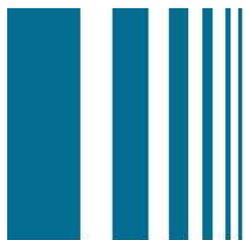


# Teachability

Creating an Accessible Curriculum  
for Students with Disabilities



Scottish higher education  
funding council

# FOREWORD

Part of the mission of the **TEACHABILITY: Creating an Accessible Curriculum for Students with Disabilities Project**, is to produce materials to assist academic staff in reflecting on various aspects of delivery of curricula, and to consider possible changes to practices, in order meet the teaching and learning needs of students with a range of impairments more effectively.

Institutions, departments and individual members of academic staff, are currently considering the implications of the recently issued QAA Code of Practice: Students with Disabilities, and the anticipated legislation. This will extend to students with disabilities in higher education similar rights to those enshrined in the Disability Discrimination Act. The materials provide an excellent source of information and a structure to assist individuals, departments and institutions to undertake a review of their provision for students with disabilities and are very timely.

The document represents the outcome of a collaborative effort involving academic staff from academic departments, teaching and learning units, and special needs advisers, from five west of Scotland Higher Education institutions. I commend it to you as representing a major contribution to meeting the needs of students with disabilities.

**Professor Susan Shaw,  
University of Strathclyde, Chair, Steering Group,**

**TEACHABILITY: Creating an Accessible Curriculum Project**



# TEACHABILITY PROJECT

## CREATING AN ACCESSIBLE CURRICULUM FOR STUDENTS WITH DISABILITIES

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Lead Institution  
The University of Strathclyde

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# Getting Started

## *Introduction*

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The following materials have been written as a framework for academic staff to reflect on various aspects of the delivery of curricula, and to consider possible changes to practices, which would meet more effectively the teaching and learning needs of students with a range of impairments.

They have been developed as part of the *Teachability: Creating an Accessible Curriculum for Students with Disabilities* project.

This work has been funded by the Scottish Higher Education Funding Council and has been undertaken by a partnership of five West of Scotland institutions of Higher Education – the Glasgow Caledonian University, the Glasgow School of Art, the University of Glasgow, the University of Paisley, and the University of Strathclyde. Within each institution, there have been further key partnerships, namely, of Teaching and Learning staff, Special Needs Services staff, members of a great range of academic departments, and, most importantly, students with various impairments, whose incisive comments are incorporated in the text.

It is hoped and intended that the materials will be of value to academic colleagues in a staff development context, and that their use would typically be facilitated by staff representing expertise in the areas of curriculum development and special needs.

# Getting Started

## *WHY use these materials?*

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The use of these materials will inform the development of departmental action plans for meeting more effectively the teaching and learning needs of students with various impairments.

In the process, departments will also be able to address the challenges of the **QAA Code of Practice: Students with Disabilities**, and the requirements of the Disability Rights in Education legislation.

Departmental action plans are likely to have implications for the wider institution, and it is anticipated that departments will share outcomes with other institutional staff with associated areas of responsibility, and who will also be strategically involved in assuring the quality of provision and compliance with legislation, for example, estates departments, or staff development departments.

The Quality Assurance Agency (QAA) **Code of Practice: Students with Disabilities** asks institutions to:

*‘Consider making arrangements which ensure that all academic and technical staff:*

- *plan and employ teaching and learning strategies which make the delivery of the programme as inclusive as is reasonably possible;*
- *know and understand the learning implications of any disabilities of the students whom they teach and are responsive to student feedback; and*
- *make individual adaptations to delivery that are appropriate for particular students, which might include providing handouts in advance and/or in different formats (Braille, disk), short breaks for interpreters to rest, or using radio microphone systems, or flexible/interrupted study for students with mental health difficulties.’*

The application of Disability Discrimination legislation to HE would advocate ‘reasonable adjustments’ which would prevent disabled students from being placed at substantial disadvantage in comparison to students who are not disabled. ‘Reasonable adjustments’ can be in relation to, for example, admissions procedures, course content, placements, teaching arrangements, provision of information and examinations.

These materials are intended to assist staff in addressing these issues.

# Getting Started

## *HOW do you use these materials?*

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The following four steps are recommended.

### **STEP 1.**

**Before you look at either the questions or the text, ask yourself what are the core requirements of the subject or programme that you teach.**

This is a challenging question, but one that needs to be addressed, because potential students with impairments need to know whether there is any possible conflict between the nature of the subject, programme or discipline, and the nature of their impairment. It is only if you begin with some clarity about core requirements of a programme that you can go on to engage with questions about adaptations and alternatives for students on the grounds of impairment. Nevertheless, it may be that you will want to revise your 'clear' ideas about such core requirements in the light of some suggestions in the materials, or consider alternative means of fulfilling these requirements.

### **STEP 2.**

**Look at the 'Questions' section.**

The questions are intended to aid reflection on current practices and procedures in relation to how well (or not) these meet the needs of students with a range of impairments, and whether there is scope for enhancement of curriculum delivery. You could skip any sections which do not apply to your subject or programme, or use them creatively to address teaching practices not explicitly covered in the materials.

### **STEP 3.**

**Read the text.**

The first part of each resource section is about practices and procedures which are likely to meet the needs of most students, and which many departments regard as good, inclusive provision.

The second part of each resource section is about possible provisions for some students with some impairments. The difference can be illustrated by an example. The department practice of putting overheads and other lecture materials on the department web-site could be seen as 'inclusive practice' from which all students are likely to benefit. However, the provision of such materials in Braille is a possible provision for some students.

# Getting Started

## STEP 4.

**Begin to formulate a strategy, by addressing the following questions:**

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

Individuals may decide to alter their own teaching practices in some way(s). At department level, changes to procedures and processes might lead to more accessible curriculum delivery. However, where barriers do exist, the acknowledgement of constraints is essential in order to inform the programme choices of potential students. Effective strategies, of course, incorporate plans for monitoring and evaluation.

Departmental strategy will also be of interest to institutional staff with responsibility for quality, programme advertising or for overseeing compliance with discrimination legislation.

## *A note on the language of the materials*

The language of 'impairment' and 'disability' borrows from the social model of disability. While people have impairments, the environment – attitudinal as well as physical – can be disabling. It is simplistic to attribute problems about disability to individuals who are said to 'have' this or that disability when the reality is that many such problems disappear when environments are accessible. And although there is little that staff in higher education can do to change the facts of students' impairments, there may be scope for altering the environment of higher education, which, like any environment, may be disabling.

