WHAT'S NEW

New workshops have been scheduled in the coming months along with several Family Mornings, covering a range of topics. (see page 38 for more details)

LiteracyBits - a new feature in the SERUpdate highlighting current literacy information and resources. (see page 32 for more information)

Introduction

This year SERU welcomes two new teaching staff. Melissa Campbell, from Modbury Special School, has joined the Inclusive Technologies Service as Project Officer Learning Technologies and Kerry Papadopolous, previously a Disability Coordinator, as Project Officer Teaching and Learning Resources.

We also welcome Craig Slee, Administrative Services Officer, who will be working with the Inclusive Technologies Service. With the current growth in emerging technologies SERU is experiencing an increasing number of requests for professional development and equipment. To meet this demand a new Inclusive Technologies Service has been established and the staff are developing a new model for Assistive Technology provision.

In this edition of the SERUpdate teachers and regional office staff provide up to date information on the latest developments in the area of hearing impairment. The topic begins with an introduction by Karen Marton, Educational and Developmental Psychologist (Sensory) DECD. The articles include mental health, Otitis Media, Sound Field Systems, inclusion models, listening comprehension and students with hearing impairment who have additional needs. Information on the Centres for Hearing Impaired in SA, and a list of contacts is also included. A range of new Auslan resources are available at SERU for loan, described on page 36. We hope you enjoy reading this edition of SERUpdate and gain a better understanding of the problems associated with hearing impairment.

Dymphna James
A/Manager
**IN THIS ISSUE**

### FOCUS ARTICLES

<table>
<thead>
<tr>
<th>#</th>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Hearing Impairment</td>
<td>Karen Marton, DECD</td>
</tr>
<tr>
<td>2</td>
<td>Mental Health in Children with a Hearing Impairment</td>
<td>Karen Marton, DECD</td>
</tr>
<tr>
<td>5</td>
<td>Otitis Media - A Hidden Barrier to Education Success</td>
<td>Greg Pedder &amp; Rob Johnston, DECD</td>
</tr>
<tr>
<td>9</td>
<td>Otitis Media</td>
<td>Cathy Jackman, DECD</td>
</tr>
<tr>
<td>11</td>
<td>Can’t Hear, Can’t Understand...Can’t Learn</td>
<td>Sue Herbert, Chris Bowen, Judy Myers, Chris Olsen, Ailsa Howard, DECD</td>
</tr>
<tr>
<td>12</td>
<td>Looking for a Cost Effective, Evidence Based Way to Improve Access to the Curriculum</td>
<td>Chris Bowen, DECD</td>
</tr>
<tr>
<td>14</td>
<td>Screening for Listening Comprehension Difficulties</td>
<td>Ailsa Howard, DECD</td>
</tr>
<tr>
<td>16</td>
<td>Centres for Hearing Impaired in South Australia</td>
<td>Rosalind Bisset, Elizabeth Park CHI</td>
</tr>
<tr>
<td>18</td>
<td>Bilingual Practice for Deaf and Hearing Impaired in South Australia</td>
<td>Jan Cowan, Sue Nixon, Rosalind Bisset, Ross Everingham, Elizabeth Park CHI</td>
</tr>
<tr>
<td>20</td>
<td>Including the Listening Needs of Students with Mild to Moderate Hearing Loss in your Upper Primary and Secondary School Setting</td>
<td>Sue Herbert, DECD</td>
</tr>
<tr>
<td>22</td>
<td>Kilparrin Statewide Support Services for Learners with Hearing Impairment and Additional Needs</td>
<td>Ellen Berbec and Rachel Sheuboeck, Kilparrin Teaching Assessment School &amp; Services</td>
</tr>
<tr>
<td>24</td>
<td>Providing Access and Opportunity to Maximise Potential and Achieve Success in a Mainstream Classroom for a Student with a Hearing Loss</td>
<td>Ben McNicholl, DECD &amp; Sallyann McNicholl,</td>
</tr>
<tr>
<td>25</td>
<td>From Diagnosis to School</td>
<td>Early Intervention Service Hearing Impaired, SERU</td>
</tr>
<tr>
<td>27</td>
<td>Theory of Mind</td>
<td>Sally Mainsbridge, SERU</td>
</tr>
</tbody>
</table>

### REGULAR FEATURES

<table>
<thead>
<tr>
<th>#</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>Spotlight on SERU Resources</td>
</tr>
<tr>
<td>30</td>
<td>Resources Related To The Topic</td>
</tr>
<tr>
<td>32</td>
<td>Literacy Bits</td>
</tr>
<tr>
<td>33</td>
<td>TechBits</td>
</tr>
<tr>
<td>36</td>
<td>New Resources</td>
</tr>
<tr>
<td>38</td>
<td>Upcoming Events</td>
</tr>
</tbody>
</table>
Hearing loss is one of the most common health problems among the populations of the industrialised world. Prevalence estimates depend on the criteria used for determining hearing loss but have been estimated to be around 16.6% of the Australian adult population with about 1.4% of children affected. In South Australia, over 100 babies and school aged children are diagnosed each year with a significant hearing impairment.

Hearing loss can affect one ear (unilateral loss) or both ears (bilateral hearing loss). There are many causes for a hearing loss. Conductive losses, including middle-ear infection (otitis media), are generally treatable with antibiotics, although they can have a lasting impact. The article “Otitis Media” by the Hearing Services Coordinators Cathy Jackman, Rob Johnston and Greg Pedder describes this issue.

In contrast, sensorineural hearing loss is a permanent condition that generally cannot be readily treated medically. An increasing number of adolescents are presenting with a hearing loss, probably caused by prolonged exposure to loud music (especially through portable music players). Nearly 20% of hearing loss cases are caused by genetic anomalies. In the past, almost 13% of hearing impairment cases were related to pregnancy issues including maternal rubella, cytomegalovirus (CMV), Rh incompatibility, prematurity, maternal drug/alcohol abuse, trauma at birth, and other pregnancy complications. While advances in medical technology have increased our understanding of the causes of hearing loss, in about 50% of cases the cause remains unknown.

Sound is measured in decibels (dB). Decibels describe the loudness of the noise from 0dB (the quietest sound that can be detected by a healthy ear), to 20dB (the hum of a fridge), 60dB (conversation) to 120dB (a rock concert). Sound is also measured in Hertz which describes pitch – from 125 Hz (the bass keys on a piano or the low notes made by a tuba) up to 8000 Hz (the treble keys on a piano or the high notes played on a piccolo).

While all voices are unique, the average human voice tends to operate from around 30 to 70dB. Some sounds are quieter (p, f) and others are louder (ar, oo). Some are higher pitched (s, t) and others lower pitched (m, or).

Degrees of hearing loss are described along a continuum from a mild hearing loss (20–40 dB) to profound hearing loss (80 dB and above). Depending on where a child is along this continuum, he or she may need hearing aids, auditory training, speech therapy, preferential seating in a classroom, and other special education services.

South Australia has been a leader in deaf education and support for hearing impaired children and their families. South Australia was one of the first states to implement a Newborn Hearing Screening program for all babies born in the state. To date, more than 100 babies have been diagnosed through this program. However, diagnosis is only the first step for these babies and families.

Following diagnosis, the families of these babies are offered information and counselling about their baby’s hearing loss. They are then introduced to the early intervention services that can support their baby develop age appropriate speech and language skills.

There are around 700 children verified with a hearing impairment in South Australian state schools. Of those, 600 attend their local mainstream school with the support of a Hearing Services Coordinator while 90 attend specialist Centres for the Hearing Impaired (CHIs). These 7 CHIs are located within Brighton, Elizabeth Park, and Klemzig Primary Schools, Adelaide High School and Windsor Gardens Vocational College while the Oral Aural Unit is located in Hillcrest Primary School. In addition, Kilparrin Teaching and Assessment School supports children and students with additional disabilities while the Auslan Early Learning Program which operates within the grounds of Klemzig Primary School caters for 10 preschool children. These support programs will be described in articles later in this edition.

Besides reduced ability to enjoy music and other sounds that we appreciate, hearing loss may produce social isolation, distorted communication and, in some cases, stigmatisation, all of which can affect mental health and quality of life. Therefore, judging from the high occurrence, hearing loss may well be a major source of impaired mental health in the population. This issue is addressed in the first article.

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MENTAL HEALTH IN CHILDREN WITH A HEARING IMPAIRMENT

Mental health, particularly depression, is a significant problem in modern society. Although it is most common in people between the ages of 35 and 44 (National Survey of Mental Health and Wellbeing of Adults, 1997), it can affect people of all ages from all walks of life. While the basic symptoms of any mental health problem are the same for children and adults, data suggests that the actual presenting symptoms differ according to age (DSM-IV). Certain symptoms such as somatic complaints (“sore tummy”), irritability, behaviour and attention problems are particularly common in children, whereas adolescents are more likely to exhibit moodiness, social withdrawal, substance abuse and eating disorders (Verduyn, 2011).

There are significant personal and social costs associated with a mental health problem for both sufferers and their families. The anger and irritability that often come with depression can cause family conflict, while high levels of anxiety may lead to excessive dependence on family members. In some cases, risk of suicide also puts families on high alert and can lead to high levels of stress amongst family members (Manicavasagar, 2012).

Unfortunately, the people most likely to suffer mental health issues are those with an intellectual, physical or sensory impairment. In the Victorian Deaf community, the prevalence of mental health problems in signing adolescents is estimated to be around 45%, compared to the overall National Survey rate of 19% (December, 2011).

Sadly, the problem is not confined to the adult population. Research has shown that about 45% of young Deaf / Hard of Hearing (D/HH) children experience emotional, behavioural and adjustment problems compared to 18% of children in the hearing population (Mahoney, 2006). Specifically, D/HH children are 6 times more likely to suffer depression (Fellinger et al, 2008) and are 3 times more likely to be sexually abused (Kvam, 2004).

What can cause such significant problems for these children?

While there is little doubt that genetics and biology can play a role in clinical depression (especially in more severe forms of the disorder), the majority of cases appear to be due to a combination of biological, social, environmental and psychological factors (Manicavasagar, 2012). Central nervous system abnormalities often associated with sensori neural hearing loss have recently been implicated in the biological components of mental health issues, but this apparent link is beyond the scope of this paper. Rather, the focus will be on social and environmental factors, such as communication difficulties and social isolation and their resulting psychological factors as these are a significant problem within the Deaf community and have the greatest relevance to the school environment.

Social Isolation

Helen Keller is quoted as saying that her blindness separated her from objects but her deafness isolated her from people. While this degree of isolation is no longer as blatant due to improvements in attitudes towards disabilities, early identification of hearing loss, access to quality early intervention programs and advances in hearing aid technology, any hearing loss makes the communication process more complex. This will obviously impact on social connectedness.

Hogan (2010) found that the rate of social problems for D/HH children in Australia is twice that of their hearing peers. According to Deafness Forum CEO, Kris Newton “The social and emotional impacts of hearing loss (which also clearly have an impact in the school environment and the workplace) include: increased effort and ‘listener fatigue’, stress and frustration at not being able to communicate effectively, a sense of isolation, loss of confidence, difficulties in family relationships, and increased levels of ‘social phobias/anxieties’.

Communication difficulties in particular can result in “a lack of social inclusion and the multiple barriers to meaningful participation in the community” (Shut Out: the Experience of People with Disabilities & their Families in Australia).

In his Australian-based research, Anthony Hogan (2010) found that 20% of family members had difficulty understanding the D/HH child’s speech. As a result, these children tended to be excluded from family conversations. When a child is unable to communicate effectively with family members, they experience a primal sense of isolation which can result in relationship and attachment difficulties.

The problem is even more severe for children reliant on Auslan (Australian Sign Language) living in a hearing family. In one study, only one quarter of the parents of signing D/HH children regarded their competence in sign language as good enough to engage in a conversation with their child. Anyone with an adolescent will know how difficult it is to conduct a two-way conversation with them. When we add a difference in languages (Mum knows only 50 signs, Dad “knows” 10 but doesn’t feel comfortable using them while their 14 year old son relies totally on Auslan), the difficulties are magnified. One needs to ask “How can a relationship be maintained using only 50 words?” “How can two people discuss their feelings, experiences, in fact anything but the very obvious basic needs with only 50 words in common?”

continued
Unsurprisingly, most researchers have found the interactions of hearing mothers and their D/HH children to be inferior to those with their hearing children and tend to consist of simpler and more controlling communication (Lederberg & Prezbindowski, 2000). These researchers hypothesised that this would increase passivity in the child and increase the risk of emotional and mental health problems.

