Creating Accessible Teaching & Support

This project was funded by the Australian Universities Teaching Committee (AUTC) / Carrick Institute administered by the Department of Education, Science and Training with a view to improving the quality of teaching and support for students with a disability. The views expressed do not necessarily reflect the views of the Department of Education, Science and Training.

ABOUT CATS

The Creating Accessible Teaching & Support (CATS) project was funded by the Carrick Institute for Learning and Teaching to improve the quality of teaching and support for students with a disability.

The project team consulted widely with university teachers, disability practitioners and students, identifying a number of issues that are faced regularly by them. In response to these consultations, we have developed a range of resources that can contribute to more consistent and systematic approaches to addressing the needs of students with a disability and for supporting the staff who teach them.

This booklet is designed primarily for academics and focuses on the needs of students with hearing impairment and the staff who teach them. It introduces the more comprehensive information available through the web resource, webCATS.

HEARING IMPAIRMENT

About hearing impairment

There are two main types of hearing loss: sensorineural, or nerve deafness, which involves impairment of the auditory nerve; and conductive deafness which usually involves a disruption of the conduction of sound through the outer and middle ear affecting hearing before the sound reaches the cochlea and the nerve receptors of the inner ear.

People with hearing impairment (or who are hard of hearing), are not an homogeneous group. Students who are deaf from birth have very different needs to those who lose some hearing later on. Support will need to be tailored to the nature and degree of the hearing loss as well as the timing of its onset. Hearing loss can also affect spoken language development and students will have varying degrees of speech depending on when they lost their hearing.

Hearing loss can range in degree of severity from mild to profound with the loss of some or many frequencies of sound. Sounds with the lowest frequency, such as vowels, are easier to hear for many people than consonants sometimes making it difficult to understand normal conversation. Students who can understand one-to-one conversation may not follow the flow of rapid verbal exchange between a number of people. The more severe the loss, the more the student will rely on visual cues such as lip-reading or a sign language interpreter to supplement oral communication.

Hearing aids and/or cochlear implants will improve the situation for many but they may not be helpful when a lecturer is speaking a number of metres away. Background noise in a large lecture theatre, tutorial space or laboratory can be an issue even for those who can hear adequately in one-to-one communication. Some students have a high-pitched ringing in the ears called tinnitus that can exacerbate these problems. Amplification systems that include FM transmitter/receiver systems with a clip-on microphone for the lecturer can be useful in the classroom situation.

Students who are profoundly deaf from an early age may have limited or no spoken language and often use a sign language known as Auslan. This is a complex language like any other and enables Deaf people to communicate the full range of abstract concepts. These people prefer to be known as Deaf (with a capital D) and share a rich culture and history. Many Deaf people will be familiar with English grammar and syntax but for others English is a second language and must be learned in the way that other non-English speakers do. Deaf students may have needs in common with students for whom English is a second language.

webCATS: http://www.adcet.edu.au/cats

webCATS provides information for academics, administrators and support staff and has been structured around a series of good practice indicators with accompanying benchmarks. It includes references to a range of useful resources and case exemplars to assist you to maintain and enhance the quality of teaching and support for students with a disability.
In order to be able to learn effectively in the university environment, students with hearing impairment may need:
- reserved seating at the front of lecture theatres and seating arrangements in smaller rooms that afford vision of the tutor and other participants
- written and oral material delivered in clear English to compensate for any stylistic idiosyncrasies and limitations in range of vocabulary
- flexible delivery of material including captioned videos and visual accompaniments to verbal deliveries
- support staff such as note-takers and interpreters, and adaptive technology equipment and software such as audio loops and FM transmitters
- access to a dictionary, thesaurus and interpreter during exams and additional time to interpret information.

Students with hearing impairment will also need to develop:
- strategies to validate the conversion of voice to text and the possible inaccuracies that might occur
- effective time management and organisational skills in order to study independently
- recognition of the importance of asking questions and taking an active part in tutorials and group work in order to remain engaged in the process of learning
- assertiveness and self-advocacy skills

• awareness of the code of ethics that governs the work of interpreters in higher education. (Interpreters in higher education must convey the message that is given not provide their own explanations of it)
• strategies to deal with the potential for increased isolation that could occur for those accompanied by support staff.