# Questions

## Information about the programme

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*"Many people feel that I should not be in the course that I am in."*

1. *What information do you think potential students for your programme would need to have to make an informed decision about whether they could undertake the programme?*
  - *Is there anything you could add (or change) to help potential students, including those with impairments, to take a more informed view about whether they could and would want to undertake your programme?*
  - *Do you give potential students a named contact in the department if they remain in doubt about whether they could undertake your programme?*
  
2. *How could you make information about your programme(s) more easily available to potential students, some of whom have impairments?*

# Questions

## Features of the whole programme of study

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*"I hope I'll be well. But from time to time I may need to go into hospital for treatment. What happens then?"*

1. *What flexibility is available in your programme of study in relation to:*
  - a. Student attendance requirements
  - b. Availability of programme part- or full-time
  - c. Extensions to end-dates of programme modules or elements
  - d. Scope for transfer to alternative programmes
  - e. Scope for choice of modules or elements within the programme?
  
2. *What flexibility in relation to a – e above could be made available to a student for reasons associated with an impairment?*

# Questions

## Induction of students into the programme or into the discipline

*"I remember when I first arrived. Being in a hearing environment, it is very difficult."*

1. *What measures do you take to induct students, including those with disclosed needs, into your department or discipline?*
2. *Does your student induction extend to cover the variety of teaching and learning settings and methods used on your programme(s), such as placements and practicals?*
3. *Where students have impairments, which create a need for the use of equipment or educational support worker, are you able to offer additional assistance with induction into the range of teaching settings and methods used?*
4. *What procedure does your department have for informing staff involved with induction in advance about the disclosed needs of students likely to require additional help?*

*"It helps if you get the notes before the lecture and then you know what they are on about."*

- 1. How does your department ensure that venues to be used for lectures, and the ways of informing students about that, are compatible with the disclosed needs of the students?*
- 2. What is the procedure in your department for ensuring that lecturers know in advance of any student who has additional needs in relation to receiving or recording lecture information, and where that requires some modification of teaching practice to enable the student to participate?*
- 3. Do you as a matter of routine make the information you provide for students in lectures available also in some other way which takes account of the needs of all students, including those with impairments?*
- 4. Are there mechanisms in place for ensuring that staff are aware of what is required to facilitate sign language interpretation or lip reading, and for the effective use of equipment such as radio aid transmitters and microphones?*

*"I felt in history tutorials as if he thought, She is not really present, she is away in another world. She is not contributing... But I couldn't hear!"*

1. *What is your department's procedure for ensuring that all tutors are informed about the needs of any students with impairments in a tutorial/seminar setting?*
2. *How do you ensure that the teaching methods used in a tutorial/seminar setting are compatible with the learning needs of all students present?*
3. *Where students, for a reason relating to impairment or health problem, are unable to attend a tutorial/seminar, are there arrangements for providing support in making up the material missed?*

# Questions

## Practical classes, including laboratories, studios and workshops

*"If material for practical classes were delivered to you sooner than the main body of the class, it would be easier to keep up with the rest."*

1. *How does your department identify and accommodate students who are unable to perform practical tasks, e.g. through absence, injury or impairment?*
  - *Does the way in which the difficulties are addressed aim to maximise the student's independence in the practical work, where this is a goal for other students?*
  - *What scope is there for providing relevantly comparable alternative work for a student who has an impairment to enable him or her to satisfactorily complete the programme?*
  
2. *What procedure does your department have for taking into account the needs of a range of possible users when buying equipment or refurbishing practical classrooms?*
  
3. *How does your department prepare teaching staff to meet the needs of students who have visual, hearing or other impairments, when required to do so, in the setting of a practical classroom?*

# Questions

## Placements, study abroad and field trips

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*"Whereas in Britain I would have to walk down the street, in St Petersburg I could jump on a trolleybus or tram and ride down the road..."*

- 1. How does your department organise placements, study abroad or field trips in a way that takes cognisance of the needs of all students, including those with impairments?*
- 2. Where problems are identified, before or during the placement, study abroad or field trip, which would make its completion impossible or unduly difficult, can students be offered any alternative experience with comparable educational/social outcomes?*

# Questions

## Information and communication

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*"Economics asked ME if there was a certain colour that helped! They were great. They use coloured paper."*

- 1. What procedures do you have in your department for ensuring that information intended for students, including those with impairments affecting the way they receive information, is received by them?*
- 2. How does your department ensure that the needs of all students are taken into account when purchasing equipment to be used for communicating information, or for students to access information?*

*"You're being marked on how much you can memorise and not what you actually know."*

- 1. What arrangements are in place for ensuring that all students are well informed about precisely what is assessed, and how the assessment is carried out?*
- 2. What alternative arrangements could you make where an assignment or part of an assignment or exam cannot be made accessible to a student?*
- 3. What systems are in place to ensure consistency and fairness in alternative assessment arrangements, for all students who require them?*
- 4. What arrangements can you make for flexibility over deadlines and timetabling of assessments for students requiring this?*

## *Information about the programme*

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*(See also Resource 8 Information and communication →)*



### **For all potential students. . .**

Many potential students will consider whether or not they would be able or want to undertake the programme(s) you offer. This raises the question of how you can help people to reach an informed decision.

Many aspects of programmes will be of interest to potential students:

- What is the programme about? What does it cover?
- What prior knowledge, experience, skills or qualifications do you think students will need to tackle the programme?

*"Many people feel that I should not be in the course that I am in."*

- What materials for learning will be provided by the department, and how much do students have to provide for themselves? (E.g. Are there lots of books to be bought and read? Is guidance given on essential and optional reading and other materials? Do students need access to computers or other equipment?)

*"When we are talking about 8 textbooks that have over a thousand pages, per year, I cannot read that."*

- How is the programme taught? (E.g. Are there labs, placements, lectures, tutorials, etc?) Is there a heavy emphasis on attendance?
- How many students are in your classes (lectures, tutorials, seminars etc)?
- When and in what ways is the programme assessed?
- How does the programme fit into the overall degree structure? What else can students choose to study if they take this programme? How many credits does it give students towards the overall qualification?
- Can the programme be studied at different paces, full-time or part-time?
- If students carry on with this subject, are there any new requirements? Is it taught differently in later years? Is there a lot of competition among students for carrying on with the subject?

## *Information about the programme*

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- Who can students contact if they want more help in making up their mind about whether this would be a good programme for them to take?

*"Who IS my 'academic adviser'? I didn't know I had one!"*

Information about your programme, which addresses the above types of questions is likely to be useful to most potential students. The more clearly and simply the information is expressed, the more accessible it will be. Some consideration also needs to be given to where the information is best made available, such as the department web-site, the University prospectus, the institution's administration offices or liaison services.



### **For some students with impairments. . .**

People with various impairments will almost certainly be among those looking for information about your programme. And for the majority of this latter group, programme information, which addresses the questions above, will usually be sufficient to help them to decide whether the programme would be a wise choice for them. However, some potential students might need information in a different format, or some additional information.