While family communication problems can be blamed on lack of understanding of hearing impairment on the part of parents, problems can occur at school as well. Many D/HH students describe being “present but not included”. Sometimes this is the function of being ‘different’ – not quite fitting in. Mainstream schooling can add to the social and emotional challenges faced by a D/HH student (Hindley et al, 1994). While many hearing impaired students cope well academically in a mainstream setting, the social aspects of mainstreaming are often a challenge. In research conducted by Kent, (2003) mainstreamed hearing impaired adolescents were found to more often experience a sense of loneliness than their hearing peers.

Sometimes, the student’s difficulties result purely from being ‘deaf’. Take for example the young girl who didn’t hear her friends invite her to play with them. They assumed she didn’t like them anymore and excluded her from their games until an insightful teacher intervened. Another case involved a young boy whose friends ran away from him laughing. Unfortunately he didn’t hear the magic phrase “You’re it!!!” and the whole episode ended in tears.

As well as key messages, D/HH children also miss out on important information and learning opportunities. Much of a hearing child’s learning is acquired incidentally - they overhear conversations (some which they weren’t meant to hear) and learn new vocabulary (again, some they shouldn’t learn), they pick up new information that adds to their general knowledge, and by listening to mum and dad offering different experiences and opinions they become aware of differing individual perceptions which helps develop a Theory of Mind. All these opportunities are limited when a child is isolated by their hearing impairment.

**Language**

Language is the skill that separates us from all other animals. As Mead (1967) emphasised, language is the foundation of social interaction. Social connections rely on a shared language. When someone agrees with us, we say they are ‘speaking our language’. We are more likely to feel understood by and connected to someone with a similar communication style. Good communication is both a cause and effect of a healthy relationship, and when communication goes wrong, it may affect intellectual growth, social interactions, language development and emotional attitudes (Cornes and Wiltshire, 1999). When children feel they are not listened to or not understood, or if they don’t understand the discussion as it occurs, they may experience isolation, frustration, worry, shame, depression and anger.

Most (D/HH) children are born into families with no experience of deafness. They can have difficulty communicating verbally with parents and others who are important to them, which may be a source of frustration to all involved.

Language deficits are common in children with impaired hearing. Most studies report that children with a hearing impairment are four times more likely to experience significant language delays than their hearing peers (Blamey, 2003; Geers, 2006). The exception is the D/HH child of signing deaf parents whose sign language proficiency usually matches age expectations. Even young children who have the benefit of an early diagnosis and state of the art aiding struggle with abstract language and the subtleties of social conventions which occur when we overhear others’ use of language.

Verbal interaction with others can be both energising and energy-consuming (Danermark, 1998). While we have all experienced the emotional high of a good chat with friends, anyone who has tried to follow a conversation in an unfamiliar language or in a noisy café will understand the level of concentration required and will have experienced the resulting fatigue (and headache). No wonder D/HH students are 7 times more likely to suffer from headaches and are more than 5 times likely to be labelled as having Attention Deficit Disorder.

**Identity**

While psychologists tend to attribute a D/HH child’s mental health problems to language deficits and social isolation, sociologists focus on the child’s impaired sense of identity. Unlike other minority groups, children with hearing impairments rarely share their minority attributes with their hearing parents – 90% are born to hearing parents. It is not unusual for D/HH children to assume they will be hearing (like mummy and daddy) when they grow up.

D/HH children born to deaf parents who use Auslan as their main means of communication are likely to grow up to be members of the Deaf community able to communicate easily among themselves and with positive views of themselves as D/HH people. In contrast, D/HH children with hearing parents often do not develop effective communication skills and as they grow they may feel they do not belong to a community of either hearing or deaf people. They also lack positive Deaf role models with which to identify. The need to belong is strong, therefore, many of these oral children learn Auslan in their early adulthood in an attempt to become part of the Deaf community.
It seems likely therefore that the hearing status of the parents of the D/HH child may play a crucial role in how the child adjusts to their hearing loss (Lewis, 2003). However, even more important is the attitudes and beliefs hearing parents of D/HH children hold towards hearing impairment which appears to be a major determinant of how well these children adjust to their hearing loss throughout their lives. This has significant relevance to the work of the early intervention providers and the other professionals who deal with the families of D/HH children during the crucial early years.

From the moment of diagnosis (often at 6 weeks of age), these children are treated as different. They have a team around them consisting of Ear Nose and Throat specialists, Audiologists, hearing aid technicians, Speech Pathologists, and a variety of early intervention providers. Their ears are poked and prodded. Their hearing levels are regularly assessed. They spend hours in clinical and outpatient waiting rooms. The medical model is entrenched, and many professionals treat these children as a pair of defective ears to be “fixed”.

In the school setting, many children are provided with an SSO who constantly hovers and offers support with the student’s school work. However, this well-meaning person often inadvertently creates a barrier between the child and their peers. She also marks the child as ‘different’ and often limits the child’s independence and problem solving skills. Therefore, the children grow up thinking they are flawed. They see their deafness as defining their identity.

Many D/HH children develop issues around self-esteem and identity. The exceptions are children born into the Deaf community where deafness is the accepted norm. These children have a strong sense of belonging to the Deaf community, although many will later challenge this in the same way most adolescents work through separating from their parents. While difficult, and potentially a source of conflict and longer term issues, this is a healthy developmental stage which the healthy, resilient adolescent can work through on their road to maturity. However, many children with severe hearing impairment, brought up in the oral world, do not experience this level of acceptance. Their social status is vulnerable as they are neither part of the signing Deaf world nor are they able to participate fully within the hearing world. This marginalised position can be an additional stressor, which may provoke mental health and behaviour problems.

Attachment

Recent research has found that hearing babies can not only hear noises in utero, they can identify their mother’s voices. Measurements of their physiological reactions (heart rate, blood pressure) to their mothers’ voices have shown that they are more easily calmed by their mother than any other voice. Hearing impaired babies are at an immediate disadvantage.

Most hearing parents experience some degree of grief following the diagnosis of their baby’s hearing loss. This can have a significant impact on their attachment to the new arrival. A mother may feel guilt that they may have somehow caused the hearing loss; a father may feel anger that their baby is not perfect; a grandparent may feel fear and uncertainty about how to relate to the baby. Whatever the actual emotions, the baby may be treated less than ideally. As Pressman, Pipp-Siegel, Yoshinaga-Itano, Kubicek, and Emde (2000) noted, maternal sensitivity may be more difficult to achieve when a mother is hearing and her child is deaf or hard of hearing because the “intuitive repertoire” the mother has for interacting with her child does not effectively accommodate the specific perceptual and communicative needs of her child. In the article “My experience of being deaf” Pullen (2003) wrote “For some deaf people, their ability to communicate with the hearing family in which they were raised is poor throughout their lives. Some deaf people have terrible experiences because their parents are unable to accept their child being deaf and so the child is never given the opportunity to access the real world of the Deaf community” (p 213).

The child who is deaf or hard of hearing lacks what Marschark (1993) reminded us is probably the most universal of parent–child communication devices, the oral–aural channel. For both mother and child, it may be difficult to achieve a comfortable and effective style of relating when language is a barrier. Their research found that some mothers of children who are deaf or hard of hearing were seemingly distant and even barren emotionally, as if they had not fully mourned the loss of the perfect child (Pressman et al., 2000).

The future?

While past research has painted a bleak picture, there is reason to be hopeful. In 2004, the South Australian Government committed to screening the hearing of every baby born in the state. In that time, some 200 babies have been identified as having a significant level of hearing impairment. Most of these babies have subsequently been fitted with hearing aids (often by 3 months of age) and engaged with an early intervention provider. The outcome for most of these children has been positive with some demonstrating above average speech and language skills at school entry. This would have been unheard of in past generations. These young children are starting from a much stronger position than those of the last generation. Only time will tell whether this improvement in language skills and family support will result in improvements in mental health.

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As in all areas, prevention is better than cure. Research into the field of mental health is no exception. Several studies have demonstrated that targeted prevention programs for adolescents are far more effective than general interventions. We also need to focus on resilience-building in this population. While language development is an important first step, more must be done about the specific needs of our D/HH students, particularly around identity and resilience. Our schools have an important role to play in this, as do the Deaf community.

References:

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OTITIS MEDIA - A HIDDEN BARRIER TO EDUCATION SUCCESS

Otitis Media (OM), commonly referred to as a middle ear infection, is usually caused by bacteria and is often associated with a mild conductive hearing loss. The middle ear is an air filled cavity stretching from the ear drum (tympanic membrane) to the cochlear (organ of hearing). This cavity contains the three smallest bones in the body: the hammer, the anvil and the stirrup, and is connected to the throat by the Eustachian Tube. These bones transmit and amplify sound vibrations across the middle ear to the cochlear.

Any condition which limits this transmission of sound to the cochlear is called a conductive hearing loss.

There are three main types of OM and only one is directly associated with an infection. An individual or their parents can be quite unaware of the other two conditions.

Acute Otitis Media is the most common form where parts of the middle ear become infected and inflamed causing the cavity to fill with fluid. This is the type of OM that is associated with pain and sometimes fever. Otitis Media with Effusion is a condition that can remain after an ear infection has passed where the fluid trapped behind the ear drum does not drain away. There are often no symptoms.

Chronic Otitis Media with Effusion is where the fluid remains in the middle ear over a prolonged period of time or occurs over and over again, even though there is no active infection.

All three conditions are associated with fluid in the middle ear caused by Eustachian Tube dysfunction. The role of the Eustachian Tube is to continually equalise the air pressure in the middle ear, ventilate the cavity and allow fluid to drain away. When it becomes inflamed or blocked the process of fluid build up begins. If fluid remains in the middle ear cavity for too long it can lead to what is commonly called ‘Glue Ear’ where the liquid becomes very sticky and viscous and impedes the movement of the ear drum and bones.

In most cases the effects of OM will usually resolve within twelve weeks or less with the average child experiencing one or two bouts in their childhood. For some children, however, and particularly those of Aboriginal and Torres Strait Islander descent, those from non-English speaking backgrounds and children with disabilities, it can become chronic very early in their development and persist throughout childhood.

continued
Diagnosis

OM can be very difficult to detect as it is often not associated with any pain or fever and any conductive hearing loss it causes can fluctuate. There are, however, tell tale behaviours other than pain and fever that can indicate its presence. These include:

- rubbing or tugging at the ears
- difficulty hearing, particularly in noisy situations
- difficulty developing phonological awareness leading to literacy issues
- difficulty discriminating between speech sounds, and
- speech difficulties which could include omitting sounds or substituting sounds.

The above indicators are common to many conditions and therefore the only sure diagnosis for OM is a full hearing assessment by an audiologist. A full hearing assessment consists of Otoscopy, Tympanometry and Pure Tone Audiometry.

Otoscopy is a visual inspection of the ear canal and ear drum using a hand held instrument and can be used to identify excessive wax build up, the presence of foreign objects, inflammation of the canal and ear drum, fluid behind the ear drum and the presence of perforations. All of which can cause varying degrees of hearing loss.

Tympanometry is a quick and easy test of how well the eardrum is functioning and can indicate the presence of abnormal middle ear pressure, fluid behind the ear drum or the presence of a perforation. For any adverse finding a doctor’s advice should be sought.

Pure tone audiometry requires the patient to listen to pure tones at varying volumes to determine the quietest sounds the person can hear at each of the frequencies that impact on speech. The testing is best performed in a sound proof booth and the results are plotted on a graph called an audiogram. Any threshold greater than 20dB is considered to be a hearing loss that will affect access to speech.

If you have concerns about particular students or children your DECD Regional Hearing Impairment Services Coordinator will be able to provide a comprehensive checklist to use to identify students at risk.

