Section 9

Sensory Impairments
SENSORY IMPAIRMENTS

Alone we can do so little; together we can do so much.

Helen Keller
The Report of the Special Education Review Committee (SERC) (1993) described a person with a hearing impairment as one whose hearing is affected to an extent that renders the understanding of speech through the ear alone, with or without a hearing aid, difficult or impossible. Circulars issued by the Department of Education and Science (DES) refer to hearing impairment as a hearing disability that is so serious as to impair significantly students’ capacity to hear and understand human speech, thus preventing them from participating fully in classroom interaction and from benefiting adequately from school instruction. It is further stated that the great majority of these students will have been prescribed hearing aids and will be availing of the Visiting Teacher Service. The category does not include students with mild hearing loss.

It is to be noted that The Irish Deaf Society (IDS), representing members of the Deaf community, defines Deaf as a state of being that defines a group of people who share a perception of the world through an emphasis on visual and kinaesthetic input. This description of deaf is used most commonly for people who are deaf at birth or from very early childhood. Deaf here defines a cultural, social and linguistic group, and is often signified by the use of a capital ‘D’. The term ‘hearing impairment’ is disliked by the Deaf community, who do not consider deafness to be an impairment but rather the mark of a distinct culture.

Hearing loss is usually expressed in terms of decibels (dB), the unit used to measure the intensity of sound. The degree of loss is measured by the number of decibels needed to amplify a sound above the normal hearing level before it is heard. Therefore, the larger the number of decibels needed the more severe the hearing loss. The SERC Report provides a useful summary (p. 105) that illustrates the levels of hearing impairment. (See table on following page.)
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<table>
<thead>
<tr>
<th>Minimum Audible Intensity</th>
<th>Level of Impairment</th>
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<tbody>
<tr>
<td>20–30 Decibels</td>
<td>Mildly Hard of Hearing</td>
</tr>
<tr>
<td>30–60 Decibels</td>
<td>Moderately Hard of Hearing</td>
</tr>
<tr>
<td>60–89 Decibels</td>
<td>Severely Hard of Hearing</td>
</tr>
<tr>
<td>90 Decibels or over</td>
<td>Profoundly Deaf</td>
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</tbody>
</table>

**Mildly Hard of Hearing:** the student hears nearly all speech but may hear incorrectly if not looking at the speaker or if there is background noise. It can be very difficult to identify this condition. Students may have difficulties responding to conversational speech especially with background noise.

**Moderately Hard of Hearing:** the student will experience difficulty hearing others speaking who are close by. The student may subconsciously augment his/her understanding with lip-reading and visual cues. It is difficult to identify the student’s hearing loss from his/her speaking voice, but on close examination the student misses word endings and omits definite and indefinite articles.

**Severely Hard of Hearing:** the student requires a hearing aid and needs to use lip-reading and body language to augment understanding. The student’s speaking voice is characterised by shortened sentences.

**Profoundly Deaf:** the student may use a hearing aid but relies on visual cues and/or sign language to communicate. The student’s speaking voice may seem incomprehensible but some students can achieve good oral skills. Radio aids may be used to transmit the speaker’s voice to the listener.

The majority of students with hearing loss in mainstream schools will have mild to moderate hearing loss and use oral/aural methods as their main mode of communication. However, an increasing number of students with severe to profound loss are now entering mainstream education and some of these students choose to use sign language as their preferred mode of communication.

Indicators of a hearing loss may include difficulties pronouncing some words or speech sounds, failure to pay attention when spoken to, frequent observation of peers for a lead as to what to do, giving incorrect answers to simple questions, a high frequency in asking for repetition of words and sentences, intense face and/or lip watching, mispronunciation of some words/sounds, straining to watch a speaker, a tendency to speak loudly and to have difficulty monitoring voice level, and withdrawal.

The greatest difficulties faced by deaf students are in relation to language and communication. The acquisition of language and the development of a communication system are central to all aspects of learning and teaching for these students. The communication approach used by students is based on the student’s own communication needs and parental preference.
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Tips for Learning and Teaching

(Teachers should note that the Visiting Teacher Service for children and young people with a hearing impairment supports parents/guardians, teachers and other professionals involved with the student. More information is available in Appendix 3.)

Accessing the curriculum involves modifying the acoustic/physical environment and the linguistic/communication environment.