Some people who are blind, partially sighted, dyslexic or who have some other difficulty in accessing standard text, may benefit from having your programme information in a different format, such as in Braille, on disk, or audio-cassette. People who are blind, and who rely on screen reading software to access web information, may be able to do so if your web-page conforms to Web Content Accessibility Guidelines, and if your web-pages do conform to these guidelines, other users are not likely to be disadvantaged.

Guidance about whether your programme is likely to be particularly difficult, for some students with some impairments, could usefully be included in general course information. Some of the reasons why a course could be inaccessible may not be obvious from general course information. For example, potential students who use wheelchairs would need to know whether part of a course has to be held in a building which is not accessible for people in wheelchairs. Potential students who have reduced stamina would welcome information about whether timetabled teaching takes place in rooms far away from each other, with limited time between classes.

Other reasons are likely to be incorporated in general course information. For example, it might be that a modern language programme involves reliance on aural acuity, and you are likely to have touched on the aural nature of course delivery in a

## *Information about the programme*

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general section on how your programme is taught. However, if the programme also relies on visual material, such as videos and pictorial images, then it would be useful for a potential student who is visually impaired to know about this in advance. If your general information already tells people who to contact if in doubt about whether the programme is suitable or not, then potential students with some impairments will know how to address any continuing uncertainty about whether the course will be accessible for them.

## *Features of the whole programme of study*

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### **For all students. . .**

A programme of study, which is flexible in its design, will almost by definition be more accessible to more students. There are several ways in which a programme can incorporate a degree of flexibility. In listing these, it is recognised that there may be sound arguments against flexible provision as the norm. Yet when the range of reasons students have for wanting or needing different provision is borne in mind, the availability of choices can seem helpful. Students who work to finance study, who have family commitments or problems, who are sometimes ill, as well as students with some impairments, are among those who can benefit from a programme of study incorporating substantial choices within it.

- There can be flexibility about attendance at time-tabled classes, and students can be helped to take advantage of this flexibility where it is available by being directed to alternative sources of learning, such as library materials or web-sites.
- There can be flexibility over pace of delivery, either of the whole programme of study, or of individual modules or credits. In the first case, students might be able to choose to study part-time or full-time, or a mixture of both, at different times of their course. In the second case, students could either complete all aspects of a module or credit as it is scheduled, or perhaps postpone some elements of it, such as parts of the assessment or a placement, for completion at a later date. Many students will leave University to become part-time employees, and this fact in itself might recommend the possibility of part-time placements as well as study.
- There can be choice of elements within programmes of study, and ease of movement between such elements.
- There can be flexibility over method of delivery (e.g. learning packages, use of e-mail.)
- Flexibility can also acknowledge that there may be many ways of demonstrating competence in relation to clearly defined course objectives. This can mean making available to, or developing with, students a variety of ways of demonstrating programme specific learning.



### **For some students with impairments. . .**

Many people who consider themselves to have an impairment are not ill. However, of those who are, occasional spells in hospital or at home can be necessary, just as they

## *Features of the whole programme of study*

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can be necessary for any student. When this happens, knowing that it is possible to return to the programme when the student is well enough is very reassuring. Most institutions of Higher Education are able to make arrangements to help a student who becomes unexpectedly ill to catch up when it is possible for them to do so. Building this possibility into programmes from the start might widen accessibility.

Heavy timetables where students are required to attend can be difficult for students who have reduced stamina, who have a mental illness, who rely on lip-reading or who are dyslexic.

Some students with impairments may identify a programme module or single subject which would be unduly difficult. And students can find the variation in provision of different departments, or within the same department, difficult.

*"I also think it's down to the actual department and how they view dyslexia because at the moment I take several subjects, and three of them are really really helpful, and would do anything for me if I really needed it, but the other two just accept that I have it (dyslexia) and that's it."*

Students who have been assessed as dyslexic, or who are deaf or hard of hearing, for example, may regard the requirement to study a modern language as part of an Arts degree as a barrier to the whole degree programme. Programmes of study, which permit flexibility of choice over its elements might therefore increase accessibility.

While these are examples of students with impairments who can benefit from flexibility in programme design, clearly no extra or special arrangements would have to be made where programmes were designed with flexibility possible for all students.

## *Induction of students into the programme or into the discipline*

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### **For all students. . .**

Students entering Higher Education are coming into a new and unfamiliar environment, and many do not yet know what it means to be a University student. With increasingly large class sizes, it may not be possible for a lecturer to tailor material to a diverse audience, where each individual has their own prior experiences of learning and their own assumptions about what it means to be a student in Higher Education. But it might be possible for lecturers to consider ways of inducting students into programmes by:

- providing information on respective roles of students and teaching staff
- clarifying misconceptions about these roles or expectations
- providing information on who staff are and where their offices are located
- helping to create an environment where students are encouraged to disclose their needs and seek appropriate support
- advising on different approaches to teaching and learning

*"In the first year, I got information from books and then dictated essays to my wife. But then we had a baby, and there was no way of keeping that going! I had to stop dictating!"*

- supporting students in learning to learn

*"You get good lecturers who are dead keen for students. But some of them won't even give you help with which bits are relevant and which bits are not."*

- helping students to acquire the basic concepts of the discipline
- encouraging students to test out and experiment with strategies for learning

It could help staff during the induction period to find out what students' conceptions and experiences of learning are. It could also help to know what their conceptions

## *Induction of students into the programme or into the discipline*

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about the particular discipline are. Devising activities to draw out this information early in the course could be time well spent. However, induction into a subject is not something that happens in the first few days at University. As the programme of study develops, students may benefit from the ongoing attention of teaching staff to the above list of considerations, as students engage with different subjects within the programme and with different activities within one subject. Students who are well inducted into the process of maximising their participation in lectures may need new and different induction into the different learning environment of a placement.

Clear pre-entry information on how learning and teaching will be organised can help students to develop new strategies for tackling the range of tasks appropriate for different methods. The induction period can provide useful opportunities for all students to test out their existing strategies, some of which are likely to need refinement in some teaching settings. By attending to the above list of ways of inducting students, many students, including those with impairments, are likely to be helped into the new environment of teaching.

An induction process which clarifies for all students the relative responsibilities of teacher and student, which creates an atmosphere of open experimentation where all students can be open about what they see as barriers to their learning, and which begins the work of helping students to develop effective learning strategies, is likely to go far towards helping all students.



### **For some students with impairments. . .**

While many students with impairments may well need no induction additional to what is generally helpful for all students, for others there are different considerations.

*"I remember when I first arrived. Being in a hearing environment, it is very difficult."*

Some students who have impairments will need assistive technology or the services of an educational support worker to help them access the curriculum. There may be a complexity about the interplay of individuals' teaching styles, new subject matter, physical characteristics of rooms and the use of equipment or educational support which combine to make the induction process even more experimental than it will be for all students.

