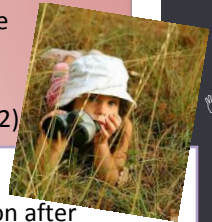




- There are almost 20 000 children and adolescents in Australia with some form of hearing impairment, 15 515 of whom are fitted with hearing aids (Hogan, Shipley, Strazdins, Purcell & Baker, 2011; Australian Hearing, 2010).
- 90% of deaf children are born to hearing parents (Feher-Prout, 1996).
- More than 83% of deaf children and adolescents attend mainstream schools (Power & Hyde, 2002).

Signs and Symptoms

- Will often reply with 'huh?' or 'what'
 - Speech delay/ words are unclear
 - Does not follow directions/ misinterprets directions
 - No reaction when name is called from a close proximity
 - Does not react to a sudden loud noise
- (Centers for Disease Control and Prevention, 2012)



Subtypes and Causes

Hearing loss may be congenital (present at or soon after birth) or acquired later on in life.

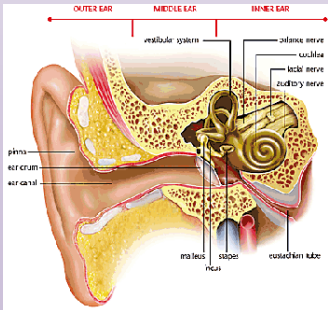
Conductive hearing loss - caused by blockage, infection, damage or trauma in the outer and/or middle ear.

Examples include:

- Accidental injury to ear
- External otitis (swimmer's ear) in the outer ear
- Otitis media in the middle ear
- Fluid in the ears
- Wax build up
- Foreign obstruction in the ear
- Middle ear infection (glue ear)
- Perforated ear drum

Sensorineural hearing loss is the result of damage to or a fault of the cochlea or the hearing nerve.

- Examples include:
- Excessive or repeated exposure to noises at or above 85 decibels
 - Age
 - Diseases i.e. meningitis
 - Viruses i.e. measles, mumps
 - Certain drugs
 - Head injury
 - Genetics
 - Birth prematurely
 - Gestational exposure to virus
- (Australian Hearing, 2003)



Cultural and Linguistic Considerations

- The Deaf community reject biomedical models of deafness and see themselves as a **linguistically and culturally diverse community**. Just as the names of ethnic communities and cultures (eg Italian, Jewish) are capitalised, so is the name of the Deaf community and culture. Since not all people who are physically deaf use Auslan and identify with the Deaf community, the d in deaf is not capitalised when referring to all deaf people or the physical condition of not hearing (Napier, 2002).
- The Deaf community have their own clubs, sporting organisations, churches, arts and film festivals, etc.

Communication

- Australian Sign Language, or **Auslan**, was officially recognised as a language by the Australian Federal Government in 1987 and is the preferred language of the Deaf (Komesaroff, 2006).
- Artificial sign systems such as **'Signed English'** represent the vocabulary and grammar of spoken language using manual signs – generally created by educators in order to increase deaf children's exposure to spoken language by making it visible. It is not a natural language but was devised by a committee in the 70s as an exact representation of English in signed form, although many of the signs are drawn from Auslan (Komesaroff, 2003).
- **Fingerspelling** is the use of hand configurations to represent the letters of a written alphabet. It is used regularly as part of Auslan, often to represent English proper nouns, words that have no direct equivalent in Auslan, and to emphasise a point. Australia uses a two-handed alphabet (Schembri, 2010).
- **Lipreading** involves observing the movements of the lips and tongue, together with facial expressions and body language. Lipreaders will also observe the syllables, natural flow, rhythm, phrasing and stress of the speech (Geers, 1994). It is however quite challenging as many words are impossible to tell apart other than by context. Facial hair makes lipreading more difficult, as does altering ones lip patterns by consciously trying to talk more clearly or loudly as it distorts lip patterns.
- Some deaf people use their voices and some do not. Most have had years of speech therapy and training, and some have developed clear speech. Many have developed speech that is understandable upon repetition but which is marked with unclear pronunciation or intonation (Vargas, 2008).

"Comparative studies of deaf children with hearing parents and deaf children with deaf parents show the deaf children with deaf parents are superior in academic achievement, reading and writing, and social development"

(Ewoldt, Hoffmeister, & Israelite, 1992).



