertise in disability needs and support, and therefore generally does not have to deal with any doubts or questions over his requests for concessions. The approach taken by the department sits well in the social model of disability – whereby the expectation is on the environment to make adjustments to the student, and not vice-versa as in the medical model. Furthermore the importance of recognising the need for anonymity in some cases, such as mental health difficulties, helps meet the requirements of the new SENDA legislation in adopting an anticipatory approach. This is particularly valid if modifications to the delivery of the curriculum in response to one disabled student are then incorporated into mainstream provision.

### Advantages

The changes made in teaching and delivery styles have benefited all students in two key ways. Firstly, asking staff to produce lecture notes and handouts in advance, in order to produce alternative formats, has resulted in better quality notes. Secondly the diversity of e-learning has benefited all students. In particular, although not created directly in response to disability needs, all students benefit from the computer-based self-paced statistical module. On average, marks are higher for this e-learning module than they were when it was delivered through lectures. Also, students generally prefer this approach to teaching statistics.

The new course structure, with an emphasis on study skills in the first year, is also conducive to supporting disabled students. This structure emphasises the point that the provision of study skills and reaching a diverse student population are not extra duties for academic staff.

Although initially many of the activities and support mechanisms were created in response to an individual disabled student, more recent activities link into institutional strategies and are planned as integral aspects of an inclusive environment.

### Problems

The disability tutor system is very successful within the Department of Psychology. However the quality of this system is not yet guaranteed across the whole university. Its success is primarily due to the commitment and energy of the tutor concerned. A formal robust monitoring and evaluation system will need to be enforced centrally to ensure success across the whole tutor network.

A specific problem arose within the department with external speakers not being able to provide their handouts in alternative formats. This acted as a catalyst to change, and the Teaching and Learning Committee recommended that a procedure be developed to ensure all external speakers make handouts available in alternative formats.

### **Reflections**

The key issue in ensuring the success of creating an inclusive curriculum is to accept that staff will 'not always get it right' and need to admit their mistakes and learn from them. If academics adopt this approach there will always be improvement. If they do not, then it is unlikely that improvements will be made.

Another important factor is to listen to the students with disabilities. They are the people who know the most about their needs and requirements. They can also be a useful source of feedback to highlight where procedures are not working in practice.

## 21 Support for disabled students undertaking fieldwork

**Institution** The University of Gloucestershire (lead site in a consortia of eight HEIs)

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### **Introduction**

This case study highlights how students with disabilities can undertake fieldwork and related activities by incorporating modifications to the learning environment. The implication is that if a fieldwork experience can be adapted for the successful inclusion of a wheelchair user, then any aspect of a curriculum can be adapted to accommodate students with any disability. Six guides have been produced on providing learning support for students with different disabilities. Feedback suggests these guides are highly regarded by tutors in a wide range of disciplines.

### Context

This case study focuses on an HEFCE-funded disability project involving a team of lecturers from geography, earth and environmental sciences, educational developers, disability support staff, and staff with research experience of disability issues.

The adoption of a social model of disability, emphasising the barriers to disabled students which society creates, is a desirable context for the success of an inclusive approach to learning and teaching. It is important because it shifts the responsibility for improving provision for disabled students from individuals to the environment. The project emphasises the rights of disabled students to learning support for fieldwork and related activities.

The project had three main aims:

- to review the experience of departments of geography, earth and environmental sciences in supporting disabled students undertaking fieldwork and related activities; and to identify practices worthy of dissemination
- to increase departments' awareness of the issues faced by disabled students, and assist them in improving the level and quality of support they provide – through specific support packages and learning and teaching strategies
- to identify the learning support that disabled students have the right to expect departments to provide.

The project concentrated on assisting departments of geography, earth and environmental sciences in HEIs in England, which together form one of the largest of the 24 subject centres of the Learning and Teaching Support Network established by the HEFCE. Fieldwork is an essential element of the curriculum in these subjects, which are taught in almost every non-specialist HEI in the country.

The main outputs were a survey report, six web-based guides, a national conference, and an advisory centre.

### Drivers for change

A main driver for creating an inclusive approach to fieldwork was the low number of disabled students undertaking geography, earth and environmental science courses. A contributory factor for this low uptake could be the image of fieldwork presented in prospectuses, emphasising masculine, youthful and able-bodied people conquering difficult terrain.

The QAA's code of practice provided a further driver, in particular precept 11: 'Institutions should ensure that, wherever possible, disabled students have access to academic and vocational placements including field trips and study abroad.'

The anticipatory nature of the latest legislation (SENDA) also provided a powerful driver for change, as academics cannot claim that they do not have to adapt current fieldwork practices because of a lack of disabled students participating in past fieldwork activities.