Staff can help greatly by spending time with students in order to gain an understanding of the need and role of the student's equipment or educational support

## *Induction of students into the programme or into the discipline*

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worker in their proposed study strategy. Students will benefit from help in relating their study strategies to the known demands of the course or discipline as it is delivered. Staff and student will need to collaborate over techniques, which require staff to learn new ways of teaching, as students learn new ways of learning.

*"I took copious notes on my computer, but I wasn't sure if I would ever go back to them or not. The good thing is that once you have made these notes, you can search for a key word. I remember a lecturer going through a past paper and saying he hadn't done much on civic virtue. I went home and did a search and found four or five points on civic virtue. We all have coping strategies."*

Staff as well as students would have to learn how to use a sign language interpreter in lectures; staff and student would jointly need to agree on what is to happen if lip-reading becomes impossible.

*"Dr ... has a beard and moustache. But the very first lecture I went to, I introduced myself, and said, 'You know, I'm deaf. Would you remember to look at the class?' ... and he remembered that, because the next day he came up to me and gave me some notes. So that was really helpful."*

Staff who use visual material or demonstrations in lectures would need advice from a student who is blind on how they can verbalise that information, or make it available in some other way.



## *Lectures*

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*"It helps if you get the notes before the lecture and then you know what they are on about. They assume you can read and listen to them at the same time."*



### **For all students. . .**

Students with various impairments often express anxiety about using lectures in their learning. So do many other students.

In traditional lectures, if transmission of information is the aim, then how students receive that information will be important. First of all, they have to be able to receive it. Then they have to be able to record it in a way that is appropriate for them. This resource section will concentrate on the role of lectures to transmit information, while the next resource section will have relevance for more interactive methods.

### *Attendance at lectures*

Students need to know where the lecture is going to be held and need to be able to get there.

*"You get lectures moved quite considerably and they put things like that on the department computer screen. Because it flicks, I can't read the whole screen before it flicks to the next one."*

Clearly there are a great many reasons for students being unable to attend, and among these, relatively few associated with students' impairments.

### *Receiving information*

Some lecture theatres can be very crowded, with some students being accommodated in additional rooms using a television relay system. This raises questions about the appropriateness of the teaching accommodation and supporting technology for the intended aims of the lecturer, when class size, overcrowding, background noise are some of the difficulties which all students can face as they try to receive information.

Many departments now provide a safety net for students unable to attend lectures in the form of lecture material presented on the department's web pages, or made available in the library. These alternative ways of enabling students to receive information can be as effective as lectures, where the purpose is to disseminate information.

## Lectures

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### Recording information

While writing notes is not possible for some students with some impairments, writing notes might not be the most effective way for *many* students to derive maximum benefit from a lecture. Many students might benefit from study skills training in e.g. note-taking.

*"If you say to them that they are going too fast, they say, well you're not supposed to copy everything that I put up on the overheads, but you are supposed to take notes from my dictation. I find that difficult."*

It can be very beneficial for students to go into the lecture tuned into the context of the lecture before hand. Providing students with a framework for following the lecture, such as copies of overheads, (which could be available on the department's web-site) which the students are then able to annotate or supplement, is one way of doing this.

*"In ideal terms, you get a structure. They'll be giving the lecture, talking, and there'll be overheads up as well and a lot of the time they are using their own notes as headings for points for themselves, understandably, to follow the actual presentation. But common sense dictates that if too much emphasis is being put on reading them then how the hell is ANYONE supposed to try and copy it down if they are literally reading it off the board? ANY student would struggle in that respect, unless some students are much faster than others in taking notes."*

### Using records of lectures

However students record information from lectures, they are likely to want to refer to them, at a later stage. The distinction is sometimes made between taking notes and making notes. Some students may 'take' notes in lectures, and 'make' notes later, that is, actively process or work with, the notes they have taken. All students can benefit from advice about ways of 'making' notes. Mind-mapping either with pen and paper, or with a computer, is found to be useful by many students, particularly those who prefer to organise material in a visual rather than textual way. Lecturers vary in what notes they expect students to 'take', and students who are exposed to many different

## *Lectures*

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lecturers are likely to be helped by individual lecturers about what they think students should do with the notes they have 'taken'.



### **For some students with impairments. . .**

#### *Receiving information*

Attendance at lectures for students who use wheelchairs or have some other mobility impairment depends on whether the lecture theatre is accessible. Where this is a problem, the solution can be to relocate the lecture. Not all lecture theatres are equipped with tables accessible for students in wheelchairs. Many lecture theatres allow people in wheelchairs little or no choice about which area of the theatre they can use. In some lecture theatres, access for people in wheelchairs is only at the back, and this is really unhelpful for people who have an additional impairment of hearing or vision, for example, or who simply want to sit alongside friends. It is also worth bearing in mind the possible impact of overcrowded lecture accommodation on students who experience panic or anxiety in such conditions.

Accessibility of information about the location of lectures for some students with impairments might mean additional consideration. For example, students who use wheelchairs will need access to notice boards, in accessible locations, at accessible heights. Students with some visual impairments will be unable to read standard print notices or department handbooks or timetables. Students who have hearing impairments can miss verbal announcements about lectures.

#### *Augmenting visual information*

Students who are reliant on taping lectures as a way of receiving information will need a translation of visual material into an auditory form. Some thought needs to be given as to the best way of conveying information from diagrams, graphs, charts and other complicated visual material.

#### *Augmenting aural information*

Students who are deaf or hard of hearing may need to lip-read, and if this is the case, then the lecturer's face – or the face of any other speaker in the lecture theatre - needs to be visible

*"Many lecturers repeat questions asked from the body of the class to make sure that everyone heard the question."*

## Lectures

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Spot-lighting may be needed for lip-reading (and sign language interpretation) when the room is darkened, e.g. for showing slides or video. Where students use the services of a lip-speaker or an interpreter, such educational support workers are likely to need short breaks during the lecture. They may also need help with provision and positioning of seating.

Both student and signer or lip-speaker will derive great benefit from being given an outline of the lecture material beforehand. Signs for new terminology need to be devised in advance: signs for specialised vocabulary such as 'heterocyclic compounds' or 'hermeneutics' do not simply roll off the hands!

In general, it is helpful to supplement aural information with visual information for students who are deaf or hard of hearing, and to supplement visual information with aural information for students who have a visual impairment.

### Recording information

Students with a range of impairments, such as those who are dyslexic, visually impaired or manually impaired may want to record information by taping, or Braille. Referring students to a web-site will be useful if the information there is designed to be visually accessible, and if the student has the appropriate equipment or software for reading it. Some lecturers are happy to provide students with disk or hard copy of lecture material, or of copies of overheads. Provision of these can enable students with some impairments to devote more attention to listening.