Some facts
- Only thirty to forty percent of words can be lip-read clearly even for those skilled in this technique.
- Not all people with a hearing impairment can lip-read well.
- Deaf or hearing impaired students in lectures and tutorials may rely on a notetaker and/or an interpreter in Auslan or Signed English, hearing aids, a radio frequency system or a cochlear implant.

The impact of a hearing impairment on learning
Isolation within the learning environment can be a problem for students with hearing impairment. Social contact and interaction with other students is often limited, and this may have an impact on learning. These students may also suffer from a lack of confidence or low self-esteem resulting from previous negative experiences. Students who are hard of hearing may have speech difficulties and may use assistive listening devices that are not as effective in group situations. Students who use sign language may also have difficulties in understanding written information if the language is particularly abstract or complex. It is important to realise that these problems are not intellectual weaknesses but limitations caused by the fact that for them English is a second language.
teaching of content is good pedagogical practice for all students and will benefit everyone not just those with a disability.

Improving teaching practice to accommodate the needs of students with disability will serve to increase academic standards, not lower them.

A wide range of students with or without disabilities will benefit from:
• receiving up-to-date book lists well prior to the beginning of term
• using a variety of presentation methods such as speaking directly toward the class, and writing key lecture points and assignments on the board or overheads.
• repeating, not louder than.
• ensuring that lists of the subject-specific jargon and technical terms which students will need to acquire are made available early in the course.

The quality of teaching and learning opportunities available to students with hearing impairments needs to be assured in the same way it is for other students. The impact of the disability can be moderated when environments and practices are designed to be inclusive.

For example, a student with hearing impairment who relies on a combination of hearing aids and lip-reading to communicate can be completely independent if the physical environment is accessible, teaching practices are inclusive and assistive technology is available. The same person will experience significant disability when the acoustics and lighting in lecture theatres are poor, sound systems are inadequate and there is distracting background noise. If all teaching and learning experiences are conducted orally and/or in groups and students are unable to participate fully in the learning process, they will be disadvantaged academically and socially.

Over the years, students with hearing impairment have been disadvantaged in the education system by lack of access to Auslan sign language interpreters. The fact that the educational achievement for these students has generally been low is more a result of non-inclusive teaching practices than a lack of ability on the part of the student.

Lecturers or tutors who move around and speak from different parts of the room as they lecture or lead discussion, effectively exclude those who supplement their hearing with visual cues. Similar problems arise in computer laboratories, for example, where students are required to put verbal instructions into place while watching the monitor and listening for further information.

Universal Design for Learning (UDL) is a philosophy of education that aims to design and deliver education services and learning environments that are accessible and that accommodate a range of functional capabilities of students. UDL reduces the need for specific kinds of individualised services or remedial supports by connecting the quality of the education program with a capacity to be accessible, equitable and accommodating to diverse student needs. UDL is achieved by means of flexible materials and activities that provide alternatives for students with differing abilities. These alternatives are built into the instructional design and operating systems of education materials. They are not simply added on.

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Teaching students with hearing impairment

Some useful strategies for teaching students with hearing impairment are outlined below. All students will benefit from these inclusive teaching strategies:

- Prior to the class, provide the student with class outlines, lecture notes and lists of new technical terms.
- Make available study materials in ample time for their conversion to accessible formats such as printed transcripts of audio and audio-visual materials.
- Provide important information for students such as assessment dates, timing and exam advice in writing (email is effective), and use written communication if there is some doubt of the student's having understood an answer to a question.
- Explain new concepts as you come to them and write key terms on the board. Provide a summary of key points at the end of the lecture.
- Pace your delivery style to facilitate notetaking, pausing to allow clarification.
- Identify and remove barriers that might limit student participation in class. Students who rely on visual cues such as lip-reading or an interpreter require an unobstructed view of the speaker or signer. Make sure your face is adequately lit even when using videotaped material as part of the lecture or presentation.

Technology issues

Many users of computer technology who have severe hearing impairment may need a combination of hardware such as volume controls and headphones or hearing aids, as well as visual display of auditory information.

Therefore, the accessibility of software to users with hearing impairment can increase when:

- all auditory information is also provided in a visual form
- all visual cues are noticeable if one is not looking directly at the screen
- a ShowSounds feature is supported (a ShowSounds feature allows a user to specify that all sound should be accompanied by a visual event, including a caption for any spoken text).

In addition, product support people must be reachable via text telephones (TTYs).