Prevalence

As was stated earlier OM is a very common complaint that in the majority of cases will have no long term affects on the individual. The peak incidence period, however, is between six and twelve months of age during a crucial developmental period for establishing auditory skills. The overall incidence of OM begins to decline after six to seven years of age, affecting students during the period when they are learning to read.

It is interesting to note that Australian Hearing estimates that at any given time one in three primary school students will have some form of conductive hearing loss.

There are also particular risk factors which have been linked to a higher incidence of OM these are:

- passive smoking
- use of dummies
- bottle feeding and putting a baby to bed with a bottle
- attendance at day-care centres and pre schools
- overcrowded housing
- poor hygiene
- poor nutrition
- poor access to medical intervention

DECD in conjunction with Flinders University School of Audiology have been collecting data on middle ear pathology and hearing loss among Aboriginal students and Torres Strait Islanders enrolled at primary schools in South Australia for a number of years through the Aboriginal Hearing Screen Program. The data collected in the Western Adelaide Region in 2009 showed 29% of the 504 students tested were referred on for further investigation for either middle ear pathology (23%) and/or suspected hearing loss (24%). It should be noted that this study was not able to distinguish between those students suffering from one off conditions and those who were suffering from recurring bouts of OM.

Implications

Even relatively short bouts of mild conductive hearing loss at crucial developmental periods can have far reaching implications. These will usually be associated with one, or a combination of, behaviour, social/emotional, engagement or literacy issues.

During bouts of conductive hearing loss children miss out on much of the incidental language happening around them and have difficulty participating in conversations and discussions, particularly when in groups.

Restricted auditory input can affect the development of auditory pathways to the brain and language skills. The nuances and subtleties of language may elude them and their difficulties will be exacerbated by noisy environments.

The development of acceptable social skills requires successful experiences communicating and interacting with others during a child’s early and ongoing development. When these experiences become limited it can give rise to inappropriate behaviours towards peers and adults when they begin school, which in turn can lead to further negative experiences. Ultimately these unsuccessful social experiences can colour their attitude to school.
To develop the literacy skills needed for success at school and in the general community the child needs to have developed the auditory and language skills that allow them to be able to:

- discriminate between sounds
- recognise sounds within words
- blend sounds together to form words
- divide words into syllables
- follow and produce an auditory sequence.

The student who has suffered from a conductive hearing loss may not be able to hear the differences between many environmental sounds, let alone sounds in words. Unless students can discriminate between similar speech sounds they will experience difficulties learning sound symbol relationships. The fluctuating nature of conductive hearing loss may cause confusion about particular speech sounds as they may hear the same sound quite differently at different times. They may also have delayed language skills, speech difficulties, an underdeveloped vocabulary, and difficulty following instructions. They may appear confused and even distressed when they miss hear some sounds, for example, ‘Put your pencils in the bin’ instead of, ‘Put you pencils in the tin’.

Confusion, misunderstandings, behaviour issues and feelings of isolation can all lead to low self esteem affecting a child’s social and emotional wellbeing. These students may have less social confidence, seek attention in unacceptable ways and they may suffer from high levels of frustration, anxiety, anger and aggression. They may also display dependence on peers or teachers, be withdrawn, easily distracted, have difficulty adapting to new situations and change, employ listening strategies which appear inappropriate to others and rely on non-verbal behaviour and communication.

**What can be done about OM?**

In the first instance medical treatment must be sought to clear any infection present and any middle ear pathology detected. This could involve a simple visit to the GP for medication and monitoring or more involved procedures that require an Ear, Nose and Throat specialist.

While medical intervention will control and limit the effects of OM it will not redress the accumulated educational, social/emotional and behaviour issues the child may have developed.

What happens in the classroom can turn these student’s experiences in to positive influences of change. Interventions may involve:

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**Maximising the acoustic environment**

Many buildings and classrooms are not suitable acoustic environments for young learners and those with hearing loss due to large amounts of background noise and high reverberation times. Background noise can affect the student’s detection and access to speech and language while high reverberation times can degrade the speech signal. There are many modifications both expensive and inexpensive that can be done to minimise the effects of background noise and reverberation. Turning off noise producing equipment like air conditioners, noisy computers and fish tank bubblers during direct instruction is one of the simplest ways of reducing background noise. Please refer to the article in this journal on ‘Acoustics’ for more information about this topic (see page 11).

**Using assistive listening devices**

If deemed appropriate and of benefit, students diagnosed with conductive hearing loss can be seen by Australian Hearing and may be fitted with hearing aids, a bone conductor, or a personal FM system. All of these devices improve the student’s access to speech. Australian Hearing supplies, replaces and services equipment to clients, up to the age of 26, for the cost of a small annual service fee.

Sound Field Systems (SFS) can also be installed in classrooms and require the teacher to wear a transmitter and microphone. Unlike the personal FM the signal is amplified through one or more speakers to fill the room with an even and consistent teacher voice. SFS have been shown to improve the educational outcomes of all students. They should not, however, be fitted to rooms that do not meet minimum acoustic conditions.

**Strategies and accommodations**

The scope of this article does not allow a detailed discussion of the strategies and accommodations that can be used to assist students suffering from OM, although the list below covers most situations.

The Physical Environment

- Minimise or stop external noise intruding into the teaching space.
- Ensure adequate lighting is available making sure that any flickering or buzzing fluorescent lights are fixed.
- All desks and chairs are fitted with rubber leg stops.
- Soft furnishings are maximised – carpet, pin boards, curtains, hanging artwork etc.
- Sound field amplification (if available) is functioning and utilised.
- Regular checking and maintenance of classroom equipment is organised.

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**SERUPDATE**

**March 2012**

**PAGE 7**

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continued
Classroom Management

- Seat students with hearing difficulties close to the speaker with good visual access to the teaching space.
- Wait for silence before speaking.
- Cue the student into listening.
- Ensure students know how to show they are listening – 5 L’s, SLANT (see links).
- Give instructions in a clear time ordered sequence and then place them on the board – first, second, last etc.
- Face the class when giving instructions or information.
- Speak clearly, do not over articulate and speak in a normal volume at a normal rate of utterance.
- Use a variety of teaching methods – explicit teaching, whole group, one-on-one, small group, peer tutoring, scaffolding, hands on learning, educational games (especially language games), establish a print rich classroom environment.
- Make sure your lips are visible at all times to aid lip reading eg no hands or books hiding lips and keep beards well trimmed or shaven.
- Use a buddy system to assist students with their work.
- Use peer tutoring.
- Pre teach key words and concepts.
- Recap at the start of each lesson and summarise at the end of each lesson.
- Establish and use routines and checklists.
- Use graphic organisers and support teaching with visual aids.

Student Awareness

- Focus on hearing, listening, ear health and brain development.
- Discuss the issues that students with hearing problems face.
- Discuss ways students can reduce noise in the classroom to help their peers.

Targeted educational programs

It is important to know your students well by using assessment tools that target specific areas of need.

The information gained can then be used to design classroom experiences and individualised programs that help students develop the skills and knowledge they require. These could include individualised or whole class listening programs, speech discrimination, phonics, reading or language programs. Assistance and or advice on assessments or the development of specific programs can be obtained through your regional DECD Hearing Services Coordinator or other regional support staff.

Resources and Useful Links


The 5 L’s Of Listening (Scroll down): [www.eslprintables.com/printable.asp?id=486605](http://www.eslprintables.com/printable.asp?id=486605)

SLANT: [http://pbiscompendium.ssd.k12.mo.us/ResourcesSchools/SSD/SocialSkills/0138.htm](http://pbiscompendium.ssd.k12.mo.us/ResourcesSchools/SSD/SocialSkills/0138.htm)

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[www.cssd.us/body.cfm?id=462](http://www.cssd.us/body.cfm?id=462)


[http://www.utdallas.edu/~thib/rehabinfo/de.htm](http://www.utdallas.edu/~thib/rehabinfo/de.htm)

Greg Pedder and Rob Johnston
Hearing Services Coordinators
DECD Western Adelaide Region
Ph: 8416 7349

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**Thomas Alva Edison**

*Referring to his deafness and true to his wit, he told extravagant fables about being clobbered by a train conductor...People asked him why he didn’t attempt to invent a hearing aid and he replied*

*“How much have you heard in the last twenty four hours that you couldn’t do without?”*
Otitis Media (OM) is an inflammation of the middle ear, common among children and known as middle ear infections.

Aboriginal children have a higher prevalence of OM and experience longer periods of conductive hearing loss (as a result of OM) than non Aboriginal children (Couzos, 2001 & Zubrick et al, 2004). Research shows that OM with effusion begins in the first weeks of life for many Aboriginal infants with the condition often going undetected and untreated. The cycle of recurring OM is established early in the life of the child.

OM causes Fluctuating Conductive Hearing Loss (FCHL) that may be either transient or persisting. Children’s ability to hear clearly can be reduced by:

- Fluid, instead of air, behind the tympanic membrane.
- Discharge from the ear during a current ear infection.
- A hole in the eardrum from repeated perforation, or
- Scarring, adhesion or destruction of middle ear structures.

While OM is primarily a medical problem the impact of FCHL on the development of language and literacy for Aboriginal children highlights the need for a multi-dimensional collaborative response from education and other service providers.

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<thead>
<tr>
<th>Issues</th>
<th>Otitis Media</th>
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</thead>
<tbody>
<tr>
<td>Poverty</td>
<td>Infant health &amp; well being</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>Hearing loss</td>
<td></td>
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<tr>
<td>Disability</td>
<td>Educational outcomes</td>
<td></td>
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<td>Education</td>
<td>Schooling experience</td>
<td></td>
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<tr>
<td>Maternal and infant health</td>
<td>Emotional &amp; social development</td>
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<td>Housing</td>
<td>Speech &amp; language development</td>
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<td>Employment</td>
<td>School attendance</td>
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Hearing loss affects learning, school retention, social and emotional development and can limit long-term opportunities for study and employment.

If you google OM and/or FCHL you will be inundated with information on these topics. What is lacking in Australian research is longitudinal studies designed to track Aboriginal newborns throughout their childhood, educational setting, and eventual workplace choices.

Aboriginal children generally do not receive the follow up they require for a range of reasons including: lack of knowledge, finances, transport and cultural acceptance of the disease. DECD Hearing Services Coordinators generally do not get to hear about these children until they are just about to transition from kindy to school or indeed, enrol into school. Most times there is very little history of the child’s ear health and hearing issues. The child is often behind in speech and language and has an underdeveloped vocabulary. Attendance is a major issue related to young Aboriginal children. Attendance to pre-schools is vital and our Government supports early entry for Aboriginal children.

In 2009 the Deadly Ears Program found 58 per cent of Indigenous children in Queensland’s remote communities aged 0-14 years had poor ear health. In 2008, the Federal Department of Health and Ageing funded Professor Linnett Sanchez (Flinders University, SA) and her research team for three years to investigate the effect of swimming in saltwater chlorinated pools on the prevalence of middle ear infections among remote Aboriginal communities in northern and western South Australia. The project will extend a small-scale study in remote Western Australian communities that found swimming in chlorinated pools produced a major decline in the prevalence of perforated ear drums in the children in those communities. A final report is due to be completed by mid 2012.

This new research project builds on a program of hearing assessment for school age children in the Anangu Pitjantjatjara Yunukuntjatjara Lands (APY Lands) and Tjarutja Lands that has been under way for six years. The program was funded by DECS (DECD) and run by staff, postgraduate and undergraduate students from Flinders University’s Department of Speech Pathology and Audiology and Flinders medical students.

The hearing assessments have found that a staggering 74% of children tested in the APY Lands fail a hearing screening test, presenting ‘horrific levels of prevalence of conductive hearing loss’ consistent with findings about ear disease and hearing loss in other remote communities. The longitudinal data from this earlier work will now provide an excellent baseline to evaluate the effect of swimming pools on children’s ear health. (Information from The Lowitja Institute).

Professor Sanchez said ‘the level of middle ear disease and related conductive hearing loss is very high. More than 70% of school-age children fail a screening test of hearing and more than 30% of ears in this population have eardrum perforations, about half of which have discharging ears (The Anangu Lands Paper Tracker).

Indigenous ear and hearing health in Australia is in crisis, with Indigenous people suffering ear disease and hearing loss ten times the rate of other people. The rate of Otitis Media among Indigenous Australians exceeds the level described by the World Health Organisation as ‘a massive public health problem…. which needs urgent attention’. (Koori Mail May 19, 2010)

So where to next?