*"You can't always rely on lecturers to give you copies of overheads. I am having problems with a department just now who are giving me copies of overheads, but not the ones they are using in lectures! "*

### Using records of lectures

Taping lectures is not always an unqualified success, unless the student develops a system for retrieving information from the tapes, perhaps by tone-indexing the tapes, or by carefully cataloguing or labelling the tapes, and keeping a record of the main ideas of the lecture. Taking home tapes of lectures for transcribing at a later stage can be very time-consuming, and students who do this may benefit from advice from lecturers about whether this is likely to be a successful strategy for study.

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

## *Seminars/Tutorials*

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### **For all students. . .**

Seminars and tutorials offer students the opportunity to engage actively with the subject. It has been suggested that successful tutors create an informal atmosphere, involving everyone without undue pressure and encouraging students to invest effort in preparation and discussion. Tutors may perceive the main function of a tutorial in different ways:

- for stimulating discussion about some text, topic or problem
- for working through examples of problems or questions in a collaborative way
- for addressing questions students have about course material
- for giving students a chance to make a presentation on a topic which they have researched.

The smaller numbers of students usually involved in tutorials and seminars will mean that a tutor can become more aware of individuals.

*"Small group tutorials are very useful because you can ask questions and get information about what you need to read before you read it."*

It also means that tutors can check with students about whether the tutorial is achieving its purpose, and whether there is any way in which students' involvement in the tutorial is being helped or hindered. Some tutors do this by asking students to record in a notepad questions they would like addressed at the next tutorial. Smaller numbers also mean for most institutions that it is easier to relocate to a different room where there are reasons to do so.

Unless it is the purpose of the tutorial to assess students' ability to respond spontaneously to freshly presented material, it is likely to be helpful for all students to be given adequate time between tutorials to prepare, by reading, researching, or preparing questions. While some students find it much easier to engage in active discussion than to write about issues, others can find the setting stressful, and have to work hard to become able to contribute. Opportunity for students to prepare can help many students.

It is important that all students are able to benefit from the contributions of tutor and other students in tutorials. The norm is doubtless that most tutors are clearer in, and more prepared for, their contributions than most students. For this reason, and for the benefit of all students, the tutor can make students' contributions more accessible to

## *Seminars/Tutorials*

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other students by rephrasing or repeating, or perhaps by recording comments on flipchart or chalkboard.

*"I felt in history tutorials as if he thought, She is not really present, she is away in another world. She is not contributing. I knew that was what he was thinking. But I couldn't hear! I was trying to hear, but I was getting lost all the time in what everyone was saying."*



### **For some students with impairments. . .**

For students who lip-read, furniture might need to be rearranged so that the faces of everyone can be seen. A horse-shoe seating arrangement is helpful for this, ideally with none of the participants silhouetted against the light.

If a student with a hearing impairment is being excluded because of several people talking at once (which makes lip-reading impossible) the tutor can control the situation by passing a pencil or baton from person to person, with only the holder of the baton being allowed to speak. Prior notice of the topic and main ideas provides the context crucial for successful lip-reading. If the subject matter is not sufficiently structured to allow this, the main ideas could be recorded on chalkboard or in some other textual way as the tutorial proceeds.

Background noise can be amplified by hearing aids where room loops are not installed. Students might use equipment, such as radio aid systems, to get round the problem, and in this case, speakers might be asked to wear a radio microphone, and this is not a difficult request to comply with. Alternatively, a change of tutorial room to a quieter side of a building or room within a corridor, can help. Rooms with soft furnishings may assist hearing by reducing echo.

Students who use an interpreter will need prior notice of new 'jargon' likely to come up in the tutorial. The interpreter will also need a short break from time to time. A student who is using an interpreter should be given the same opportunity as other students to ask questions or make comments: they might rely on the interpreter to speak for them. However, some deaf people who need an interpreter to enable them to understand a speaker can nevertheless speak independently.

Students who have a visual impairment or some other difficulty in accessing text may be excluded when there is some reading to do in the tutorial. For students in this category, it is particularly helpful to anticipate this by providing such textual material in an accessible format in advance, even if this is not the tutor's usual practice.

## *Seminars/Tutorials*

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Speaking in public is an ordeal for many students, but is often expected of them. Tutors can help greatly by creating an appropriate atmosphere, encouraging students to develop the skill of articulating views and questions. Yet some students may be unduly anxious, for reasons, which might in some cases relate to mental health difficulties. If a tutor knows about such a problem, then treating the student with sensitivity can help to overcome it.

Students who have speech impairments are not necessarily among those who would experience undue stress at having to contribute. Where a student has a severe difficulty with verbal communication, it might be sensible to discuss in advance with the student how they could best contribute. They may wish the tutor to repeat their contribution for the benefit of other students. If the tutor finds that s/he does not always follow what the person is saying, then sitting next to the student and using a notepad and pen can clarify any misunderstandings. Students who use equipment which produces synthesised speech, or who would be able to use overheads rather than speech will benefit from prior notice of the topics to enable them to prepare.

## *Practical classes, including laboratories, studios and workshops*

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### **For all students. . .**

It is helpful to begin with the question,

*What exactly are students being asked to do, and with what educational objectives?*

If understanding theories, concepts and processes is the key aim of practical classes, rather than development of practical skill, then it may be possible to substitute alternative activities when any student, for whatever reason, (and these could range from limitations of University resources to ethical judgements) is unable to carry out the practical task. Those delivering programmes perhaps need to have a view on whether it is crucial that students should be able to do the activities in question, or 'only' understand what it is that is being done. If understanding is the objective, then it may be sufficient if students observe processes, not necessarily at close quarters, rather than actually conduct them. In many practical settings, not all students perform every task in any case, but often learn by observing others perform the activity. This would be less appropriate where the educational aim is to develop a skill in addition to developing understanding of a process.

In recent years, some Universities have developed virtual laboratories, which minimise physical requirements and allow all students access to laboratory equipment through the integration of instrumentation and the use of simulation software. Many more universities supplement laboratory practice with some simulated, computer based experience.

Laboratory and other practical classes are often seen as teaching environments in which concerns about safety are paramount, and few people would dispute this. The vast majority of students with impairments raise no more safety considerations than any students, and the same procedures will maximise the safety of all. Clearly, it is important for students to be encouraged to share with staff any concerns about safety considerations in practical classes.

*"My pest control lecturer is very aware of the problems asthmatics encounter and tells me when some pesticides he may be showing might be harmful to me. Then I can stay out of the way! "*

## *Practical classes, including laboratories, studios and workshops*

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### **For some students with impairments. . .**

If understanding rather than activity is the goal of a practical class, then it is likely that staff will be able to accept the principle of a student working with and through an educational support worker whom the student directs to perform a variety of tasks. In this case, the support person would be the practical class equivalent of a scribe for written examinations. Enabling a student's inclusion would then be a matter of acceptance of a principle rather than, or as well as, provision of equipment or resources.