Inclusive assessment practices

Inclusive assessment policies and practices potentially benefit all students and can reduce the need for, and cost of, adjustments for those with disabilities. The same academic requirements and standards should be applied to all students whether or not they have a disability. The objective in providing alternative assessment strategies is simply to accommodate the functional differences that exist because of the student’s disability, not to give them any additional advantage.

All information (including information about room changes or due dates for assessment) should be provided in a variety of modes: on-line notes, on notice boards, via email and on the subject website.

Depending on course objectives and learning outcomes, the following assessment adjustments may allow students with hearing impairment to compete on equal footing:

- Alternative assignments to those which are based on interviews or questionnaires
- Assignments instead of examination
- Short-answer examination instead of multiple choice examination

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IMS Global Learning Consortium

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www.adcel.edu.au/cats

...for students with hearing impairment

- Different styles of assessment which vary question and response modalities (for example a signing interpreter or the provision of a transcript included in listening tasks and aural examinations)
- Flexible assignment deadlines, particularly if students have had to wait for taped material to be transcribed
- Use of a separate venue with minimal background noise or alternative date or time of examination
- Additional time in examinations, particularly extra time for reading questions especially if using an interpreter (some students will prefer to have questions and instructions ‘signed’ to them)
- Use of computers, amanuenses/scribes, readers and other support in examinations.

Working with students with hearing impairment in the field

It is important to anticipate requirements in all aspects of the learning program including access to field trips and industry sites, ensuring audiovisual resources are accessible and appropriate for students with hearing impairments. When briefing students with hearing impairment in the field, consider utilising the following techniques:

- Wear a transmitter during the briefing if that will help those with hearing aids (as one would in a lecture).
- Captions have been included on any video clips that are being used as part of the course. If these are not available, alternative ways of making the material accessible to students with hearing impairment have been sourced (these might include using an interpreter or providing text alternatives or transcripts)
- Transition to university can be a daunting process for any student. The inclusive and flexible practices that drive course design and delivery should also underpin transition processes. Orientation programs should take into consideration the needs of students with a disability.
- Provide accurate information about courses, subjects, how they will be taught, topics to be covered, and reading required including elements that might make participation difficult for students with some disabilities. This will allow students to make informed choices or seek adjustments before the commencement of the semester. For instance, some language courses with high oral/aural components might be difficult for students with hearing impairment. Opportunities should be provided for prospective students with hearing impairment to meet with lecturers to discuss aspects of the course that might create difficulties for them and develop strategies to address these.
- Orientation for students with hearing impairment who will be using assistive technology and for the staff who teach them will mean that time is saved when classes commence.
- More and more we find that fieldwork can be replicated in a virtual way and that many postgraduate students were finding it easier to access fieldwork that actually involved no fieldwork at all. Therefore, rather than excluding students who find the demands of fieldwork too excessive, we can steer them to areas of the course that require minimal fieldwork or none at all.
- Faculties, departments or any research centre accepting postgraduate students is adequately resourced to provide adequate accommodations
RIGHTS AND RESPONSIBILITIES

Disability legislation
Federal and State legislation including the Disability Discrimination Act (DDA) require universities not to discriminate against people with disabilities. These obligations are further defined in the Disability Standards for Education (2005).

Through the DDA and the Disability Standards for Education students with a disability have a right to (on the same basis as those without disabilities):

• be consulted about their needs
• enrol in courses and programs
• participate in courses and programs (including relevant supplementary programs)
• use services and facilities provided by the university including student support services.

They also have the right to:

• the specialised services without which they would not be able to participate
• to be assisted by independent advocates or others nominated for the purpose
• the reasonable adjustments necessary to meet their needs
• an environment which is free from discrimination, harassment and victimisation.

But students also have a responsibility to:

• make early contact with the university and be willing to discuss their specific requirements (with assistance if necessary)
• be proactive in advising institutions of any difficulties encountered with accessing aspects of the life of the institution
• use the services provided in a fair and effective manner, e.g. observing conditions placed on adjustments made, advising of absences to prevent unnecessary attendance of service personnel such as sign interpreters.