A pro-active model is needed to offer an opportunity to close many of the gaps in the health-education system commencing with improved data collection to include the ethnicity and Aboriginality of newborns who fail the screening and are referred to DECD State Office for early years support. Different levels of support are required for families of newly diagnosed hearing impaired children to support them to attend appointments and follow through with the medical intervention. Whilst this is primarily a health issue, those of us in education need to be working alongside other agencies to strengthen the relationships and build a tighter support for families.

As educators we can continue to build capacity by providing:

- professional and specialist knowledge around Conductive Hearing Loss and its educational implications,
- information regarding optimal acoustic environments,
- advocacy for amplification systems,
- support to students and families affected by hearing loss and work closely with teachers to provide them with the support to enable them to experience success with our Aboriginal learners affected by conductive hearing loss.

If you are interested in learning more about some of the medical advancements in addressing Otitis Media the following link has some interesting articles. Scroll down to the supplement: Otitis Media 2009: an update - http://www.mja.com.au/public/issues/191_09_021109/contents_021109.html

Cathy Jackman
Hearing Services Coordinator,
Northern Adelaide Regional Office.
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Verbal instruction is the primary medium for teaching in any learning institution, particularly in schools and preschools – whether through teacher direction, in peer group situations or following different media and technology. Research shows that children/students spend between 45% - 70% of their school day listening and being expected to respond to what is heard. (Berg 1987 and Flexer 2004).

It is essential, therefore, that students are provided with the best listening conditions so that they have the best opportunity of hearing spoken instruction.

Obviously, if a student is not able to hear or understand what is being said, they cannot be expected to respond, take on new learning and develop new concepts. The listening environment is critical.

Research conducted by Crandell and Smaldino (1994) showed that in an “acoustically good” classroom, students sitting at the front of the room received 83% of the teacher’s voice signal, 66% when seated in the middle of the room and 55% at the back of the classroom. In addition, it is known that at any given time 1 in 3 primary aged children/students will have some form of mild conductive hearing loss (Australian Hearing) which means the auditory signal is further depleted for those students.

Sound Field Units (SFUs) which help to deliver a clearer auditory signal, have been developed over the past 20 plus years. They are not a P.A. system but instead are designed to spread the teacher’s/speaker’s voice clearly and uniformly throughout the classroom.

A number of DECD sites in the Southern Adelaide Region have installed SFUs in some or all of their classrooms.

Teachers using the systems report:
- Improved attentiveness, listening and comprehension with fewer “teacher redirections”.
- Improved learning outcomes – particularly in literacy – for all students but especially so for students with articulation and language difficulties and those with a hearing loss or Auditory Processing Disorder.
- Improved outcomes for Indigenous children/students and students from non-English speaking backgrounds.
- Reduced teacher voice strain.

These local observations are supported by more formal international research.

A portable SFU costs approximately $2000 which almost equates to the amount provided to a school for a student with a disability who attracts an ‘A’ level of support.

A SFU in a classroom will benefit approximately 30 students for the whole year and other students for a number of years to come. Thus the purchase of a SFU provides a cost effective intervention to improve student learning, particularly in literacy rich areas of the curriculum.

If a site is considering the purchase of SFUs, please consult the relevant DECD Hearing Services Coordinator in your region because there are some classroom environments that are not acoustically suitable.

Training and Development from a Coordinator can include:
- information about where to install systems and the placement of speakers
- ideas for the management of multiple systems
- teacher instruction on the use of SFUs in the classroom
- information sessions for school communities.

Sue Herbert, Chris Bowen, Judy Myers, Chris Olsen, Ailsa Howard
Hearing Service Coordinators, Southern Adelaide Regional Office
Ph. 8305 0112
O’Sullivan Beach Children’s Centre staff met with the author and gave their perspective on Soundfield Amplification Systems. This brief snapshot gives an insight into the way these skilled educators value a very cost effective intervention that delivers improved access to the curriculum and therefore an improved opportunity to participate. Thank you to Leanne Mattson (Director) and Cheree Barrett (Teacher). Thanks also to Gill Vial (Teacher) and Deb McKenzie (ECW) who were able to join the meeting a little later.

The centre initially started using a Phonic Ear FM fixed 4 speaker soundfield amplification system in 2002. This system was mounted permanently to cover the listening area in their old building. This system was funded by a grant in 2002 from the Morialta Trust.

According to Leanne, the centre identified Fluctuating Conductive Hearing Loss (FCHL) due to middle ear infections as a major educational issue that needed addressing.

Educational disadvantage due to socio economic status and a high number of children with asthma and allergies were factors that were considered. The 3 peak incidences of middle ear infections in Australian populations happen in the critical early years before children are 6 years of age. FCHL is associated with middle ear infection, the hearing loss will usually be at mild to moderate levels (roughly equivalent to wearing earplugs). According to Australian Hearing one in three Australian primary school age children in any classroom will have hearing loss associated with middle ear infection at any given time. Consequently the incidence of FCHL will be higher in younger populations and even more so in disadvantaged populations.

The Centre staff have a good relationship with their parents and although they have reports from parents of bouts of middle ear infection they are aware that many incidences are undiagnosed or may pass unnoticed. Soundfield amplification systems were originally designed to improve the signal to noise ratio in the educational listening environment for this precise reason – to help children with FCHL hear. Subsequent formal research internationally has found wider benefits than just this cohort. While we are aware of, and assist families to follow up the medical needs of children with middle ear issues, the fact remains that children have FCHL in our preschools and schools and we have to deal with the educational needs of these children to be able to access a predominantly auditory curriculum and give them the opportunity to participate. Soundfield amplification systems offer a cost effective intervention to address this. As we shall see later, in the centre’s experience, the benefits extended to all children and staff not just those with FCHL. The centre staff saw huge benefits for the children and they saw another benefit in protecting the voices of their staff. The original system gave outstanding service for approximately 9 years.

In 2011 the centre moved across the road to a beautiful new purpose built children’s centre. The new centre is blessed with what seem to be good acoustic qualities thanks to good design and acoustic ceilings. Soundfields work best in good acoustic environments. Advice was given that they needed a different system to suit their new centre. Unfortunately the old system was not suitable for the new listening space. The staff trialled a portable Front Row To Go system (costing approximately $1900) and decided this was the option for them. For a number of months the centre was without a system while the centre embarked on raising funds for the new system. Coincidentally, towards the end of 2011 DECD Aboriginal, Student and Family Services provided a brand new Front Row To Go portable soundfield system as part of a state wide program targeting preschool settings with significant Aboriginal enrolments. The package came complete with a teacher microphone and a pass around student microphone. The system was semi permanently mounted to the wall and has been used on a daily basis since then during all formal listening and sharing times.

Cheree noticed an improvement in the engagement of the children at the new centre when they started using their new Interactive White Board. When the soundfield system was installed she noted even further improvement. She said that you could observe the children at the rear of the group really sit up and participate more in the listening experience. Cheree recalls that during the time the centre was without a soundfield system she felt her voice and throat were working hard. Since the new system has been in place she noticed less effort was required with her voice. She reported a benefit that the author had never heard from a teacher before. During story time and times when telling ‘felt’ stories she believes she has a bigger vocal range when using the system because she doesn’t need to project her voice. She is teaching at a ‘conversational’ level and consequently even whispers are audible to the children and more quality is available for her intonation to make the stories have a more dramatic effect. Gill reinforced this by citing an example of a great story, ‘The Paper Bag Princess’. She said the children became very calm and attentive in the quiet parts and the dramatic parts had much more impact without the teacher’s voice having to be raised.

continued
Gill continued that you don't want to be using a projected voice consistently with the children because their perception might be that you are using an unfriendly raised voice. (Interestingly, a primary aged student reported to the author earlier in the week that she believed her teacher's voice was friendlier because it wasn't raised when using a sound field system!) Both Gill and Cheree reported that initially they were a little self-conscious wearing the microphone but now they both agreed that they are very conscious of not having the microphone – the children do not seem as engaged. They say they wouldn't be without it! A feature of the system that the teachers like is the 'boom' microphone (sometimes known as a Madonna mic…). This leaves the teachers hands free to participate fully in the actions of stories and songs. Similarly the teacher can participate fully in all games and other activities with both hands free. Another bonus is that the microphone moves with the teacher's head and there is no fluctuation in sound quality because of varying distances between the mouth and microphone.

Cheree was very keen to comment on the pass around microphone that the children use. This makes the softly spoken children audible to the group. Both Cheree and Deb agree that the pass around microphone appears to have increased children's confidence when interacting with the group. They seem to exhibit more confidence in communication – the emphasis seems to be on the microphone and this seems to take away the self-consciousness for the child. They seem to enjoy hearing themselves through the system and this reinforces their confidence to come forward in the group. This all fits with the Early Years Learning Framework – ensuring the child's voice is heard, literally! Deb was keen to point out that technology is in the curriculum and this is technology that the children are using meaningfully. It also reinforces the aspect of children being effective communicators and Cheree cites an example of how effective and expressive the children using the microphone became when acting out, "The Gingerbread Man". They are gaining immediate feedback on their own effectiveness through the use of the system.

In summary the soundfield amplification system is helping all children hear, it's helping the teachers teach, it's complementing the curriculum, acoustics and technology in place at the centre. More importantly at O’Sullivan Beach Children’s Centre, it is a valued educational tool that delivers exceptional benefits to everyone.

For more information about the benefits of soundfield amplification systems please contact your DECD Hearing Services Coordinator in your Regional Office or the Early Intervention Service based at SERU.

Chris Bowen
Hearing Services Coordinator, Southern Adelaide Region.
Ph 8207 3784
In 2010 a project was implemented with the aim to gather information about listening skills of Aboriginal students who attend primary schools, in a particular cluster of schools.

I was motivated to conduct this research to:

1. Redress the inherent disadvantage of Indigenous students who suffer from middle ear disease at ten times the frequency as their non Indigenous peers.
2. Compensate, through an emphasis on enhanced educational practices, for the negative ongoing effects of fluctuating middle ear disease on students’ ability to communicate effectively, understand information presented in the classroom and develop appropriate social skills.
3. Enervate, invigorate or motivate classroom teachers/educationalists to develop strategies that will result in improved listening comprehension skills which are fundamental to students being successful in school and in the community.

It was envisaged that the information would be used to inform sites/teachers about the listening needs of Aboriginal students, including those who don’t have an identified hearing loss, and to generate conversations about teaching practices and learning environments that will help these students have better access to acoustic information presented in class. It was expected this would lead to improved learning outcomes for Aboriginal students.

The project expanded early in its implementation, when it was decided to screen a similar group of non Indigenous students at each site. This then provided some comparative data.

**The Screening Tool**

“The Auditory Processing Assessment Kit” was developed in Victoria by Dr. Kathy Rowe – Paediatrician; Jan Pollard – Audiologist and Dr. Ken Rowe – Research Psychologist. In the assessment, a sentence length score and a digit score is determined for each student. The sentence length score is an indication of the student’s ability to understand what they hear – including instructions and explanations. The digit score (unrelated information) indicates how well a student processes information in order – e.g the sounds that make up a word or the process for writing a story/recount/report.

**Results**

In the first cluster of schools 98 Indigenous students were screened and 75 non-Indigenous students. They ranged in age from 5 – 13 years. Within this group only 17.3% of the Indigenous students achieved levels at or above the norm in both sentence and digit recall. That is 82.8% of Indigenous students scored below what would be expected for students of their age in either sentence recall or digit recall or both.

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**Executive functioning** – “the capacity that allows us to control and coordinate our thoughts and behaviour. It includes the ability to direct our attention, to plan future tasks, inhibit inappropriate behaviour and to keep more than one thing in mind at once”

Blackmore & Frith – The Learning Brain

**Working Memory** – storing and manipulating/working the information. It allows us to hold information long enough to connect with information learned previously (factual/declarative information) and to carry out procedures

**Short term memory skills** – strong auditory information long enough to repeat without alteration or manipulation

continued
40% of the non-Indigenous students within this same group of schools (cluster) achieved levels at or above the norm in both sentence and digit recall. That is 60% of the non-Indigenous students scored below what would be expected for students of their age in either sentence recall, digit recall or both.

