Enabling Accessibility in the Curriculum for the Physical Sciences

Legal

Disability Discrimination Act 1995

The Disability Discrimination Act 1995 outlawed discrimination against disabled people in employment, the provision of goods and services and the selling/letting of property. Education was exempted but provision of other services by educational institutions was not.

<www.opsi.gov.uk/acts/acts1995.htm>

Human Rights Act 1998

This Act brings into UK law certain provisions of the European Convention on Human rights. It came fully into force in the UK in October 2000 and it ensures the 'right to education' and a 'prohibition of discrimination' in the enjoyment of convention rights. The implications with respect to higher education are not clear.

<www.opsi.gov.uk/acts/acts1998a>

The Special Educational Needs and Disability Act 2001

This became law on 11th May 2001, the Act legislates for the prevention of discrimination against disabled staff and students in the provision of education, training and other related services. The new legislation was effective September 2002 although there was an additional year (until September 2003) to allow the incorporation of reasonable adjustments (e.g. induction loops) and a further two years (until September 2005) for physical adjustments to be made (e.g. access to buildings). At present, Northern Ireland is excluded from this new legislation.
<www.opsi.gov.uk/acts/acts2001.htm>

The JISC Legal Information Service

This service was set up to respond to the issues and concerns generated by the new legislation.

General Guidelines

Code of Practice for the Assurance of Academic Quality and Standards in Higher Education: Students with disabilities (published 1999)

This Code describes 24 precepts or standards that institutions are expected to meet. These cover all aspects of an institution's relationship with students, including teaching and learning. Institutions are expected to treat disabled students as an integral part of the academic community. QAA auditors will use the Code as a benchmark during assessments.

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

What is a TOOLKIT?

A resource which brings together and provides links to:

• reports

• information

• resources

• downloads

for a particular topic.

Accessible Curricula - a good practice guide
Carol Doyle and Karen Robson - edited by Simon Ball and David Campy

This document is designed as a starting point for the support of students with disabilities in learning and teaching.

<www.techdis.ac.uk/resources/files/curricula.pdf>

Accessibility of Laboratory Practicals, Field Trips and Work Placements

A report giving guidelines on how to incorporate accessibility into these areas.

<www.heacademy.ac.uk/resources/detail/id136_accessibility_of_laboratory_practicals_field_trips>

Guidelines for Technology Applications

Creation of Learning Materials

Effective and engaging e-learning materials can go a long way to meeting the accessibility needs of different learners. This section looks at:

- the benefits of e-learning over traditional approaches
- selected scenarios to explore issues around staff skills and accessibility expectations
- sample approaches to making accessible learning experiences for different learners

<www.techdis.ac.uk/index.php?p=9_7>

JISC Senior Management Briefing Paper 15 (September 2001)

Disability, Technology and Legislation: New pressures and new opportunities for further and higher education institutions and staff

<www.jisc.ac.uk/whatwedo/programmes/buildmlehefe/lifelonglearning/mlebriefingpack/22>

Web accessibility

New legislation is being introduced to ensure that educational resources are accessible to all students. Those producing web pages need to be aware that this legislation will have an impact on them.

Physical Sciences Briefing paper 4 Version 2 Issued February 2005

<www.heacademy.ac.uk/physsci/publications/briefingpapers>

Science-based Resources

Workshop: New Legislation, New Opportunities - Implementing the new disability legislation

Loughborough University on Monday 8 April 2002

This event was a collaboration between LTSN Engineering, LTSN Bioscience, LTSN GEES, LTSN Physical Sciences, the UK Centre for Materials Education and the Centre for Education in the Built Environment (all now incorporated in to the Higher Education Academy Subject Network). It focused specifically on the issues for subjects that use lab and fieldwork in their teaching and also examined the implications of using technology in learning and teaching.

<www.engsc.ac.uk/nef/events/past_events.asp>

The report contains many resources - including…

1. Royal Society of Chemistry, Disabled Workers in Laboratories
   <www.rsc.org/pdf/ehsc/disabled.pdf>
2. Science laboratory access manual

3. Equal Access to Software and Information - lots on science teaching for students with various impairments
   <people.rit.edu/easi/>
4. Equal Access Computer Labs
   <www.washington.edu/doit/Brochures/Technology/comp.access.html>

Inclusive Science and Special Educational Needs (ISSEN)

This site aims to facilitate the sharing of good practice and ideas relating science education for students with special educational needs.

Physical Sciences Centre - Disability/Accessibility

The Centre has collaborated on a number of publications and resources on this area and lists other resources specifically to support physical sciences students and staff. For example:

- British Sign Language glossary for science education
- Learning, teaching and assessment: a guide to good practice for staff teaching d/Deaf students in science and engineering

<www.heacademy.ac.uk/physsci/home/pedagogicthemes/accessibility>

National Organisations

Higher Education Academy

The Academy has a number of pages covering disability issues at:
<www.heacademy.ac.uk/ourwork/learning/disability>

Disability support in higher education

Universities and colleges are increasingly aware of the needs of disabled students and students with specific learning difficulties.
<www.direct.gov.uk/en/DisabledPeople/EducationAndTraining/HigherEducation/DG_4000917>

TechDis

TechDis is a Joint Information Systems Committee (JISC - http://www.jisc.ac.uk/) funded service supporting the further and higher education community in all aspects of technology and disabilities and/or learning difficulties.

Skill: National Bureau for Students with Disabilities

Skill promotes opportunities for young people and adults with any kind of disability in post-16 education, training and employment across the UK.

Scottish Disability Team

Funded by the Scottish Funding Council (SFC) and based in the School of Computing at the University of Dundee this is a major new development in the area of improving provision for disabled students across the sector.
Through the delivery of specialised training and the provision of an informative Web site, the Scottish Disability Team aims to improve provision for disabled students across Higher and Further Education in Scotland.
<www.computing.dundee.ac.uk/projects/sdt/default.asp>

The National Association for Special Educational Needs

With over sixty branches across the country The National Association for Special Educational Needs (NASEN) is the leading organisation in the UK which aims to promote the education, training, advancement and development of all those with special educational needs.
<www.nasen.org.uk/Index.asp>

Web Accessibility

World Wide Web Consortium (W3C) Web Accessibility Initiative (WAI)

This consortium promotes web accessibility and produces guidelines for web developers.
<www.w3.org/WAI>

Campaign for a non-browser specific www - Accessible site design guide

This site gives guidance on how to design web sites from an accessibility point of view.

Assistive Technology

Support from computer manufacturers

1. Microsoft has a number of resources for people with disabilities, including a list of types of assistive technology tools broken down into those for visual-, mobility-, language- and learning-impairment.
   <www.microsoft.com/enable/at/default.aspx>
2. Apple has a list of Macintosh solutions for people with Special Needs and links to other accessibility resources including many to US associations for people with disabilities and details of tools for use by those with disabilities
   <www.apple.com/accessibility/resources/>
3. The IBM Accessibility Center has accessibility resources broken down into vision, mobility, speech/hearing, cognitive/dyslexia and education
   <www-3.ibm.com/able/>
4. The Sun Microsystems Accessibility Program reports on accessibility support in the Gnome 2.0 Desktop, including an on-screen keyboard and a screen reader/magnifier
   <www-03.ibm.com/able/>

Techdis

The TechDis Accessibility Database is part of the JISC funded TechDis, Technology for Disabilities Information Service. This site provides an on-line resource of information about products which are available to assist those with disabilities. The resource is designed to provide information on assistive, adaptive and enabling technologies to the United Kingdom Higher and Further education sectors.

Publication Details