



## **Teaching Deaf/Hearing Impaired Students**

Disability Resource Centre  
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Students who are deaf or hearing impaired may be affected in different ways. Losses range from mild to profound and can be conductive (resulting from impairment to the outer or middle ear), sensori-neural (resulting from impairment to the inner ear), or a combination of both. They may use hearing aids, British Sign Language (BSL), lip reading or a combination of the above. It is essential to communicate with the student to find out what his/her particular requirements are.

### **Communicating with the student**

The effect on communication depends on the extent, type and timing of the impairment. A person who has a severe or profound loss before speech has developed, may rely on signed forms of communication, such as British Sign Language (BSL) which has its own structure and syntax, and is different from English. Thus English may effectively be their second language. Reading comprehension and written expression may be affected if vocabulary and experience of English are less extensive because of the inability to hear the language. Speech may also be affected. It may differ in volume, pitch or inflection because the speaker hears his/her voice differently or not at all.

Be aware that you will need to attract their attention before starting to speak normally; firstly try to get into their line of sight, and if that is not effective consider touching the person gently on the arm, bearing in mind it may startle them. When speaking make sure that your mouth is not covered in any way and ensure that you face the person to whom you are speaking. If you are speaking to a deaf person in a group try to ensure that only one person at a time speaks so that he/she can more easily follow the thread of the conversation.

## **Hearing aids**

Deaf or hearing impaired students in your lectures and supervisions may be using one of the following amplification devices:

- Hearing aids.
- Radio frequency system *or*
- Cochlear implant.

Most lecture theatres have been fitted with an induction loop which enables people using hearing aids to have direct input from the lecturer's microphone, thus eliminating background noise. Please remember to turn on the microphone! None of these devices replaces normal hearing but all will benefit the student in some way.

## **Lip Reading**

Many students who are deaf or hearing impaired rely on lip reading to some extent but be aware that only about **30%** of words can be lip read clearly. In addition, not all people with a hearing impairment can lip read well. Where a student is a lip reader, you will need to remember the following when talking to the group in the field environment:

- Face the student so that your lips can be read as easily as possible and ensure your face is not in shadow.
- Speak at a normal pace and do not shout.
- Avoid walking around or covering your mouth whilst talking.
- Try to include contextual clues whenever talking most lip-reading is guesswork.

## **Working with interpreters**

- BSL sign users will need interpreters during lectures. Make sure that the interpreter is within hearing distance and ready before you start talking.
- Speak directly to the student *not* the interpreter.
- The interpreter always lags a little behind the speaker. Be aware of this. You may have to pause or speak more slowly to ensure the interpreter is keeping up.
- If the interpreting has been intensive, provide a rest break every 15-20 minutes or negotiate an appropriate time with the interpreter as signing is intensive and tiring work.

## **Lectures**

### **How you can assist students in your lectures**

#### **BEFORE the lecture:**

If possible, provide:

- Lecture outlines.
- Lecture notes.
- Key dates, references etc in writing.
- Lists of new technical terms that might be difficult to unravel by listening only.
- Printed summaries of audio and audio-visual materials
- Any key announcements about practicals, field trips and examinations should be provided in writing for all hearing impaired and deaf students.
- Ensure students are aware of emergency and evacuation procedures for the buildings they are using.

## **DURING the lecture:**

### **Before speaking:**

- Attract the student's attention unobtrusively eg by moving into their line of vision.

### **When speaking:**

- Face the student so they can lip read.
- Avoid moving around too much.
- Ensure light is on your face eg don't stand with your back to the window.
- Speak clearly, don't shout or over enunciate as this distorts sound and lip patterns.
- Give a clear view of lips: avoid covering the mouth with hands.
- Always face the audience, if something is being written on a board, stop talking until you face the audience again.
- Use gesture and facial expressions.
- Repeat the content of a question from the lecture before giving the answer.

### **Other points:**

- Be aware that teaching strategies useful for students with a hearing impairment may be useful for everyone.
- Try to understand and act upon the requirements of a student with a hearing impairment; this is one of the most supportive strategies you can adopt.
- Agree to wear a microphone or transmitter if the student requests this.