Discussion
It is important to note that this screening tool does not provide a diagnosis of any disorder; it simply identifies a functional delay in some students. The identified functional delay relates to the student’s short-term memory skills. Short term memory is foundational to a student being able to engage working memory which in turn is foundational to the development of executive functioning skills.

Children and students, at all levels of schooling, are expected to engage in tasks and activities that require them to employ working memory skills throughout the school day, e.g. “Think about this story and in your language book, on a clean page, write what you think would be a good title,” or “Remember to take your library book with you because we won’t be coming back to the classroom after recess. We will be going straight to the library and you will need to line up outside the library door and wait for me there.”

In this particular school cluster approximately 80% of the Aboriginal students and 60% of the non-Indigenous students have difficulty storing as much auditory information as would be expected for a student their age. Thus their ability to hold onto information and manipulate it is compromised. This is what is expected of students in class when asked to follow an instruction, complete mental arithmetic problems, complete a sequence of tasks or link new information with something learned previously. In turn the students’ ability to control and coordinate their thoughts, plan tasks and/or adjust their behaviours is reduced.

So in this cluster of schools more than half of all students attending would have difficulty following auditory information presented in class. The reasons for students having poor auditory memory skills are many and varied, but the bottom line is that this is “where students are at” and therefore it is the responsibility of our schools to ensure information is presented in such a way that these students can access it.

The extended consequences of not addressing the problem are significant.

“If the difficulties are not addressed over time students may withdraw, give up, become disruptive/inattentive/disheartened and see little point in trying to catch up.
By the time these students start high school they have usually missed a significant amount of basic information and have gaps in their knowledge, lose confidence in themselves, have ongoing problems following instructions/explanations and integrating new material and have significant problems sequencing information which in turn effects negatively on essay writing, comprehension, spelling....” Rowe, Rowe and Pollard.

The researchers point out that the majority of the students identified by this assessment tool are capable of learning. It is the responsibility of educators to ensure information is presented in such a way that the students are able to access it.

The simple strategies suggested in the research behind the screening tool are not complex or expensive. These teaching “basics” benefit all students and include:

- Gain the student’s attention before speaking.
- Use short, grammatically correct sentences with pauses between sentences/phrases.
- Speak at a slightly slower pace and chunk information.
- Monitor for the “glazed look” and repeat instructions/information as necessary.
- Establish predictable classroom routines.
- Check for understanding.

As well:
- Ensure the environment is as quiet as possible when students are required to listen.
- Stand within 1-2 metres of the student when speaking to them or use a Sound Field Unit in the classroom.
- Use a variety of modalities – visual, kinaesthetic, auditory, tactile.
- Use explicit teaching strategies – demonstrate, model, provide structures, scaffold learning tasks.

Looking ahead
I am now left with a moral obligation. A simple exercise of gathering what I thought would be useful but unremarkable data to use with sites has exposed confronting, even alarming, information about the listening needs of the majority of students in a particular cluster of 6 schools.

The data shows there are significant numbers of students who have difficulty accessing auditory information. Given that research shows children/student are required to listen for up to 75% of the school day (figures vary depending on the research paper), I believe that unless this very fundamental anomaly is addressed, particularly among Aboriginal students, we cannot expect literacy and numeracy skills to improve, or attendance and student retention numbers to increase.

Ailsa Howard
Coordinator: Hearing Services, Southern Adelaide Region.
Ph 8207 3194
Since the 1950s the Education Department has provided dedicated educational facilities for students with significant hearing loss. Currently as part of their range of options, DECD continues to offer specialist education for students with significant hearing loss through Centres for Hearing Impaired (CHI) or the Oral Aural Unit. These are state-wide resources promoting excellence in Deaf Education. Leadership is provided by the Principal of the host school and an Assistant Principal or Coordinator with expertise in the field of Deaf Education. CHI are staffed by teachers with qualifications or experience within the field. The “Teacher of the Deaf Competencies” document published by the National Association for Teachers of the Deaf, endorses the use of qualified teachers within the field and DECD have supported this with scholarship opportunities to up skill our teachers.

There are currently 84 students enrolled in CHI, all having achieved a “High Level of Support”. The H level of support is attained through a panel process which scrutinizes evidence of each student’s needs. CHI are located at Adelaide High School, Brighton Primary School, Elizabeth Park Primary School, Hillcrest Primary School, Klemzig Primary School and Windsor Gardens Vocational College. Each site offers specialist learning opportunities for H level students using DECD policies and frameworks.

**ADELAIDE HIGH SCHOOL**

Adelaide High School CHI provides a Centre of Excellence with specialised services for Deaf and Hearing Impaired students. All students enrolled in the centre have access to all curriculum offerings and are supported by trained Teachers of the Deaf or Bilingual Support Services Officers (BSSOs). Adelaide High School has an excellent orientation program for all students new to the school. The focus of the program is to introduce the students to school routines, provide information and an induction into aspects of the school including Information Technology, Resource Centre, and sports programs and promote the development of relationships with peers and staff. Year 8 students receive an introductory Auslan session with Auslan classes available weekly for interested staff and students. The staff of the centre encourage students to develop a positive self concept and approach to their impairment both as an individual and as a learner. They use the preferred form of communication of the student as agreed in the Negotiated Education Plan (NEP) process, oral aural, or Auslan. Staff take an active role in modifying and adapting curriculum in line with the NEP.

They maintain and develop close links with employer groups, universities, TAFE and other providers of education and employment. A Teacher of the Deaf or a Bilingual School Services Officer (BSSO) provides support to all Auslan students in all subject areas.

**BRIGHTON PRIMARY SCHOOL**

Situated within Brighton Primary, Brighton CHI provides a language rich educational service for the education of Deaf and hearing impaired students from the Southern Region. The aim of the centre is to provide a supportive educational environment which scaffolds and maximises each individual child’s understanding of and capacity to use language meaningfully in the context of the school based curriculum. Each student’s language is carefully monitored and supported through appropriate interventions related to the development of language based skills. English and Auslan are both utilised in the programs offered and the language supports and interventions vary according to the language profile and needs of individual students. Prior to 2012 the Centre provided a range of placement options these included an intervention class, reverse integration classes and regular class placements.

This year our students have all been placed in regular classrooms; with each class offering a Sign-bilingual context. Staff are working collaboratively within this new structure to provide an optimum learning conversation for our students. A comparison of this new model and our previous models of delivery will be made at the end of the year to determine how we organise classes in the future. The Centre attends closely to the well-being and success of our students and our whole school programs reflect this concern.

**ELIZABETH PARK SCHOOLS**

Elizabeth Park CHI offers an acoustically treated, dedicated learning centre comprising of two small classrooms, a speech room and a kitchen activity area. Student FMs and the Smartboards are linked through the Sound Field Systems providing optimum listening conditions. We use a model of reverse integration where hearing students are invited to be part of each CHI class, which has a small student to staff ratio to optimize learning outcomes. The teacher of the Deaf is the classroom teacher, highly scaffolding the teaching of language across each curriculum area.
Auslan bilingual and spoken English opportunities are provided along with individualised speech sessions. Our CHI uses the Accelerated Literacy program, the SAFE program (Personal Safety Skills for Deaf Children) and the Play Is The Way social skills program.

All CHI students move into larger mainstream classes to access specialist Science, History, ICT and PE lessons. Middle and Upper Primary students join larger classes every afternoon to broaden their social and learning experiences. All CHI students are members of the whole school community accessing all the wonderful opportunities of primary schooling. They are supported to access opportunities such as SAPSASA sports, music, choir, signing choir, school captains, gardening, clubs and camps.

HILLCREST PRIMARY SCHOOL

Hillcrest Oral Aural Unit is situated within Hillcrest Primary School and is the only purely Oral Aural option for hearing impaired students in DECD. Our aims are to develop expressive and receptive oral language competence within an interesting and interactive curriculum with intensive speech, language, literacy and numeracy during the morning program in the Unit. The Oral Aural program has an emphasis on an Auditory Verbal approach. Each student has an individual speech, language and auditory program based upon formal and informal language assessments and cognitive development. Staff support parents to reinforce goals with a home program. Hearing impaired students attend age appropriate mainstream classes in the afternoon with support provided by Teachers of the Deaf or School Support Officers who are experienced in working with hearing impaired students. The Oral Aural Unit has a current enrolment of fourteen students and three spacious classrooms provide for three classes of up to six hearing impaired students in the morning program.

All classrooms in the school are extensively treated to provide optimum acoustic conditions by blocking out external noise and reducing reverberation. Infrared sound field systems are installed in all mainstream and Unit classrooms and the resource centre. Interactive Whiteboards in each classroom enable students to learn in a hands–on manner. Hillcrest Primary School and Oral Aural Unit have a strong focus on student wellbeing, the development of social skills and a commitment to the learning needs of all students.

KLEMZIG PRIMARY SCHOOL INCLUDING CENTRE FOR HEARING IMPAIRED

The development of age appropriate language and academic skills is supported through oral and signed programs in a language rich environment including assisted audition. Deaf and hearing impaired students are educated with their hearing peers in bilingual classes. Skilled Teachers of the Deaf provide the necessary pathways for Deaf and hearing impaired students to access the primary school curriculum in their preferred language – English or Auslan. All children are fully integrated within a carefully constructed bilingual classroom of hearing and Deaf students. These classes are staffed by a team who co-teach the classes, including a mainstream teacher, a Teacher of the Deaf and Deaf School Service Officer who is a positive role model to build identity for students. All students, Deaf and hearing, communicate in Auslan learnt as the school’s LOTE (Language Other than English) for 90 minutes per week. Auslan classes are provided for staff and parents. Support to improve communication is provided through individualised programs by a Speech Pathologist, who specialises in hearing impairment and is employed by the centre.

AUSLAN EARLY LEARNING PROGRAM (based at Klemzig Primary School)

This early learning program is the only specialised preschool for hearing impaired children in South Australia and provides a service for the metropolitan area, operating an Auslan bilingual program for children aged from 3 1/2 who

- Have a moderate or greater bilateral hearing loss or are Deaf.
- Are hearing children of Deaf adults (CODAs) or hearing siblings of hearing impaired and Deaf children.

The program aims to develop the child’s communication through immersion in Auslan and English. Children learn through a play-based curriculum (Early Years Learning Framework) with small group activities structured to develop each child’s language. The centre liaises with other support organisations to provide specialised support leading to optimum learning outcomes. The program is available four sessions per week i.e. one full day on Tuesdays and Thursdays and on alternate Mondays for children over 4 years.
During the 1980s, as a result of research, sign languages throughout the world gradually became recognised as languages in their own right for the first time. Around the same time, teachers in various countries, created and began using constructed sign systems, developed in an attempt to overcome the short comings of the oral and sign systems that were in place and which were deemed to have failed to achieve the original language and literacy goals that had been visioned. Since then, bilingual education has transformed through both practice and research reflecting the changes in technology, medical practice and advancements in education.

The aims of Deaf bilingual education remain the same; that is, the development of language and literacy, identity, social, emotional well-being, and an understanding of culture and community.

Crucial to the success of sign bilingual programs is the involvement of fluent, Deaf signing adults. This is necessary both from the language and cultural aspects. The difference that Deaf adults make as positive role models for language and identity is evident with Deaf students not only identifying with the Deaf adults but glimpsing the possibilities of their own lives as successful Deaf adults. In the not so distant past, Deaf students, deprived of contact with Deaf adults, naturally assumed that they would grow up to be hearing. As hearing teachers of the Deaf we cannot and do not understand fully what it is to be Deaf or Hearing Impaired and this is the important difference that Deaf adults make to the students’ learning and well-being.

An excerpt from an article by American Deaf advocate, Jamie Berke, reads as follows: “My early mainstreamed elementary school memories are vague, but one thing stands out — I was definitely NOT part of the class. I did not have interpreters. The teacher read to the class while I sat alone. Being deaf, I did not know what was going on, did not know my classmates’ names, and often did not even know my teacher’s name.” This situation no longer exists in the bilingual settings where students are scaffolded in the integration context, but it does serve to highlight previous experiences of many Deaf adults socially isolated in mainstream settings and forced to endure schooling in their non-preferred language.