Modifying the acoustic/physical environment

- Ensure appropriate use of hearing aids and assistive technology.
- Where necessary utilise technological aides such as closed caption decoders, FM systems, sound field systems and silent overhead projectors.
- Check the best seating position. Seat the student close to the teacher in order that he/she may lip-read effectively.
- Seat the student away from the hum of projectors or computers.
- Do not stand with your back to the window as the light will affect the ability of the student to interpret facial cues and gestures.
- Do not stand with your back to the student.
- During class discussions allow only one student to speak at a time and indicate where the speaker is.
If students are to be asked to work together, arrange the seating so that the students can see everyone by putting chairs in a circle or horseshoe shape.

When other students answer, repeat their answers.

Do not walk around the room when giving instructions.

Classrooms are noisy environments that create listening difficulties for all students, especially those with hearing loss. Look for minor changes or additions to a classroom that can reduce ambient noise and improve acoustics (e.g. acoustic ceiling tiles, carpeting, curtains for windows, double-glazed windows, elimination of background music, rubber tips on chair, table and desk legs, and avoidance of open-plan classrooms).

**Modifying the linguistic/communication environment**

- Prepare students for the introduction of a new topic, perhaps by writing the title on the board.
- Place a deliberate emphasis on the important instructions or keywords.
- Write on the whiteboard/blackboard/flipchart to support verbal instruction.
- Utilise visual cues to clarify what is said.
- Employ visual resources such as computer programmes/video tapes/DVDs/PowerPoint.
- Rephrase and repeat difficult words.
- Pace oral lessons appropriately.
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- Speak clearly and at a moderate pace.
- Be aware that the student will find dictation difficult – supply photocopied notes where possible.
- Avoid over-pronunciation or exaggeration.
- Modify text and simplify language where necessary.
- Use lively gestures and facial expressions when teaching.
- Short phrases are easier to understand than single words. Chunk information to assist memory and for revision purposes.
- Phrase questions to the student carefully and always say student’s name beforehand.
- Avoid blocking visual access to face through hand movements/books.
- It is harder for a student to communicate with a bearded or bespectacled teacher as these can mask facial expressions.
- Give homework instructions only when class is quiet.
- Allow a friend to check that instructions and information are clear.
- Obtain feedback from the student at regular intervals without drawing too much attention to him/her.
- Consider providing notes prior to a lesson.
- A ‘Buddy system’ can work well, especially in terms of note taking and peer support.
- The student may find it difficult to communicate orally with classmates and it may be useful to explore the possibility of providing signing lessons for hearing peers.
- Encourage social communication with classmates during curricular and extra-curricular activities.
- Remember that students have to concentrate more in class than their peers with normal hearing, thus they may become tired more easily. Frequent breaks are essential.
- Encourage students with hearing loss to identify their own strengths and needs. Students who can ask for assistance when necessary and proactively seek reasonable accommodations will serve themselves well in school and in their futures.
- Teachers need to be sensitive to a student’s level of comfort with regard to self-advocacy and may need to give some children phrases or strategies to use during stressful times. (E.g. ‘Please repeat the last part of the directions.’; ‘There’s a lot of noise in the hallway, could you close the door please?’; and, ‘I missed what Mary just said. Could you repeat it please?’)
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**Additional Resources/References**

5. Deaf Hear (formerly the National Association for Deaf People), website: [http://deafhear.ie/](http://deafhear.ie/)
7. Dublin Deaf Association (DDA), 40 Lower Drumcondra Road, Dublin 9. Tel: 01 830 0522 Fax: 01 860 0231.
8. Ear Foundation: UK charity to support and to provide activities, courses and resources for deaf children, young people and adults with cochlear implants, their families and supporting professionals, website: [http://www.earfoundation.org.uk/](http://www.earfoundation.org.uk/)
14. National Centre for Technology in Education (NCTE) offers advice on how Information and Communication Technology can be used with students with hearing impairment, website: [http://www.ncte.ie/](http://www.ncte.ie/)
Deafblind students (also called ‘dual-sensory impaired people’) have a combined sight and hearing loss that leads to difficulties in communication, information-access and mobility. Deafblind students cannot learn incidentally or by imitation. They learn slowly, but this does not necessarily mean that they have cognitive learning difficulties. Deafblind students tend to fall into four groups:

**Group 1: those born deaf and blind**, which may happen if for example the mother suffered Rubella (German measles) during pregnancy.