Deaf Children's Rights in Education

- The Office of the United Nations High Commissioner for Human Rights in the Convention on the Rights of Persons with Disabilities, in Article 24 states that Deaf students should be taught sign language and that the linguistic identity of the deaf community should be promoted. It also states that the State should take appropriate measures to employ teachers who are qualified in sign language. Article 30 states that the Deaf cultural and linguistic identity should be recognised and supported (United Nations, 2006). Australia signed these declarations on 30 March 2007.
- Australian states and territories recognise that all students, regardless of their 'disability' have the potential to learn and that a student's strengths must be focused on and accommodations addressed to meet their individual needs. They also recognise the importance of diversifying instruction to promote inclusivity (Hyde, Carpenter & Conway, 2010).
- This may involve the establishment of a professional team of speech pathologists, visiting teachers of the Deaf, interpreters, note-takers, and audiologists. The level of support will depend upon the individual student's assessed or appraised level of need.
- Teachers should be made aware of the student's condition and implications for learning; the school/ classroom environment should be assessed and assistive devices and supports provided that optimises curriculum access; and professional development should be provided to staff (Hyde, Carpenter & Conway, 2010).

Learning and Teaching Considerations and Strategies

The environment:

- Ensure the classroom is relatively quiet before talking or giving instructions.
- Speak in close proximity to the child with a hearing loss. Speak loudly and clearly – project your voice but do not yell, it distorts your natural lip patterns making it harder for those who lipread.
- Do not talk while walking around the room or turn towards the board while giving instructions.
- When engaging in group work, utilise smaller groups and monitor noise levels as high level background noise makes it more difficult to hear, thereby impacting the student's capacity to engage.
- Ensure you have the Deaf or hard-of-hearing student's attention before giving instructions or speaking.
- Seat the student with his/her back towards the light source since it is difficult to lipread when looking into the light.



Assistive Devices and Technology:

- Familiarise yourself with assistive listening devices, FM systems, hearing aids and cochlear implants - their functions, maintenance and ideal/unideal conditions for use.
- Obtain flashing strobe lights for classroom and school alarm systems.
- Obtain communication devices such as captioned telephones, video relay service technology, TTY, and other such devices for learning and play.
- Utilise visuals as much as possible and provide a visually stimulating environment.
- Utilise visual technologies such as KidPix and PowerPoint, telescopes, microscopes, binoculars, and digital cameras.

Inclusivity:

- Teach basic sign to the whole class. Incorporate basic signs into songs, stories and communication.
- Have visual pictures of the Auslan sign next to written and picture labels of various objects within the classroom.
- Place Auslan charts around the room teaching basic signs, i.e. colours, emotions, greetings, animals, fingerspelling, etc.
- Employ Auslan interpreters or a Deaf teacher or teacher aide, or utilise Deaf adults in the classroom as language models.
- Provide opportunities for deaf/hard-of-hearing students to meet with other deaf/hard-of-hearing students (pen pals, internet, deaf sports carnivals, etc).

Literacy

- Without a strong L1 it is difficult to learn an L2. Strengthen the child's first and natural language. Utilise Deaf adults for storytelling, reading times, sign-singing, and throughout daily procedures and activities.
- Deaf students rely more heavily on the use of semantic processing of content words than phonological information (Komesaroff 2002:35). Intervention strategies and activities therefore require high visual, as opposed to auditory, components.
- Translate stories using Auslan, not as a developed English manual code. Children will eventually begin to realise that even though the word order of both the languages are different, the same concepts are still conveyed in both.
- Keep both languages (Auslan and English) visible - Keep the English text visible while interpreting the story in Auslan. This allows the child to make sense of both languages, while still noticing that the meaning originates in the printed text.
- Check for understanding. Ask the student questions that require him/her to repeat content rather than respond with yes or no answers.
- Re-read stories on a "storytelling" to "story reading" continuum.

(Doyle & Dye, 2002; Schepler, 1997)

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Note:

Children with normal hearing passively absorb information from the environment. This is referred to as incidental learning and accounts for as much as 90% of learning, with only 10% from direct instruction. A child with a hearing loss cannot casually overhear what people say and therefore misses out on essential daily information and practical knowledge needed to make progress in both the school environment and the community. Children who have a hearing loss will need to be taught directly many of the skills that other children learn incidentally (Doyle & Dye, 2002).



Relevant Organisations, Links & Resources

- Deaf Children Australia - www.deafchildrenaustralia.org.au
- Bilby Special Needs Resources – www.bilby.net
- Deaf Services Queensland - www.deafservicesqld.org.au
- Deaf Sports and Recreation Queensland - www.dsrq.org.au
- Deaf Australia - www.deafau.org.au
- Parents of Deaf Children - www.podc.org.au
- Royal Institute for Deaf and Blind Children - www.ridbc.org.au
- National Auslan Interpreter and Booking Service - www.nabs.org.au
- Australian Communication Exchange - www.aceinfo.net.au
- www.auslanresources.com.au
- www.signplanet.net
- www.aussiedeafkids.org.au
- www.auslan.org.au
- www.australianbabyhands.com
- Read articles/books by David Schepler, Trevor Johnston, Adam Schembri, Jemina Napier, or Linda Komesaroff.