In bilingual programs, emphasis is placed on visual learning; the way that Hearing Impaired and Deaf students learn most naturally and effectively. Improvements in technology and, more recently, Interactive Whiteboards and iPads have been an enormous boost for Deaf and Hearing Impaired students, making education more interesting and relevant and enabling them to engage in visual activities in all curriculum areas but most particularly in attaining literacy skills which impacts so heavily on all areas of the curriculum.

The following are three examples of variations of bilingual education in primary school programs in South Australia. In addition both Adelaide High School and Windsor Gardens Vocational College offer Auslan options tailored to meet individual student needs.

Klemzig Centre for Hearing Impaired

In 1993 Klemzig began moving towards becoming the first Auslan bilingual centre in South Australia and by 1997 the school was already known for it’s bilingual programs throughout Australia, with staff from other sites visiting to observe this new model. The school became recultured and the bilingual program is still an integral and highly valued part of the culture of the school.

BILINGUAL PRACTICE FOR DEAF AND HEARING IMPAIRED IN SOUTH AUSTRALIA

WINDSOR GARDENS VOCATIONAL COLLEGE

Windsor Gardens Vocational College CHI caters for students with a wide range of hearing impairments to enable effective learning in different class placements. We use a range of communication modes including Auslan and spoken English.

The Centre provides a broad and balanced education across years 8 to 12 that prepares Deaf and hard of hearing students for effective participation in society.

Student success is supported by making expectations clear, encouraging and supporting parent participation and developing pride in both the Centre and themselves. Students choose subjects from a large range offered and have access to a diverse Senior School curriculum that includes all the vocational offerings within the host school. Individual student needs are at the core of our work and depending on need students can attend all mainstream subjects with support or can participate in withdrawn classes within the Centre.

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continued
Within the bilingual integrated classes, two teachers share the delivery of the curriculum. The mainstream teacher and a Teacher of the Deaf both take responsibility for the learning of all the students within the class but bring their own areas of expertise to the team. The students benefit from access to two highly effective practitioners and Deaf SSOs who are skilled and available to bring a Deaf perspective on accessible delivery of the curriculum.

Through full time integration, Deaf and hearing impaired students are able to equally access all curriculum areas, and fully participate in a range of co-curricular activities. Integration provides an opportunity to interact and communicate freely with a wide variety of adults and peers from whom they can learn academically and socially, developing valuable life skills. This learning from peers is valuable and profound whilst the hearing students also learn to accept and value difference.

Klemzig hosts the state’s only preschool for hearing impaired children, CODAs (children of Deaf adults) and their siblings. The Auslan Early Learning Program (AELP), is a language rich, bilingual program, focusing on the development of language and communication, signed and spoken. It provides preschool children with the opportunity to develop linguistically, socially, and emotionally at an earlier age, prior to moving to the most appropriate school.

Many other structures support the bilingual program e.g. Auslan as LOTE, Signing Choir, Community Auslan classes and Deaf club. The provision of the LOTE program for the last 15 years, has created a community of signers and influenced other schools to provide Auslan as LOTE. The students become very fluent eliminating linguistic barriers between them. 100% of parents surveyed said they believe the language will be an important life skill for their child.

We strongly believe that it is crucial for both academic development and social wellbeing for Deaf and hearing impaired students to receive the specialized scaffolded support that will enable them to be successful in an inclusive environment where they are equal members of a learning community – the best of both worlds.

Brighton Primary Centre for Hearing Impaired has been on a pathway for the implementation of Sign-bilingual strategies since 1998. At that time Auslan was adopted as our Centre’s LOTE (in 2008 it became the LOTE for the regular school also). Gradually, we have built a responsive context that can provide Sign-bilingual access to education as this is a requirement for a significant number of our Deaf students.

About one third of our students are Deaf from Deaf families and providing a Sign–bilingual context for these students is a challenge which the Centre has been managing to its best ability for the past decade. The essence of our approach is “a focus on meaning” . On occasion some of our students build language resources through having experiences with both languages. A number of our students have had significantly delayed oral language when beginning in the program and have subsequently developed spoken language after learning to sign.

Our staff believes that learning through multiple modes enhances the students’ capacity to learn language (individual language capacity varies from student to student) in accord with their own language contexts and abilities. We agree with research findings that suggest that Sign-bilingual contexts are supportive of the wellbeing of both Deaf and Hearing Impaired students.

In the education of Deaf and Hearing Impaired students there are many variables that can impact upon the child’s language acquisition. A foundation of our practice is that it is the quality of the learning conversation that the child is involved in that is the most critical element. The conversation must be reciprocal, proximal to the child’s capability and scaffolded for vocabulary and understanding continually to ensure that meaning is captured by the student and their language developed. The development of Sign-bilingual contexts is challenging and requires building staff capacity with language (both English and Auslan) and the provision of appropriate role models able to demonstrate successful language models to students. Relevant and appropriate training is also a necessary component of provision but can be difficult to source as the demographic for service provision is quite small. A future goal would be for increased collaboration with other Centres.

Brighton also utilises English as a Second Language (ESL) methodology to help ensure that students develop deeper understandings of the prototypical genres of schooling. For some students this means explicit teaching and for others it means using Auslan to understand the different grammatical structures of English (English through Auslan). This reflects the complexity of the goals of Sign-bilingual service provision. From spoken to written or sign to written it is an intricate journey.

Language, be it English or Auslan (or both) must be inherently valued. Student competencies and capacities need to be consistently and carefully monitored with the constant goal of increasing language complexity and capacity. Language is our most powerful resource and it is our obligation to provide access to its potential to our students. In essence this is the premise of a Sign-bilingual provision.

continued
The Australian Curriculum is based on assumptions that each student can learn and the needs of every student are important. Students in Australian classrooms have multiple, diverse and changing needs that are shaped by individual learning histories and abilities as well as cultural, language backgrounds and socio-economic factors.

Diversity of learners Information Sheet ACARA

These objectives are great but what about those students who have a mild to moderate hearing loss in upper primary and secondary schools, including those who are very sensitive about wearing hearing aids or other devices that make them stand out in a classroom. Often they don’t want to use the hearing aids, which means they can’t really hear the teaching that is happening in the classroom! A lot of their energy is spent in avoiding it being noticed that they can’t hear 100% of what is happening in the classroom. This behaviour can impact significantly on their self-esteem, confidence and ultimately the potential they reach at high school.

The facts
- He/she may be the only student with hearing impairment in the school
- He/she may struggle with identity and being part of a social group
- He/she may have increased risk of depression (irritability, frustration, sad, withdrawn, trouble sleeping etc.) and mental health problems (Beyond Blue fact 33)

The behaviours they display may include
- Being inattentive or anxious.
- Responding inappropriately to questions or social interactions.
- Being slow to respond to instructions and in social situations.
- Watching other children to see what has been said
- Speaking in a soft voice, possibly acting as the class clown, being moody or aggressive.

The implications of this behaviour are that they may
- Learn in the classroom by watching, copying work, looking busy, not following the sequence of tasks.
- Develop a poor auditory memory and a delay in the processing of language.
- Miss incidental language happening around them with friends in the yard.
- Not do well in school which impacts on their future prospects and earning power.

What students with hearing loss think of high school classes
- “Sometimes you don’t hear all the oral work and the teacher forgets about you”.
- “People don’t understand me. I am a creature in a zoo-type scenario”.
- “Sometimes you feel like you’re not like others eg. other people can hear anything”.

(Linda Byrnes, PhD thesis, Uni of Melbourne 2008)

Is the student with hearing loss in my class at risk?

Make a time to talk to and get to know the student privately and confidentially and ask if they have any concerns at school. You can submit a referral to the DECD Regional Support Services for the Hearing Services Coordinator if you are unsure or you can complete the Secondary SIFTER screening tool that can be downloaded from the Internet for personal use only. The Secondary SIFTER is a screening instrument for targeting educational risk in secondary students by Karen L. Anderson, USA. (http://www.nwresd.k12.or.us/pdfs/SecondarySIFTER.pdf)
“Being Deaf or hearing impaired is not a risk factor…it is the factors surrounding deafness that are the risk factors for mental health issues” (http://www.health.qld.gov.au/pahospital/mentalhealth/damh.asp)

What can be done? Start small, grow slowly and reflect…

- Improve the quality of life for hearing impaired students (and indeed all students in your class!) by encouraging empowerment (a sense of control, a sense of meaning and purpose and a sense of connection), promoting protective factors and focusing on early support systems if the student experiences problems (counsellor led small groups for wellbeing activities in and across the school)
- Use of mentoring systems or cross-age peer support programs available in school and ‘peer buddies ’ in each subject area.
- Understanding the listening environment of your classroom (the acoustics of the room) and discussing this with your DECD Hearing Services Coordinator. Use the class Soundfield system if you have one installed and ensure it is functioning well. This system will benefit all students in your classroom and your voice too!
- Gain an understanding of differentiated curriculum possibilities in your teaching sphere and also inclusive assessment strategies (DECS Unlocking the World PD - Inclusive education: teaching students with learning difficulties and disabilities in mainstream classrooms, SERU training and resources available). Good instruction is the basis for differentiation.
- Ask the student for feedback about your teaching style and assessment tasks in class, eg. what they find easy to ‘hear’ in class and what is difficult for them. Think about the core competencies /processes you are teaching and select what you will differentiate in your lessons and evaluate afterwards.
- Utilise technology to assist students such as television captions, digital pens that reproduce notes as text files, iPads and Dragon Wizard apps, Interactive Whiteboards, u-tube clips with subtitles etc.
- Good use of Negotiated Education Plan meetings with the student as key person, Individual Learning Plans, Personal Learning Plan subjects in Year 10, English topics, On the Same Basis documentation etc.

“Social and emotional wellbeing has been linked to young people’s schooling outcomes, their social development, their capacity to contribute to the workforce and the community” beyond blue sheets

Resources

- Make contact with the Hearing Services Coordinator in your DECD Regional Office for advice, resources, technology and training. They organise a statewide camp for hearing impaired students from 12 – 16 years each year in term 3 for 4 days where the focus is on social-emotional wellbeing activities.

SERU have copies of the following kits for loan.

- Mindmatters…whole school approaches and activities for classroom use on Resilience, Loss and Grief, Bullying and Harassment and Understanding Mental Illness. http://www.mindmatters.edu.au/resources_and_downloads/resources_landing.html

References

Linda Byrnes “Revisiting the inclusion debate from the perspective of students who are deaf or hearing impaired” 2008 National Association of Teachers of the Deaf Visiting Fellow PowerPoint presentation.

Sue Herbert
Coordinator Hearing Services
Southern Adelaide Region, Noarlunga House
Ph. 8305 0112

2011 HI Statewide Camp at Douglas Flat, Southern Adelaide undertaking individual and group well being activities

Cooperation for building a go kart and fun team races after.

Rock climbing builds self esteem
KILPARRIN STATEWIDE SUPPORT SERVICE FOR LEARNERS WITH HEARING IMPAIRMENT AND ADDITIONAL NEEDS

Kilparrin Teaching and Assessment School and Services (Kilparrin) is located at Park Holme and provides preschool and school programs and a statewide support service for learners with hearing and/or vision impairment/s and additional disabilities.

Kilparrin’s Statewide Support Service (SSS) consists of eight teachers with postgraduate qualifications in hearing and/or vision impairment including an Orientation and Mobility Teacher. The team works with children aged from birth to end of schooling who have an identified sensory (vision and/or hearing) impairment and additional disabilities in the home, preschool and school environment.

The role of Kilparrin’s SSS teachers is to support families and staff in curriculum adaptation, resources and teaching strategies to accommodate the identified learner’s hearing and/or vision impairment and additional disabilities.

At Kilparrin we recognise that a child’s additional disabilities impact significantly on their learning especially in relation to their hearing impairment. For all of our supported learners we approach the curriculum with a broad focus as many of our supported learners have significant additional needs which may include one or more of the following:
- dual sensory impairment
- physical disability
- learning difficulty
- speech difficulty
- intellectual disability
- a diagnosed condition such as Autism Spectrum Disorder (ASD), Down Syndrome or other hearing related conditions such as Goldenhar, and CHARGE Syndrome
- significant health condition such as epilepsy.