There are some fairly straightforward and low-tech ways of modifying or adapting equipment or activities to allow students with various impairments to participate. Examples include auditory displays of visual information (such as talking thermometers), tactile displays of visual information, (such as beakers with raised markings) clamps and other devices for holding items of equipment, and hand held, illuminated magnifiers. Examples of such innovations are likely to multiply as more people who develop impairments while in employment are maintained and supported in employment.

Difficulties of students with visual impairments in laboratories are sometimes related to textual materials rather than equipment, and in these circumstances, alternative formats, verbalising text or interfacing lab equipment with computer with large print or speech output might be helpful.

The layout of a laboratory can be problematic for students who have a hearing impairment, and it is helpful for teachers to supplement aural with written information.

*"It's difficult to hear what the demonstrator is trying to say over the noise of a laboratory."*

Video presentations can be captioned, or supplemented by the use of transcript.

Students who use wheelchairs may be able to participate in many practical activities through the use of adjustable height work-benches, perhaps supplemented by help from another person, where equipment cannot be moved to an accessible level. Other students might be able to participate fully, although at a slower pace, and flexible scheduling arrangements might be all that is required to enable the student to complete work.

Clearly, the demands of laboratory and practical work are as many and as varied as are the needs of students with a great range of impairments.

## *Practical classes, including laboratories, studios and workshops*

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*"If I was going into a lab I would like to know what I am going to do in the lab first so I can have read information about it. But working in engineering labs they like to keep it a surprise until you're in there. Then you're supposed to read this information which they hand you IN the lab and then do the lab experiment. It takes me the first lab to read it."*

Early negotiation between lecturer and student with a view to creative problem solving is likely to lead to the most productive outcome, and others are likely to benefit from any consequent publicising of innovative solutions.

*"If material for practical classes were delivered to you sooner than the main body of the class, it would be easier to keep up with the rest."*

## *Placements, study abroad, and field trips*

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### **For all students. . .**

While there are many, many different activities involved under the headings of placements, study abroad and field trips, nevertheless these elements of courses often involve common factors, such as the uprooting of students from their usual study (and perhaps also living) environment to one which is very different, and the control of the environment by people outside the student's home HEI, for example, employers, or professional bodies. The range of activities also calls for a standard response, namely careful and timely planning, and clear identification of the purpose of the placement or trip.

### ***What is the purpose of the placement, study abroad or field trip, and its role in the overall course?***

All students are likely to want as much information as possible about all aspects of the activity, such as answers to:

- Is it a requirement of the course?
- What does it involve?
- How can students prepare?
- How much will it cost to participate?
- What do students need to take with them?
- How is it assessed?
- What happens if the student is unwell at the time and can't attend?
- Is there any alternative to attendance?
- Is part-time attendance possible?

A clear, accessible outline providing as much information as possible as early as possible, will help to prepare all students for the activity, and be useful for any student who would have difficulty (for reasons which might be financial or personal, as well as those associated with some impairment) in completing it.

The question of purpose is likely to be central to a department's considerations when designing an element of a course, such as a field trip, for example. If the point of the trip is for students to demonstrate and extend their skills in climbing, then more

## *Placements, study abroad, and field trips*

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challenging terrain may be needed. But if the purpose is to collect specimens for geological analysis, then challenge may be less important. Inclusive field trip design will envisage a variety of potential participants, and accommodate as many varied needs as possible without compromising the educational objectives.



### **For some students with impairments. . .**

Departments organising placements, field trips or study abroad for students with impairments will need to consider, ideally alongside students themselves, the differences between the new context and environment and the more usual, and often more structured, context of study. Sometimes, the use of equipment, arrangements or personal assistance could, with a little planning, transfer to a different context.

*"In Social Work practice, the same arrangements as tutorials work. When everyone is talking or working in pairs, I can go to an empty room so that I can hear more easily."*

Software supportive to dyslexic students could be used in a workplace to enable a student to produce written work of a satisfactory standard. Similar equipment might be appropriate for trainee teachers in classrooms.

Some equipment or educational support may not be so easily transferable. Taping lectures may be acceptable in a way that taping interviews with clients in a setting requiring confidentiality may not be. Portability may be a factor to be considered for field trips and study abroad. Some non medical, personal help, such as communication support for lectures, could be regarded as obtrusive in some one to one work involving clients.

It will sometimes be necessary to identify additional items of equipment for specific purposes. For example, a sound monitor could be used as a visual indicator of classroom noise for a trainee teacher with a hearing impairment. A laptop with speech synthesis linked to a data projector could allow a blind trainee teacher to do the functional equivalent of writing on a chalkboard. This latter arrangement could clearly have uses in other work contexts involving presentations. The fact that funding may need to be found to purchase additional equipment for placements, field trips or study abroad, underlines the necessity to plan and prepare long before the placement start date.

Travel, physical access and length of working day may be relevant considerations for students who have impairments affecting mobility or stamina. For some students, the option of carrying out a placement or field trip over a longer period, or on a part-time

## *Placements, study abroad, and field trips*

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basis could be helpful, and reflection on the large numbers of people in employment who, for many different reasons, work part-time, might recommend this option.

*"On field trips I need to be able to take my time, which isn't always possible."*

Some students travelling abroad may benefit from an additional 'settling in' period, to allow for time to locate local facilities and support, such as transport, student services, accommodation and health care. For some students, the climate and terrain can be issues.

*"The organisation arranging the year in St Petersburg wasn't overjoyed to learn that a student with juvenile chronic arthritis wanted to go! But a student who came back told me that the hostel where students live was in the same building as the teaching block. This meant I wouldn't even have to go outside in the morning to get to classes... I got a grant from SAAS to cover things like extra transport, as well as laundry and cleaning, things I find hard as my hands are weak."*

If the work placement, field trip or study abroad is an integral part of the course, then it is to be expected that most issues would have been considered during the pre-entry admission process. Nevertheless, environments, whether in the UK or not, may not always be predictable. Indeed, changes, which bring about increased access for people with impairments, may be more likely than the reverse, with the progress of anti-discrimination legislation, bringing new obligations to employers whose employees develop disabilities. This in turn may impact on the requirements laid down by professional bodies, whose regulations, where relevant, must of course be taken into account. Changes in available work placements could produce either new constraints and challenges or new flexibility and freedom of choice for students with impairments.

Students with impairments are positive assets on courses, where a reminder of the diversity of human experience is important. It can be instructive to be reminded of substantial gains for all students from organising placements in such a way that students with impairments are safely included, and not to think exclusively about problems.



## *Information and communication*

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### **For all students. . .**

When access to information or materials depends on access to equipment, there will be problems for all students who can't get to, or use, the necessary equipment. Similarly, for students to benefit from information in libraries, they need to be able to know how to access it and be able to access it. There are also issues about what volume of information and teaching materials students can make use of. Most students welcome advice about what staff think are the most important or most useful materials for them to look at. Clearly the more information and other materials that can be made available to students in a variety of ways, in a variety of environments, with advice about what to prioritise, the more helpful and accessible for all students.



