SENSORY IMPAIRMENT

This is a general overview of the implications of vision impairment, hearing impairment and multi-sensory impairment. The impact of impairments for individual students with complex learning difficulties and disabilities would need to be analysed in depth.

What is sensory impairment?

The term sensory impairment encompasses visual loss (including blindness and partial sight), hearing loss (including the whole range) and multisensory impairment (which means having a diagnosed visualand hearing impairment with at least a mild loss in each modality or deafblindness).

Vision impairment (VI)

This term covers varying degrees of vision loss including those who are registered severely sight impaired (blind). Even the latter may have some vision, such as being able to tell the difference between light and dark. There are many conditions that cause different kinds of vision loss, the main distinction between conditions is whether the impairment is ocular (eye) or cerebral (brain). Cerebral VI (also known as cortical VI) is common in children with CLDD/PMLD. Functional vision refers to the interaction between the environment and how the visual information is processed. Knowing a student's condition and degree of functional vision may help staff to understand what they can see.

Hearing impairment (HI)

The two main types of hearing loss are:

- Conductive hearing loss, which is the most common type and results from interference in the conduction pathways through which sound reaches the inner ear. This hearing loss usuallynaffects the volume of sound reaching the inner ear. People with conductive hearing loss maynbenefit from the surgical insertion of grommets or from hearing aids. It is commonly a temporary hearing loss
- Sensorineural hearing loss, which is caused by damage to the hair cells lining the inner ear, or the nerves that supply them. This hearing loss can range from mild to profound, and affects certain frequencies more than others. Consequently, people with sensorineural hearing loss need high quality hearing aids or cochlear implants to gain access to the spoken word and sound in the environment.

It is also possible to have a mixed hearing loss, which arises from both the above.

Multisensory impairment (MSI)

This is a term used to describe students who have a combination of visual and hearing loss. They are sometimes referred to as deafblind, although many have some residual sight and/or hearing. The combination of the two sensory losses

intensifies the impact of each. Students with multisensory impairment have much greater difficulty in accessing the environment and the curriculum, than those with a single sensory impairment.

Possible indicators of sensory impairment

One characteristic shared by all students with VI is that they are limited in their ability to learn incidentally from their environment. Since vision is the primary sense through which children usually explore, organise and integrate information about their environment, when this sense is absent or limited, it impacts significantly on students' curiosity, exploration and information gathering ability.

Like sight, hearing plays a vital role in the learning process. HI causes delay in the development of both receptive and expressive language skills. Having difficulty picking up language in the usual way has a significant impact on all areas of learning.

Students with MSI are more likely to have learning difficulties and additional disabilities than other children, which compound the difficulties arising from MSI, resulting in complex needs. In addition, high anxiety, multisensory deprivation, and behavioural and emotional difficulties often accompany deaf-blindness as a result of the student's inability to understand and communicate.

Implications for teaching and learning

1. VI
It is important to consider factors relating to students' vision condition in order to meet their individual needs. These include: type of condition or visual impairment; age of onset; degree of functional vision; type of intervention provided.

Students with VI and additional learning needs may:

- be delayed in all areas of development, including cognitive, physical, emotional and neurological
- struggle in their attainment of key developmental milestones such as acquiring communication and social skills, attaining orientation, mobility and life skills and understanding abstract ideas and concepts
- have delayed social use of language due to lack of concept understanding, for example.

2. HI

Again, it is important to know: the type of deafness; age of onset; level of useful hearing; means of communication (signing, speech or both); type of intervention, including whether wearing a hearing aid or a cochlear implant. The development of communication is a key issue.

These students may:

- be delayed in the development of both receptive and expressive communication skills
- experience difficulty in learning various aspects of verbal communication, including vocabulary, grammar and word order
- need to communicate through a combination of oral (including speech and speechreading) and manual (including sign language and fingerspelling) methods, depending on the degree and type of deafness and a range of other factors
- display developmental, psychological and emotional problems.

3. MSI

The combination of the two sensory losses, which intensifies the impact of each, makes for much greater difficulties in accessing the environment and the curriculum, than those with a single sensory impairment. Particular difficulties lie in:

- communication and the development of relationships
- mobility and interaction with the physical environment
- processing and integration of information from residual hearing, vision and other senses
- perception of time and space
- transference and generalisation of skills and concepts
- development of abstract reasoning.