The child with hearing impairment and additional disabilities requires considerable modifications to curriculum and specific teaching strategies. Our specialist teaching staff and the purpose-built environment at Kilparrin School allow our students to achieve success through the design of specific accommodations to enable access to the Australian Curriculum and extended curriculum including social skills, independent living, Orientation and Mobility and community access.

For learners with sensory impairment/s and additional disabilities learning is not incidental. Learning by observation may not occur. Specific teaching is required for learners to experience, discover and learn about their environment. Providing parents, pre/school staff and other support providers with relevant knowledge to ensure the learner is able to access the curriculum and maximise development enhances support outcomes.

Professional development activities, specifically related to the curriculum needs of the learners supported by Kilparrin, are available for teachers, school services officers, other professionals and parents. This training and development has included full day training programs at the Education Development Centre, Hindmarsh and training within individual kindergartens and schools. The range of training includes understanding hearing and vision impairment, the implications of sensory impairment on literacy attainment and general learning and has included sign language support from a native sign language user.

Given the diverse nature of the individuals we support we need to be able to adapt to different needs and support requests from staff and families for early intervention clients.

For Deaf children in country South Australia who want to undertake signing as their primary mode of communication there are a number of issues around accessing services. Added to this is the difficulty of accessing teachers and SSOs with adequate signing skills. At Kilparrin we have been particularly concerned that due to additional disabilities, sign language may be the only viable communication mode for some students. As a consequence we have incorporated Auslan into our staff and family support service delivery and into our resource development.

To meet the needs of students disadvantaged by location the Kilparrin support teacher visits country areas with a Deaf school service officer once a term. This gives staff the opportunity to discuss signs that they do not know but need. It gives students the opportunity to communicate with a fluent native signer and it gives parents the opportunity to meet a competent Deaf adult and extend their own signing. Napier et al. (2007) notes that for many hearing parents, their first contact with a Deaf person will possibly be their own child and that they will have had limited exposure to sign language. Pickersgill (1997) further believes that hearing parents should be provided with links to the deaf community and have opportunities to develop their own Auslan communication skills.

Organising meetings between parents and the Deaf support worker has been of particular benefit and a highlight of the service we provide. In one country town, community based silent dinners take place once a term to allow school staff, parents and other interested people the opportunity to practice their signing skills in a relaxed atmosphere with a native Auslan user.

continued
We have also spent time making resources to support schools and students when we are not there. This began with simple DVDs with common school signs and DVDs with songs for school. We then started adapting books and including signs in them and making up computer books with a video of a Deaf adult signing the story.

Kilparrin has a teleconferencing service which is proving valuable for country families and schools. This service has been utilised to teach mothers sign language using our Deaf SSO. The ability to link up in this way has meant that these parents have had access to a deaf native signer and have extended their own signing. This service took place on a weekly basis and meant that when parents were unsure of a sign they had access to support in a timely fashion. Teleconferencing has also been successfully used to support staff in schools to access the signs they need for the students access to the curriculum. We have helped to interpret books, songs and concert items in this way and this year will be supporting with interpreting spelling words as well. Teleconferencing has been an exciting innovation in our service with regard to supporting sign language as we are now able to assist between the termly visits that we provide if the need arises.

Brown and Remine (2008) quote from the Victorian State report that, “equity of service delivery to families with hearing loss is an important issue that is sometimes difficult to achieve.” At Kilparrin we offer a diverse service for learners with hearing impairment and additional disabilities so that accessing a quality service is achievable for all our children and students.

References


Ellen Berbec
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Providing Access and Opportunity to Maximize Potential and Achieve Success in a Mainstream Classroom for a Student with a Hearing Loss

Ensuring that any mainstream child entering school for the first time has adequate access to the curriculum and is granted the best opportunity to maximise their potential is a challenging task in itself. When a child with a hearing impairment begins school the challenge brings a new dimension and a different perspective which requires some dynamic thinking and innovative ideas.

In Term 3 2011 I assisted in transitioning a student with a severe sensorineural hearing loss from preschool into school. The student attracted a high level of funding which was to be used to support her access to the curriculum and help ensure she has maximised opportunities for learning. In consultation with the parents, principal, student disability coordinator and teacher we decided to trial a new teacher expert support model of intervention and support for the student that would give her access to teacher expert support model of intervention and coordinator and teacher we decided to trial a new teacher expert support model of intervention and support for the student that would give her access to the curriculum and opportunity to maximise potential.

The model of intervention and support that we used included:

- 7 Hours SSO support per week,
- 2 x 45 minute sessions with the classroom teacher working with the student on individual goals,
- weekly speech sessions with a speech and language therapist and
- one hour of one on one teacher support during the teachers non instruction time (NIT).

The process for ensuring this student’s success at school began long before she walked through the gate. Initially the most appropriate level of support was applied for and allocated to the school. Secondly plans were made to place the student with a classroom teacher who already had a very in depth knowledge and understanding of hearing impairment and early years literacy development. Finally classroom placement, group dynamic, the listening environment and appropriateness of the SSO were considered.

Prior to entering school we identified the key areas that the student needed further development in. Hearing loss in children typically impacts most greatly on their auditory, speech and language development so this was the area that we focused on. After a series of assessments, home and kindergarten observations it was found the student’s speech, language and pre literacy skills were the areas where the student had the most difficulty. This information was sought by myself and the DECD Speech Pathologist for the kindergarten. Given the importance of developing a good foundation of literacy skills we felt it was necessary to rapidly and intensively target those deficits so that the student did not begin to fall further behind. Our overall goal was for the student to as quickly as possible reach age appropriate or close to age appropriate norms with her spoken language and pre literacy skills so that she could more actively engage in and access the whole curriculum. Once the student began school an Individual Education Plan was developed to address this. Specific goals were set based on the student’s needs and the desired outcomes that we wanted her to achieve.

The Individual Education Plan also included how we would best structure the students support to address her needs and ensure she has the best access to the curriculum throughout her schooling. As a school we decided to be innovative with the use of the student’s funding to support the belief that the teacher is the expert in the child’s education. We did this by appointing additional teacher time for the student’s classroom teacher and allocating that to regular intensive 1-to-1 support with the student as well as additional time for planning and programming. This meant that the teacher chose to give up her NIT time for 1 hour a week in order to work with the student, this time was made up in whole day releases twice a term. The primary focus of each session was to improve the student’s pre literacy skills including phonological and phonemic awareness with a focus on improving the student’s understanding of alliteration, rhyming, and syllables. In addition phonetic awareness and reading skills were focused on to support the literacy program in the classroom. We timetabled the intervention in such a way that the student received additional literacy support on top of the regular literacy program of the classroom. As research shows this makes the maximum impact for students learning.

In addition to the teacher time allocated we provided SSO support for 7 hours a week. This included both in class support for mainstream lessons and for small group intensive work, whereby the SSO worked on goals set by the teacher and speech pathologist. This intensive support both by the teacher and SSO was complimented by regular meetings between the SSO and teacher to ensure that the most appropriate goals were being targeted and that the student was continually learning within her zone of proximal

continued
Finally we employed a private speech pathologist to come into the school to work with the student on a weekly basis. This was timetabled in place of the LOTE subject offered at the school. This was set up so that the student could access expertise and intensive speech language therapy continuing on from what she received in early intervention.

All of the intervention was coordinated by our Coordinator of Hearing Services. Meetings were held between the principal, teacher, support staff and parent to come to an agreement on how the funding would be best used to support the student. Intervention had been provided to the student prior to school entry using a family-centred approach so it was imperative that the parents were well aware of the intervention programs in place at the school, the goals that were to be achieved and how they could support this process at home. It was considered that the parent would become a key element in maximising the potential of the student and ensuring they gained access to the curriculum.

Our rationale for implementing this model of intervention was to support an expert teacher methodology. We felt that the best people to be providing the intervention were those with the expertise and those who knew the student the best.

The students overall development was not delayed, however the areas of delay were eventually going to impact on her access to the curriculum and we felt these could be improved through intensive targeted intervention. We knew that the student would be beginning school with delayed spoken language and pre literacy skills, so this became our starting point with the hope that improving her spoken language and literacy skills would eventually grant her better access to the curriculum in a mainstream environment. We believed we needed the student to be working on pre literacy and language goals that would be alternative to the rest of the class. The achievement of these goals needed to be supported by the classroom teacher and a speech language therapist as these people had the expertise to provide a program that would make a difference.

We felt that the intervention needed to be diagnostic, which is why we planned regular meetings between the speech pathologist, SSO, coordinator hearing services, parents and teacher. Through this process we could ensure that the goals were altered so that the student was continually making progress.

Outcomes

The student has made significant progress in all areas of literacy as has been noted by the classroom teacher, SSO and Speech and Language Therapist. At the beginning of her schooling she was able to identify 5 sounds, she is now able to identify and produce 35 out of 42 English sounds. She now uses her knowledge to sound out words when reading and writing, is able to write initial sounds in dictation tasks and is becoming more confident with segmenting and blending. The student's phonemic awareness and phonological awareness has improved in addition to her phonetic understanding. Overall her progress has been very pleasing and has certainly set her up for success for 2012.

The students over all language was reviewed informally by her speech pathologist. Over the past 6 months she has made remarkable progress in her expressive sentence length and complexity. When assessed in August last year she tended to describe pictures with 1 – 3 words and required prompting to give longer descriptions eg “What is this girl doing?” The student said “teddy”. At this review she used much longer sentences eg Tell me what the man is doing? She said “The man is climbing up the ladder to get the cat in the roof”. She included the subject of the picture 50% of the time (this was a therapy target last year). Increasing her grammatical complexity and accuracy will continue to be a focus of therapy this year.

Her stories are at an action sequence level which is expected for a child 4-5 years of age. She is using male for female pronouns (eg he for she). The progress in her expressive sentence complexity is obvious here as well demonstrating the great progress she has made.

2012

After achieving the outcomes with the student and due to the success of the teacher expert model, the school in consultation with the parents and myself have decided to continue this model of intervention and support for the student. Minor changes have been made to ensure the student has continued success in being able to access the curriculum in 2012.

The 2012 model of intervention and support will include:

- 7 Hours SSO support per week,
- 2 x 30 minute sessions with the classroom teacher working with the student on individual goals,
- weekly speech sessions with a speech and language therapist and
- one hour of one on one teacher support during the teachers NIT.

As with all programs we will continue to regularly review it to ensure the outcomes for the student are being met and she has the best opportunity to access the curriculum and maximise her potential.

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Statistics show that for every 1,000 babies born in Australia each year, one to two babies are born with a significant, permanent hearing impairment.

The Women’s and Children’s Health Network coordinates free hearing screening to all new born babies in South Australia. This ensures early detection and facilitates implementation of intervention strategies for babies and their families. A midwife or designated screener conducts the assessment. A soft-tipped ear-piece is placed in the outer part of the baby’s ear. Alternatively, three small sensors are placed on the baby’s head. Small headphone cups are then placed over the baby’s ears or a small soft-tipped ear-piece is used. A series of clicking sounds are played and a computer registers how the baby’s ear responds to the sound.

If the baby has a PASS result from the hearing screen this means the baby almost certainly has good hearing. However, it is possible for a child to develop hearing loss later because of a middle ear infection, inherited conditions, or other infections and illnesses.

If the baby does not pass this first screen it is called a REFER result indicating further assessment is warranted. A CaFHS Nurse conducts the second screening in the community.

If the second screen also produces a REFER result the baby will be referred to a paediatric audiologist. This is a free service. A full hearing assessment is conducted. Results show the nature and severity of any temporary or permanent hearing loss. The baby may be referred to other specialists, such as an Ear, Nose and Throat specialist.

The audiologist then refers the baby to the DECD Guidance Officer for Hearing Impairment (GOHI). This person discusses with the family intervention services currently available in South Australia (DECD Early Intervention Service – Hearing Impairment; Cora Barclay Centre; CanDo4Kids). The baby is then referred to all services and a representative from each makes contact to discuss service provision for the family. Babies with vision and hearing impairment may also be referred to Kilparrin Teaching and Assessment School/Services.