### **Use visual aids:**

- Write key information on the board eg new vocabulary, due dates, references.
- Overheads.

- Films and videos should be subtitled (contact the DRC for advice and information on captioning). If this is not possible, provide a written summary of the main points before viewing, give the student the opportunity to view the video again or to use a note-taker.

It is also useful to permit the interpreter, if one is used, to view the material beforehand, as this allows him/her to develop familiarity with the concepts, thus ensuring more accurate interpreting.

If lights are turned off to watch audio-visual material, ensure that your face - and, that of the interpreter - are still illuminated.

The student may have a note-taker allowing the student to concentrate on the lecture without worrying about writing down all the relevant information. These note-takers are organised by the NMA scheme (Non-medical Assistant) run by the Disability Resource Centre.

## **Supervisions**

- Ensure suitable seating arrangements. A circle or semi-circle is best, as the student can then see all members of the group.
- Use normal language ie. use short sentences rather than single words; use normal speech at a normal rate.
- Ask open-ended questions, not those that require a yes/no response. This will enable you to check that the student has understood the question.
- If a student is having difficulty understanding, **re-word** rather than repeat what you have said.
- Allow only one student at a time to talk.
- Hearing impairments increase the time and effort which students must expend in activities of daily living, as well

as in activities related to their studies. **Be aware of this** if a student is making a request such as extra time for the completion of essays and worksheets.

- Don't single out students with a hearing impairment or discuss their requirements in front of a group.
- Indicate which student is speaking.

## **Examinations**

Some students who are deaf or hearing impaired may be eligible for extra reading and/or writing time when undertaking examinations.

In certain instances, examination papers may need to be adapted into 'plain English'. Thus altering the 'carrier' language to ask the same question but using simpler language constructions. This method is used primarily for people who have been deaf from birth. It is important to ensure that the student is being assessed on their subject knowledge, not their grasp of English grammar.

## **Case Study:**

### **- Mark Lutman**

Institute of Sound and Vibration Research,  
Faculty of Engineering and Applied Science at the  
University of Southampton

### **Background:**

I teach students in Audiology at Masters level at the Institute of Sound and Vibration Research, which is within the Faculty of Engineering and Applied Science at the University of Southampton. While this subject has only marginal associations with engineering, the lessons I have learnt from teaching hearing-impaired students would apply equally to regular engineering students at both undergraduate and postgraduate levels. However, hearing impairment is a common disorder in the general population. Approximately one in seven adults has a great difficulty understanding conversation in a background of noise.

### **Personal Experiences:**

It has been necessary to make certain adaptations to the teaching environment, and to teaching practice, to ensure that these students are fully included. A mixture of technical and personal adaptations is usually required.

Only minor alterations to the curriculum have occurred.

### **Technical adaptations:**

Technical adaptations have concentrated on the main teaching room that is used. Firstly, it was necessary to ensure that all teaching sessions could be timetabled in the same room. Funding was secured from the university to improve the teaching environment: double glazing to exclude external sound, absorbent false ceiling to reduce reverberation (the room was already carpeted), air conditioning to avoid the need to open windows, radio and other microphones feeding into special sound system (with outputs for induction loop and FM signals to feed

hearing aids directly), and spotlights to highlight the lecturer's face for lip reading. A particular difficulty had previously occurred with group discussions and seminars. Room microphones were connected to the sound system, which could operate in lecture or seminar mode. The sound system was designed and fitted by the Royal National Institute for Deaf People (RNID). Use of these facilities has required some discipline.

### **Teaching adaptations:**

All lecturers and visiting speakers are required to wear the radio microphone, and to ensure that it is working effectively. They are requested to always face the audience and to stop talking if they turn away to write on the boards. They should not cover their face while speaking (and preferably shave off any beard). They are asked to either repeat any questions from the audience, or to ensure that they have been understood. In general this discipline has been followed well, with a few lapses.

Lecture notes given out at the start of each module should highlight jargon and technical terms that might be difficult to unravel by listening only. All lecturers are required to provide handouts of all slides or overhead transparencies one week in advance to any hearing impaired students.

Lecturers are encouraged to deliver material in a simple and direct way, avoiding asides and puns that may be amusing to the majority, but which may exclude students with hearing impairment. All staff who may come into contact with students, including secretaries, attend a workshop designed to increase awareness of problems experienced by people with hearing difficulties.