Supporting studenst with VI, HI oder MSI

The following approaches may be effective for students with VI:

1. providing appropriate resources (e.g. braille, large print, etc.) and ensuring access to VI specialists, including habilitation (orientation and mobility) specialists, who may be needed to teach students to negotiate their way around school or to travel independently outside the classroom
2. providing information through oral or tactile means, such as providing verbal instructions and tactile pictures (eg Wikki Stix)
3. providing opportunities for experiential learning involving the use of real-life objects which students can touch; providing frequent repeated instructions, as well as opportunities for multisensory learning, including using taste and smell, when appropriate
4. providing opportunities for students to familiarise themselves with the classroom environment without other students being present; concrete (permanent) objects such as furniture and flooring can be used to distinguish between different areas of the room, as can sounds and smells
5. considering glare within the classroom with regard to reflection from lighting and the sun; means to reduce glare, such as blinds, indirect lighting and dimmers should be available, and careful consideration should be given to where best to position students to ensure optimal visual conditions
6. providing assistance with organisational skills, including having a tidy classroom and providing specified places for items to be kept; containers to

store items which are consistent across different classrooms used can assist with this

7. printing text with the highest possible contrast (e.g. black and white (light letters on a dark background may be more legible than dark letters on a light background)) and ensuring large, bold fonts are used ensuring lines of text are widely spaced and justified to the right with simple typefaces such as Arial, on an uncluttered background

8. providing thick paper (so that text does not come through from the reverse side) with a matt finish, as glossy finishes can exacerbate problems with glare

9. providing large felt pens and pencils, and paper with raised or bold lines to aid writing skills; computers can be useful in facilitating independent writing further; additional assistive technology, such as screen enlargement and programs and equipment specifically for children and young people with VI, may also be very beneficial

10. devising strategies to encourage students to gain social skills.

The following approaches may be effective for students with HI:

1. providing access to HI specialists, such as teachers of the deaf, advisory teachers, communication support workers (CSWs), speech and language therapists and audiologists; these people can advise on how hearing aids and cochlear implants (if used) should be cared for and the use of any sound systems (including radio aids and sound field) that need to be in place to enhance students' hearing

2. Improving the acoustics within a classroom, including using carpet, putting rubber tips on chair legs, using soft furnishings such as tablecloths and curtains, placing acoustic tiles such as carpet tiles on the walls, and keeping down external noise

3. being aware of where the speaker is standing when talking; standing in front of a window, for example, will create glare which prevents students from seeing the teacher clearly; ensuring the teacher faces students and speaks clearly, to encourage speech reading

4. ensuring students can see classmates as much as possible and especially when they are speaking; where practicable, and depending on the numbers of students, a recommended classroom configuration is a U-shape

5. providing opportunities for hands-on learning and providing visual resources, to support students' understanding of what is being said

6. providing alternative forms of visual communication such as Makaton, pictures, or symbols to support communication; using Total Communication as an approach – a combination of speech, sign support and fingerspelling.

The following approaches may be effective for students with MSI:

1. enlisting the support of a variety of specialists, such as orientation and mobility and rehabilitation specialists, physiotherapists and occupational therapists, who may be required to ensure that these students reach their potential in terms of mobility and independence

2. providing a secure and stable environment (both social and physical), which provides optimal visual and auditory conditions and consistent, well-cued routines
3. using a wide range of communication options, including speech, gesture, British Sign Language, braille, objects, symbols, etc
4. interpreting all behaviour in terms of being about students trying to communicate their feelings and ideas
5. having a cross-curricular, multisensory approach, which is highly individualised and includes movement-based learning
6. encouraging students to use their hands as tools to provide them with information and help them to communicate
7. intensive interaction is an approach that may be useful; it seeks to build up a learner's motivation and ability to communicate and interact, with the person who is supporting following the learner's lead; sessions are made fun and happen regularly, with the length of time gradually increasing; the pace of interaction is matched to each learner's sensory abilities.

Additional suggestions for learners with no residual sight or hearing
1. provide a touch-encouraging environment. Encourage learners to use their hands to explore the world. Watch/touch learners' hands and learn to 'read' them
2. be aware of what learners are touching and support shared attention on any object being touched
3. use a hand-under-hand touch to explore objects together, or to imitate actions, laying the foundation for communication
4. make your own hands available for learners to manipulate as they wish. Play interactive hand games
5. encourage energetic throwing to develop confidence in use of hands