### **The project**

Fieldwork in geography and the earth and environmental sciences includes residential and non-residential field courses, UK-based and overseas trips, guided tours and activity-based fieldwork, and urban, rural and 'rugged-country' (mountainous areas, deserts) activities. These are undertaken independently, in groups, and with the whole class.

Activities include observation, monitoring, sampling, mapping, interviewing and other forms of data and information collection. In addition there are briefing meetings, planning, map analysis, risk assessment, laboratory analysis of samples, statistical analysis of data, note-taking, using computer-based virtual environments, and preparing and presenting findings.

Most fieldwork is planned without attention to the diversity of student need, and when faced with a disabled student most departments respond, to a greater or lesser extent, on a one-off basis. A need to shift from a reactive to a more strategic pro-active approach was the basis for this project. Support may be provided at several levels: course, department, institution and subject association. The intention is that this, in turn, should lead to geography, earth and environmental sciences being able to market themselves to disabled students in the sure knowledge that they would enjoy a supportive learning environment.

A key factor in overcoming many barriers to participation in fieldwork involves careful consideration of the intended learning outcomes of particular activities. Fieldwork should be undertaken for specific educational reasons linked to the course outcomes. It needs organising in a way that is appropriate for as many people as possible, and includes opportunities for prior negotiation with disabled participants.

### The guides

The guides illustrate issues in providing learning support for disabled students undertaking fieldwork and related activities. They can be downloaded from the web-site at [www.glos.ac.uk/gdn/disabil/index.htm](http://www.glos.ac.uk/gdn/disabil/index.htm). They focus on the needs of students with particular

disabilities, such as mobility impairments, visual impairments, mental health difficulties or dyslexia.

Examples of the types of modifications recommended in the guides include:

- providing written details about the main features to be seen in the field and the activities and projects to be undertaken, to benefit a deaf student. (This also clarifies the learning to be experienced by all students on the field trip)
- making a video of a geological site that is not accessible to a student in a wheelchair. (This may also be used in other classes, and as part of the pre-fieldwork introduction for students visiting the site in future)
- investigating an alternative local non-residential field course venue for a student needing daily dialysis treatment. (This may lead to the alternative location being offered to other students, particularly benefiting those with family responsibilities and those who can not afford a residential field course.)

These examples illustrate how modifications for disabled students should not be seen as a bolt-on/additional activity, but should fit comfortably within both the learning and teaching and widening participation agenda and contribute towards an enhanced learning experience for all.

#### Monitoring and evaluation

The guides were evaluated by users and by an advisory panel established for the project that included specialists in the disability field. At this stage it is difficult to assess the impact in departments throughout the country. However, within the University of Gloucestershire links have been established with the departmental strategy in the School of the Environment through the head of the school's personal involvement in the project. This has been primarily achieved by raising the profile of accessible fieldwork through workshops within the school, which has informed practice and contributed towards the department strategy.

One lecturer, with no direct experience of the project, has started a pilot looking at the use of video and still photographs of locations to be used for field trips to help reduce anxiety in students. If, following evaluation, this strategy proves to be successful it will be used on a WebCT base for all students.

Impact at institutional level is evidenced through the recently re-written teaching and learning strategy, which now includes more explicit reference to disability and access issues.

#### Advantages

The advantage of focusing on fieldwork is that many of the issues faced by disabled students in HE are magnified in this method of teaching and learning. If the barriers to full participation by everyone in fieldwork can be reduced, it is likely that awareness of the obstacles to full participation in other learning activities will be heightened, and the difficulties of overcoming the barriers will be reduced.

By reducing barriers to inclusion of disabled students, barriers to all students are reduced. Furthermore, by creating an inclusive environment for study, disabled students may not feel the need to declare their disability and therefore can avoid feeling 'labelled'.

The discipline specialists involved in the project felt their own professional development had been improved as a direct result.

### Problems

Many of the discipline specialists in the team started the project with little experience of disability issues. To address this, a disability awareness session was organised for the project team.

A challenge for the team was web-site accessibility. Substantial time was invested at the outset in planning accessible features for the web-site. This is an area that is constantly improving, and many organisations offer free advice and support.

### Advice

Disabled students, with the support of their HEI, can apply for money from the Disabled Students Allowance to help them specifically with access to fieldwork. This is distinct from mainstream funding awarded to HEIs to support their provision for disabled students.

### **Reflections**

Any activities to create a more inclusive learning and teaching environment are more effective if they are not conducted in isolation. Developing close links with staff in central disability support services, and with disabled students, enabled the project to use their expertise and experiences.