Are prospective students with hearing impairment informed about:

• Disability services and how to obtain them?
• The availability of oral and sign language interpreters, notetakers, real-time captioning and other assistive listening devices?
• The availability of TDDS (telecommunication devices for the deaf - also known as TTY’s or text telephones) and their location?
• The provisions for safety in the halls of residence in case of fire or other emergency?

supervision policy identifies the responsibilities of the supervisor in relation to the diversity of students, and training includes consideration of the learning needs, of and appropriate responses to, students with hearing impairment
supervisors and students negotiate alternative research and communication methods that accommodate the needs of students with hearing impairment.

What about international students?
Included in the diverse international student cohort will be students with a disability whose needs must be recognised and addressed. To exclude these students could constitute discrimination. Universities need to make an accurate assessment of support requirements and promote the benefits to students of timely disclosure for assistance. Students should be appropriately informed through international recruitment processes thereby developing clear and reasonable expectations.

International students will inevitably experience cultural differences even if English is their first language. For students with a disability, this cultural difference will be compounded by the added necessity of dealing with the cultural aspects of disability. Different cultures and countries will provide different levels of support and students might find that services provided by universities in their home country are not available here. In Australian universities, the provision of support usually relates directly to academic activities and the educational experience. Whilst universities might be able to provide advice about avenues to follow in finding outside requirements, technical equipment and other amenities not linked directly to academic course are generally regarded as being the student’s own responsibility.

Students with hearing impairment may expect captioning or other real-time text provision in lectures and tutorials. This is available nowadays in some Australian universities but many students will also find themselves reliant on interpreters and notetakers. Even for those who identify as members of the Deaf community, this can be problematic as Auslan differs significantly from American or British Sign Language. The student may need to spend some time initially developing expertise with a language which is unfamiliar.

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Creating Accessible Teaching and Support for students with hearing impairment
RESOURCES

Vicdeaf (The Victorian Deaf Society)
This site also provides a series of fact sheets including a Student Kit that give facts and figures about hearing impairment in a clear and concise format.

The Australian Disability Clearing House on Education (ADDET) provides information about inclusive teaching and assessment practices. Fact Sheets exist for individual disabilities. See Teaching and Assessment Sheet: Teaching students who have hearing impairment

Towards Success in Tertiary Study series has a study skills booklet for university students who are deaf

IBM ViaScribe
http://www-306.ibm.com/able/solution_offerings/PDF_ViaScribV2.pd
IBM ViaScribe is a voice recognition software package that has been specifically designed for use in lecture theatres to provide real-time captioning from the lecturer’s voice. This software has been trialled in the Liberated Learning Project at St Mary’s University Nova Scotia, Canada and has been expanded for further trials in Australia.

The Higher Education Academy Engineering Guide: Working with students with a disability Case Study 5
http://www.engage.ac.uk/dsis/c5.asp
The Engineering Subject Centre is a national centre delivering support for learning and teaching for the UK higher education engineering community.

Providing Learning Support for Deaf/Deaf Students Undertaking Fieldwork and Related Activities - Geography Discipline Network
http://www2.glos.ac.uk/gdn/disabi/disabf7.htm#7.1
A Z of Learning Activities - deaf students - University of Leeds
http://www.equality.leeds.ac.uk/dei-services/staff/academics/rl/ds/ta/

Strategies for Teaching Students with a Hearing Impairment – University of Southern Queensland.

Teachability web site - University of Strathclyde
Accessible Curriculum for Students with a disability - a series of suggestions on making lecture, tutorials, laboratory work, fieldwork and examinations and assessment inclusive.
http://www.teachability.strath.ac.uk/teachabilityintro.html

Learning, teaching and assessment good practice guides for staff teaching deaf/Deaf students in art, design and communication and science and engineering.
University of Wolverhampton
http://www.wlv.ac.uk/teaching/deafstudents/

Premia Resource Base - includes a range of awareness and development materials for research supervisors, administrators, examiners and others designed to make the research environment more accessible.
http://www.premia.ac.uk

Visit the CATS website for a wide range of resources for maximising teaching and learning experience for students with hearing impairment.
http://www.adcet.edu.au/cats/

Creating Accessible Teaching and Support (CATS) – for students with hearing impairment is one of a series of booklets that provides information and resources to assist universities to create equitable access for students with a disability and to comply with the Disability Discrimination Act and the Disability Standards for Education.

Others in the series are:
• Creating Accessible Teaching and Support (CATS) – for students with vision impairment
• Creating Accessible Teaching and Support (CATS) – for students with mental health conditions

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