### **For some students with impairments. . .**

If information and teaching materials are provided in more than one format, along with advice about what is really important and what is less important, then not many students with impairments will require any additional provision.

*"Economics asked ME if there was a certain colour that helped! They were great. They use coloured paper."*

Some students would be disabled by reliance on hard text – posters and notice boards to convey information, references to reading materials available only in print, lengthy reading lists, the contents of which would require to be read onto tape or Brailled in order to be accessible, and so on.

*"I do read, but because of my short-term memory I can't look at as many words as everyone else so I read slowly with the book reasonably close to me."*

Other students would be disabled by the location of resources in libraries, where shelves, library equipment, furniture and services, such as the use of photocopiers, may be inaccessible to students and others who use wheelchairs.

Many students have personal equipment which allows them to access text in an alternative way. Computers with scanners, screen reading software, and speech output, CCTVs, screen magnifying software, computers with Braille input and output are some of the enabling technologies available. However, much personal equipment is not transportable even where students own their own equipment, and students who

## *Information and communication*

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rely on such equipment need access to it on campus if they are to make use of periods between timetabled classes. For many courses involving the use of computers, enabling technology will also be needed in computing labs. Blind and partially sighted students who need screen reading software to access the Internet benefit from web-page design conforming to Web Site Accessibility Guidelines. Pictorial or diagrammatic images can be more resistant to verbalising, and therefore more problematic for screen reading software to handle.

Since libraries and computing labs are the places on campus where many students access information, appropriate computer workstations with some of the above facilities will be needed. There are various other accessibility features of computers, which could also be incorporated, such as wrist rests, keyguards, large print key labels, and large monitors. The provision of adjustable height workstation tables will ensure access for students who use wheelchairs, for whom more general consideration about access to the library and computing laboratory rooms is also needed.

A great deal of information in Universities is displayed on posters and notice-boards, and given out in handouts and booklets. Students who do not have access to print can find this disabling and excluding. It is helpful for information, especially crucial information, such as exam times or exam results, to be provided in alternative ways to meet individual students' needs. It is worth repeating that most students with most impairments will need no extra provision if departments routinely provide information in more than one way, such as in a handbook and on the department's web-pages, or on notice-boards and electronically.

If all information is provided in simple style and language it is more accessible to all.

## *Assessments*

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### **For all students. . .**

It is important for students entering into a degree programme to have detailed information relating to the assessment strategies in operation throughout the different stages and levels of that programme. The learner should know departmental policies and strategies regarding:

- Continuous assessment and end of course/module/programme examinations
- Formative and summative assessment
- Assessment tasks and methods
- Timetabling of continuous assessment assignments and examinations
- Location of examinations
- What will be assessed?
- How will it be assessed?
- Why will it be assessed this way?

### **Continuous assessment and end of course/module/programme examinations**

*What is the balance between continuous assessment and examinations for any course?*

### **Formative and summative assessment**

*What are the opportunities for obtaining feedback on a piece of work before/after having it formally assessed to count towards end of course/module marks?*

*"A lot of the time you get comments back, they are completely illegible. It would be more useful if they sat down with you after they have marked your essay and said 'This should be done like this and that should have been done like that.'"*

## Assessments

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### Assessment tasks and methods

*What are the assessment tasks which students pursuing your course are expected to undertake? E.g. essays, reports, dissertations, theses, examinations, oral presentations, group presentations, group reports, model construction, placement practice, exhibitions etc.*

### Timetabling of continuous assessment assignments and examinations

*It may be particularly important for some students to know in advance the pace of the course they are considering, the timetabling arrangements for exams and particularly whether there may be any flexibility in this respect.*

*"I had six exams in a row and ten exams in two weeks in second year. I didn't do very well. I was just dead. I was sleeping twelve hours a day."*

*"To me it doesn't matter when the exam starts. What matters is when the next exam is."*

*I had four resits in two days. See the third one! I left so I could go home and cry. I was so tired I couldn't do anything."*

### Location of examinations

*It is very important that information on the location of examinations is consistent and not changed at short notice. Where possible it would seem reasonable to encompass this in the examinations policy and strategy, taking account of the necessity for examination locations to be accessible for all students.*

As much information as possible should be accessible to students preferably before they enter into a course so that they can make informed choices as to the compatibility of their own learning goals and capabilities and their chosen degree programme. In addition to providing the above information it is important that all forms of assessment of student learning are underpinned by sound pedagogical principles. It is stated that one of the goals of Higher Education is to support students in becoming autonomous, independent learners able to engage in deep learning and take responsibility for setting and attaining their own learning goals. Students can be helped to achieve that goal by being given adequate information about assessment.

It might be helpful for those involved in developing and designing courses to consider the following three questions when devising assessments:

## *Assessments*

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### *What will be assessed?*

It is not unreasonable for students to be informed about exactly what knowledge, understanding and skills are being assessed in any course assignment/examination. For example, if students are asked to write an essay, are they being assessed only on their knowledge and understanding of the topic or are they also being assessed on their ability to write an essay?

*"You are being marked on how much you can remember, not on what you actually know."*

### *How will it be assessed?*

There are two components to this question. (1) What is the intended assessment product e.g. essay, report, dissertation etc? (2) What are the assessment criteria? In some programmes, students can make choices about the assessment product and may also have a say in setting the assessment criteria. Recent research indicates enhanced student attainment when efforts have been made to ensure that students understand assessment criteria for any task.

### *Why will it be assessed this way?*

To take into consideration the learning needs of all students, it is useful to consider whether the chosen assessment strategy is the only possible one for judging student attainment. Knowing why a strategy has been chosen makes it easier to consider an alternative should the need arise for any student in the class.



### **For some students with impairments. . .**

For students who have impairments of various kinds, the usual assessment format may need to be modified to achieve the assessment objectives. Clarity about the latter will be very helpful in determining acceptable modifications, which will be different for different types of assessment, or for different parts of the assessment. For example:

- A student may be considerably disadvantaged by part of an exam paper with a heavy concentration of text, such as multiple choice questions, but have no additional difficulty in reading and understanding brief essay titles.
- A student unable to participate in an oral group presentation of project work may have no particular difficulty in producing extended pieces of writing for a dissertation.

## *Assessments*

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- A student who has a hearing impairment may have no additional difficulty in completing a written exam paper, but invigilators may need to provide oral information during the examination, e.g. about changes to the exam paper, in writing.

It is possible to give someone something quite different to do while assessing the same things, on the same criteria. For example, a *viva voce* examination might be an appropriate alternative to a written examination. A three dimensional model might demonstrate understanding of building design just as well as a drawing. The justification for changes to the assessment will rest on the nature of the assessment as much as on the consequences of the student's impairment.