**Group 2: those born deaf who then lose their sight.** This is often caused by Usher syndrome – (see page 20) deafness followed by a decrease in sight because of retinitis pigmentosa (tunnel vision).

**Group 3: those born blind who then lose their hearing.**

**Group 4: those who become deafblind**, most commonly as a result of old age, or through an illness or accident.
Deafblind students need an emphasis on conceptual development and exploration of the environment. Provide them with opportunities to explore their environment and to understand and control it.

Deafblind students often have problems generalising skills and concepts from one situation to another and require specific teaching in generalisation.

Access to sensory information should be provided (e.g. awareness of pressure and temperature, balance, smell, taste and touch) as these are important learning pathways for the student.

Encourage meaningful student-adult interaction that responds to the student rather than leading.

Place an emphasis on mobility and the development of hand function. This is essential for most Deafblind students, who use their hands for exploration, information and communication to a much greater extent than sighted, hearing peers.

Additional Resources/References

3. Arbour Hill Braille Unit, Arbour Hill Prison, Dublin 7. Tel: 01 6732949.
5. Sense (UK Deafblind charity), website: http://www.sense.org.uk/
Students with visual impairment are described in Department of Education and Science (DES) circulars as having a visual disability that is so serious as to impair significantly their capacity to see, thus interfering with their capacity to perceive visually presented materials such as pictures, diagrams and the written word. Some will have been diagnosed as suffering from such conditions as albinism, cataracts, congenital blindness, retinitis pigmentosa, etc. Most are described as requiring the use of low-vision aids and of availing of the services of a Visiting Teacher. The category is not intended to include students whose visual difficulties are satisfactorily corrected by the wearing of glasses and/or contact lenses.

Students with visual impairment may display comprehension difficulties, have poor organisational skills, fail to complete assignments and experience difficulty staying on-task. Most students described as having visual impairment are, in fact, partially sighted and can function in the school situation with the assistance of low-vision aids. Those who have deteriorating minimal residual vision or who are totally blind may need to read and write through the medium of Braille.
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Tips for Learning and Teaching

(Teachers should note that the Visiting Teacher Service for children and young people with a visual impairment supports parents/guardians, teachers and other professionals involved with the student. More information is available in Appendix 3.)

- Encourage the student to use visual aids/resources that have been prescribed (e.g. glasses, magnifiers, big-print books, etc).

- Seat the student appropriately in the classroom (e.g. in the middle towards the front).

- Make sure lighting is suitable.

- Make efforts to eliminate the risk of glare from the desk and whiteboard.

- If possible ensure lights are coming from behind or to the side of the student.

- Give clear instructions as the student may misinterpret gestures and facial expressions.

- Consider the use of enlarged print/magnified worksheets.

- The less configurations on a page the better (worksheets can be cut in strips and stapled together to present less work at a time).

- Print materials need to be clear and dark.

- Have lined paper for assignments (the darker the lines the better).

- Nearpoint work should be limited to fifteen minutes or less. The student should be encouraged to look away from his/her work, sharpen a pencil or participate in another activity as this will allow the student to refocus his/her eyes so that the student is less likely to become fatigued.

- Have students measure from their elbow to their fingers and tell them they need never get closer to their work than that distance.

- Slanted desks may be of benefit to individual students.

- Provide contrast on any visual materials used: black and white is best.

- Avoid italic or ornate script. Remember that lower-case letters are easier to read than capital letters because they have a greater number of ascenders and descenders, making them more visually distinctive.
Supplement visual material with clear verbal explanation.

- Require less copying from the board or elsewhere.
- Increase oral activities.
- Use concrete material and hands-on experience whenever possible.
- Allow more time to complete tasks and provide breaks to combat fatigue.
- Do not lower expectations because the student has a visual impairment.

- Provide mobility and orientation training as students with visual impairment experience great difficulty in acquiring skills in direction, mobility and travel. This is particularly important at post-primary level where the student may have to move for individual subjects.
- Arrange for other students to act as buddies and use peer tutoring. Peer-groups should be encouraged to include and support the student.
- Use the student’s name when seeking his/her attention.

Additional Resources/References


4. National Centre for Technology in Education (NCTE) offers advice on how Information and Communication Technology can be used with students with visual impairment, website: http://www.ncte.ie/

Notes