A very small part of the curriculum is inaccessible to hearing-impaired students. Certain practical skills involve being able to hear or identify quiet sounds accurately. The students are allowed to modify their practice by getting another person to listen for them under direction. The assessment is modified accordingly.

**Examinations:**

Other modifications to assessment recognise that reading and comprehension skills are often slower and less developed in those who cannot access spoken language readily. Additional time is allowed in examinations and allowances are made for imperfect spelling or grammar.

**Resources available:**

The University Disability Co-ordinator has been extremely helpful to students with hearing impairment, by assisting them in making claims for finances to purchase additional equipment or services. These have included FM radio systems and the time of a note-taker to sit beside the student in all lectures. Practical work and group work entail less controlled situations that may pose particular difficulties. My experience has been that other students are accommodating during group assignments, and that experienced clinical teachers can ensure that practical work with patients is steered along the right lines.

**Continuing issues:**

Students with hearing impairment have been able to give presentations to their peers without modifying the curriculum. However, one area that continues to cause problems involves group discussions or case presentations in class. Students need to be reminded repeatedly to speak one at a time, to identify themselves before speaking and to speak clearly and at an appropriate pace. This requires constant vigilance by teaching staff.

**Conclusion:**

Students with even severe hearing impairments can access the curriculum with only minor modification, provided there is a systematic and concerted effort by all teaching staff to adhere to a few common-sense rules. Awareness of the difficulties of people with hearing problems can be conveyed to teaching staff in a workshop lasting a few hours, and is worthwhile for most

departments. There are probably some students with undisclosed hearing difficulties in every faculty.

## Summary

For students with hearing impairments, the following checklist may be used to ensure appropriate arrangements are being made (checklist from *The needs of disabled students in further and higher education* produced by SKILL)

- A human aid to communicate, eg sign language interpreter or lip-speaker.
- A qualified support teacher or tutor, eg for language tuition and concept support.
- An induction loop system in lecture halls and seminar rooms.
- Radio or infrared microphone system.
- A textphone (eg minicom) at home, in the student union and/or somewhere easily accessible at the college.
- Access to a fax machine and e-mail facilities.
- For people at the college to undergo deaf awareness training.
- For people you have a lot of contact with to take British Sign Language (BSL) classes.
- A tape recorder and costs of copy typist met for recording lectures.
- Cost of photocopying materials met.
- A computer or word processor to assist with English, particularly grammar.
- A flashing light or vibrating pad for the fire alarm (a flashing bell for hall of residence room).
- Notetakers.
- Local authority support services for deaf or hard of hearing people.
- A TV which has subtitles and video which has the capacity to record subtitles.

## **Resources available**

### **- Disability Resource Centre**

Disability advisers help students organise the help they need due to their disability. This can include organising BSL/English interpreters and note-takers for lectures via the Non-medical Assistance Scheme (NMA). There is also a library of electronic equipment, software, books etc available to students.

### **- Disabled Students' Allowances**

Awarded by the Local Authority (previously the LEA) to home students, the DSA is designed to cover any of the additional costs of studying in Higher Education by a disabled person. The allowance pays for any equipment or human help that is needed in order for the individual to study effectively. In the case of students who are hearing impaired, this may be in the form of note-takers, interpreters or electronic equipment such as laptops.

### **- College Tutors**

College tutors can provide support for the student in a number of ways such as helping make arrangements for extra time during examinations. They can also put the student in contact with the Disability Liaison Officers in the relevant department ensuring that the teaching rooms, lecture theatres used have induction loops if necessary.

## **Further Information:**

- A general guide to teaching engineering students who are disabled:

<http://www.engsc.ac.uk/downloads/resources/disguide2ed.pdf>

- University of Nottingham's guide to 'Inclusive Teaching Strategies' for disabled students, including hearing

impaired students:

<http://www.nottingham.ac.uk/disability/ITS%20leaflets.htm>

## **Contact information**

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### **Leaflets in this series**

- Asperger Syndrome
- Mental Health
- Hearing Impairment
- Physical Impairment
- Visual Impairment