Possible modifications can be considered under the following headings:

- Alternatives to how the assessment is carried out
- Alternative timing of assessment
- Alternatives to what is assessed

### *Alternatives to how the assessment is carried out*

There are various ways in which the questions of assessments can be conveyed to students. Students whose first language is sign language may understand signed questions more easily than written text. Students who are blind, partially sighted, or dyslexic may need questions in formats such as Braille, tape, or enlarged print, and for some students the colour and contrast of the exam or question paper is important. Alternatively, the questions or titles of the assignment could be provided on disk, if appropriate access technology is available. Or they could be read to the student.

Achievements which are being assessed may also be capable of being demonstrated in a variety of ways. Responses can be conveyed by a student using sign language, which can then be verbalised by an interpreter, and written by an amanuensis (scribe). For some students who are pre-lingually deaf, written English may be 'deaf' English, i.e. in the word order of sign language, which is very different from the word order of English. If the subject of the assessment is what is understood rather than how this is expressed, then signed responses may be acceptable.

Some students may rely on equipment for the demonstration of assessed achievements, whether in a formal examination environment, or the less formal setting in which assignments are prepared for continuous assessment. A tape recorder, computer, or amanuensis or assistant, may be needed to enable a student to complete an assignment. There is a need for clarity over the role and involvement of

## *Assessments*

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equipment or assistant, so that arrangements are identified which ensure that the student maintains control over producing what it is that is to be assessed.

An amanuensis can be regarded as an efficient writing machine, responsive to instructions and free from the mechanical complexities of keyboards or tape-recorders. It is usually necessary for the amanuensis to be literate in the subject he/she is scribing. This is particularly true of subjects with terminology and symbols unfamiliar to most people.

Working with an amanuensis takes practice, for both parties, as decisions have to be taken about such matters as spelling, punctuation, and, especially in a timed examination setting, the speed of dictation. Negotiations may also need to take place about how visual material is to be conveyed to and from a student who is unable to see or produce it, or about how aural material is to be conveyed to a student who has a hearing impairment.

Where the assessment is carried out may be affected by how it is carried out. Students relying, in a formal examination setting, on either speech-to-text software or an amanuensis, will obviously have to be accommodated in a room separate from other candidates. Other aspects of physical arrangements may also be relevant, such as lighting, height of desks, as well as accessible location and proximity to facilities such as appropriately accessible toilets. Some students become unusually anxious about examinations, and for a few, the provision of a separate room can make a significant difference.

Many departments mark anonymously. Where students produce assignments in an alternative way, departments may have to consider whether the goals of anonymous marking can be achieved in some other way. If departments regard anonymous marking as a protection against marker bias, then it may be possible to achieve this end by some other way of monitoring standards in marking.

### *Alternative timing of assessment*

There are many justifications based on students' impairments for altering the timing of assessments. Students may require additional time to read and understand questions in an examination paper, or material to be mastered for an essay or presentation. Alternatively, they may need additional time to complete their responses, or to perform the practical tasks, which are being assessed. This could be linked to the alternative way of responding to the assignment demands, such as through an amanuensis or access technology. Or it might relate to the speed of writing, which can be reduced for many different reasons, such as a lessening of stamina, impaired manual dexterity, or the consequences of medication. In the case of continuous assessment, this might relate to periods of ill health, or more general difficulties around accessing the relevant materials for working on an assignment.

## *Assessments*

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### *Alternatives to what is assessed*

How an assessment is conducted may affect what can be assessed. In some subjects, marks may be deducted for mistakes in spelling, grammar or presentation. Yet where students are using assistive technology, such as speech recognition software, or an amanuensis, then spelling, grammar and presentation may be shaped by the medium for communicating responses. If a student does an oral presentation using a Voice Output Communication Aid, such as a Light Talker, or a sign language interpreter, control of intonation, part of what might be assessed in some settings, would be outwith the student's control. This underlines the necessity for clarity about what exactly is to be assessed.

## References

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### Resource 1 Information about the programme

Web accessibility guidelines can be found at <http://www.w3.org/WAI/>

### Resource 4 Lectures

*What's the Use of Lectures?* Penguin Education (Bligh, 1972).

### Resource 5 Seminars/Tutorials

Anderson C (1997) "Enabling and Shaping Understanding through Tutorials" in F Marton et al (eds) *The Experience of Learning* 2nd edition, Scottish Academic Press

### Resource 6 Practical classes, including laboratories

Professor Alan Jones's book and video, *Able Scientist, Technologist; Disabled Person*, (Elsek Publications, Loughborough; or Commercial Centre, Nottingham Trent University, 1999)

### Resource 7 Placements, study abroad, and field trips

Mobility International USA, web address <http://www.miusa.org/index.htm>

Gagliano, G and Moore, N, *Studying Abroad: A Guide to Accessible University Programs and Facilities for Students with Disabilities – The United States and Canada* (1997)

Association for Higher Education, Access and Disability (AHEAD) Report to the European Commission D.G. XXII on the Findings of the AHEAD pilot study on the participation of Students with disabilities in SOCRATES 1996 – 9. AHEAD, Dublin. <http://www.ahead.ie/>

Van Acker, M (1996a) *Studying Abroad: 1, Checklist of Needs for Students with Disabilities* FEDORA/KU Leuven: Leuven

Van Acker, M (1996a) *Studying Abroad: 2, European Guide for Students with Disabilities* FEDORA/KU Leuven: Leuven

[Note: The Van Acker Checklist is available in various languages, so that students can use it as a basis for contacting a host University with specific queries about facilities.]

## *References*

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### Resource 8 Information and communications

Guidelines for accessible courseware. This guide has been produced by HEFCE, SHEFC, HEFCW, DENI, TLT Support Network, DISinHE.

Web Access Initiative's web-site,  
<http://www.w3.org/WAI/>

Centre for Applied Special Technology web-site,  
<http://www.cast.org/bobby/>

Disabilities, Opportunities, Internetworking and Technology web-site,  
<http://www.washington.edu/doi/>

### Resource 9 Assessments

Boud, D. (1995) *Enhancing Learning Through Self Assessment*, Kogan Page

Stefani L.A.J. (1998) *Assessment in Partnership with Learners*, *Assessment and Evaluation in Higher Education* 23 (4) pp 339-350

### General

SKILL provides a great deal of information and advice on all aspects of Higher Education study and students with disabilities.

They can be contacted at:

Skill: National Bureau for Students with Disabilities,  
Chapter House, 18-20 Crucifix Lane, London, SE1 3JW.

Voice/text: 020 7450 0620

Fax: 020 7450 0650.

Email: [admin@skill.org.uk](mailto:admin@skill.org.uk)

### **Information Service**

voice: 0800 328 5050 (freephone)

voice: 020 7657 2337;

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