Once the family has gathered all the information about the different service providers they decide which service they feel will best suit the needs of their family. The family informs the Guidance Officer Hearing Impairment of their decision or they may request further information to help them make a decision. Once the family has decided, the GOHI informs all service providers that the family has chosen a service.

When a family chooses Early Intervention Service - Hearing Impaired (EISHI) a service provider contact is re-established to organise a time and date to start intervention.

EISHI consists of a team of Teachers of the Deaf and a speech pathologist. The team works with children and families from birth (or diagnosis) to the age of five (school entry) focusing on communication skills, listening and play skills as well as providing parent education. The service provides support for families in their home environment as well as visiting and supporting children in a wide variety of pre-school settings.

The first couple of sessions with a family are to gather and share information (formally and informally) which helps understand some of what the needs, priorities and expectations are for them, their child and from us as a service provider.

At this early stage some families are still in a state of shock, suffering from information overload, and feeling stressed that their baby may or may not have hearing aids. Conversely another family may appear to have everything under control: they can share information about the type of hearing loss their baby has, what colour hearing aids they are being fitted with next week and be gushing with enthusiasm for programming to start.

It is important at this early stage to establish reliable, respectful and trusting relationships with families so that everyone concerned in the program feels at ease and understands the goals being set within the program. Through this respectful and trusting relationship some families are able to share with us their story from birth or before, to diagnosis, which can be an emotional journey for both the family and teacher.

Sometimes this very personal and emotional information may not be shared until months or even years after service has begun, or may be shared in snippets along the journey through early intervention. There is no specific order in which families choose to share or even to share at all. The role of the early intervention teacher at this point is to listen to families and monitor each child’s communication, language and play development.

Once the relationship is established programming begins in earnest. Goals are set for the child in a few different ways: parental observation and input; following a developmental profile such as the Monitoring Protocols for Deaf Babies and Children or the St Gabriel’s Curriculum; teacher observation of what the baby/child is, or isn’t, doing; speech pathology goals and observations.

The teacher plans a program for each individual child, collects resources to match the goals and presents the program at the next visit.
Sometimes this program may be put on hold as the baby/child may be asleep or just not interested in the resources, but interested in something they have at home. Improvisation is a big part of early intervention! When baby/child is asleep it is a good opportunity for teacher and parent to catch up and maybe go through the Monitoring Protocols (which can take time and are very tricky to complete with busy little bodies needing attention).

One of the goals set may be to get a more accurate hearing assessment from Australian Hearing. Some children need extra support of familiar faces during assessment times. Teachers from early intervention can be part of this assessment and bring with them resources (toys) the children are familiar with and may have used at home to practice a listen and post activity (a sound is made and the child responds by e.g. posting a marble into a labyrinth or stacking blocks).

Some parents choose to, or need to, have their baby/child in childcare. EISHI provides training for staff in childcare centres. This training consists of communication skills, specific needs of the baby/child with regards to their hearing loss, hearing aids or cochlear implant, communication, language and listening skills. Information is also shared regarding noise levels within the centre and ideas to help reduce noise.

EISHI can assist parents in choosing an appropriate pre-school for their child. Sometimes the local pre-school is a very appropriate setting for the child, but occasionally a more specialised centre may be more appropriate, such as: Klemzig Auslan Early Learning Program; The Briars; or Kilparrin Teaching and Assessment School/Services. Some pre-schools have had children with hearing impairment in their centres before and may have had an acoustic upgrade to help reduce reverberation (bouncing around of sound/echo within the room). If the local pre-school is the preferred choice the EISHI teacher will perform an acoustic assessment of the centre and apply for funding to assist with an acoustic upgrade.

Around the same time pre-school starts, parents are usually concerned with school placement. Some parents decide really early where they would like their child to attend school, and some parents change their mind on a weekly basis, depending on how well they think their child is doing at the time. Some parents need a lot of guidance and information before they decide on the school they think will best suit the needs of their child. This process can take a long time. A discussion is usually held with the EISHI teacher, parents and pre-school director about the child’s potential learning need and schooling pathway.

Once EISHI know the child’s anticipated school they can contact the necessary support services. If a child is going to attend a DECD school, contact is made with the Hearing Services Co-ordinator for that school and transition process begins.

The process is slightly different when the child will be attending a private/independent school as each of these schools have their own process for children with additional needs.

During these last months of early intervention, parents and teachers are usually working hard to make sure the child’s transition to school is smooth and seamless. All relevant information is shared with the Hearing Services Co-ordinator and the school before the child starts school.

EISHI is based at the Special Education Resource Unit (SERU), Henley Beach.

**Early Intervention Service – Hearing Impaired**
SERU
Ph: 8235 2871

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**THEORY OF MIND**

**What is it?**

Theory of Mind (ToM) is the ability to be aware of what others are thinking and to make predictions about people’s behaviours based on what we think they are thinking. Having ToM means that you have an understanding that people have thoughts, intentions, wants and feelings and that these thoughts can be very different from one’s own thoughts. In other words, ToM is the ability to mind read and to take on the perspective of another person.

**Why is it important?**

ToM is integral to social competence and conversation maintenance as it helps us to understand our social world. When we can predict what others know or might feel it enables us to plan our communication accordingly. This then enables us to create and maintain a variety of relationships with other people. As ToM matures we are able to gauge other’s beliefs, desires, perspectives, and intentions, and perhaps predict their behaviour. Empathy develops and we can understand many aspects of human social life such as surprises, secrets, tricks, mistakes and lies. It enables us to recognise there may be multiple viewpoints held by others for particular situations, and we take on those perspectives even when they differ from our own. We can recognise that it is not that I am right and you are wrong, we just have different viewpoints.
Without ToM a child can be very concrete and literal, unable to take on another person’s perspective.

**Deaf children**

There is a growing body of research showing that children who are Deaf with hearing parents typically have poorly developed ToM skills. Because of their hearing impairment they are often excluded from eavesdropping on conversations. When overhearing conversations children can discover that others may have different thoughts from themselves.

**What can parents do?**

- Talk about your thoughts out loud: “How are we going to fix this?” “I wonder what it’s like to live in a cave”, “What could we do when we go see Nanna today?”
- Keep FM systems on when having discussions with older siblings getting into trouble – so that your child can hear problem resolution in action.
- Put words to your thoughts eg. “I’ve lost my car keys again. I get so annoyed when I lose them. I wonder if I left them in the fridge, like I did last week”.
- When talking with your child remember to use mental state words such as think, wonder, dream, bet, suppose, hope.
- Talk about your emotions eg. “I’m feeling sad today because Moxie the cat died”.
- Explain misunderstandings.
- Talk about things that have happened in the past eg. use photos to reminisce about your last holiday; when playing with a toy say “Remember, Uncle John gave you that for your birthday. You were so surprised. You thought he’d forgotten”. It helps the child see that a person can keep memories in his mind.

**What can teachers do?**

- Leave FM systems on in the classroom when answering other children’s questions, even when the other student is getting into trouble (formal and informal language is used within the classroom and the student with a hearing loss needs to hear both).
- Focus on building students’ mental state vocabulary (surprise, guess, forget, angry, tired, shy etc.). These words are not concrete and cannot be held, but are vitally important to include in a child’s vocabulary.
- Use children’s literature – it is a rich source of mental state terms. It also provides the opportunity to talk about different characters thoughts and perspectives.

**Some practical examples**

At a kindy with several hearing impaired children, a teacher showed the children a tin of hot chocolate. She asked them to smell it and guess what was inside. Because the tin smelt of chocolate all the children guessed it contained hot chocolate, so were very surprised to find a teddy inside. The next day, the teacher showed the children the same container and asked what they thought was inside. As there was a new member in the group, the other children all informed him there would be a teddy inside, even though he said he thought it would be hot chocolate. All were again surprised to discover an apple inside the tin. This activity was repeated over the next 2 weeks, with a different surprise inside each day. By the end of the period, the children were predicting different things would be in the tin. Each item they suggested, however, was an object they had seen in the tin over the past 2 weeks. The plan is to continue this activity, using different containers with different objects, with the aim that eventually the children will be able to generate new ideas themselves.

**Some great books to use**

- My Lucky Day
- A Mother for Choco, Keiko Kasza
- 3 Little Fish and the Big Bad Shark
- The Naughty Little Monkeys
- Rosie’s Walk, Pat Hutchins
- Turk and a Runt: A Thanksgiving Comedy, Lisa Wheeler
- Good Dog, Carl, Alexandra Day
- The True Story of the Three Little Pigs, Lane Smith
- Suddenly, Colin McNaughton
- Carrot Soup, John Segal
- Aunt Ceecee, Aunt Belle and Mama’s Surprise, Mary Quattlebaum
- One Frog Too Many (Boy, Dog, Frog) Marianna Mayer
- Max’s Chocolate Chicken (Max and Ruby), Rosemary Wells
- Good Night, Gorilla, Peggy Rathmann
- Ferocious Wild Beasts, Chris Wormell

Sally Mainsbridge  
Speech Pathologist, SERU
SAFE PROGRAM

This Package is designed to be used by professionals working with HI/Deaf children aged 7 years and over to reinforce learning and to promote the safety and wellbeing of HI/Deaf Children. It can also be used with children with other additional needs.

The program aims to help professionals give HI/Deaf children the knowledge, awareness, information and language to:

- Keep themselves safe, or to tell someone who can help to keep them safe.
- Enable them to make better informed choices about their lives.
- Encourage them to support each other and strengthen their identity, self confidence and self esteem.
- Empower them to communicate their thoughts, wishes and feelings.
- Enable them to explore and understand their life experiences.

The program has been produced by the National Society for the Prevention of Cruelty to Children (NSPCC) with support from the National Deaf Society (NDCS), with funding to implement a pilot program. The package provides a practical guide and a DVD which gives information and guidance on planning and delivery of the program topics.

Each of the topics on the DVD Rom are presented by young Deaf presenters. There are role plays (short films), storyboards, animations, a glossary of British Sign Language (BSL) terms and other learning resources. A number of Centres for Hearing Impaired are currently using this program.

“Deaf children don’t find it as easy as hearing children to pick up everyday bits of information about coping with everyday life”.

The program covers a range of topics

- Feelings
- Relationships
- Difference
- Personal safety indoor/outdoor
- Someone to turn to
- Growing up/ sex and relationships education
- Road safety
- Bullying
- Safety using internet and mobile phones

**Some examples of what the topics provide**

- **Aims/Learning Outcomes**: Each topic has topic aims and learning outcomes
- **Presentation**: Give different ideas that you say/can do with the children for a particular topic
- **Role Plays**: Short films provided with different role plays for different topics for the children to watch to facilitate further discussions
- **Resources**: Gives different ideas of resources - books/games/activities that can be used for each topic
- **Storyboards**: Different storyboards provided to facilitate discussions
- **Feeling Cards**: Different feelings cards are provided to facilitate discussions

This package can be borrowed from SERU or copies can be ordered from the website.
**Resources Related To The Topic**

**Auslan LOTE Teaching Guide Stage 1, Bilby Publishing. 2005. 16.0425.01**
This is the first of two comprehensive teaching guides that are designed to provide teachers with a range of resources to teach the Auslan LOTE curriculum for K-6. This edition addresses grades 1 and 2 levels and includes a range of topics, eg animals, people, family, numbers, at school, around the house and general communication. The focus is on vocabulary building but also provides ‘bring it together’ topics, gradually building communication skills from single words, to verb and noun combinations, up to 5-6 sign sentences. It includes curriculum objectives and assessment material and sign lists for each topic. A CD, teaching notes, activities, games songs and handouts are also included. See also Auslan LOTE Teaching Guide Stage 2.

**Pediatric Audiology Diagnosis Technology and Management, Madell, J. & Flexer, C. 2008. 16.0419.01**
This book provides practical reference for the diagnosis and educational management of children with hearing disorders. There are step by step descriptions of testing and treatment protocols and a DVD featuring behavioural assessments and cochlear implant surgery.

**Software Otto’s World of Sounds. 16.392.01**
This is a multimedia based program designed to simulate auditory development. The game consists of 10 sound environments taken from everyday life (a house, kitchen, seaside). Each scenario contains different sounds common to the particular environment.

**Educational Audiology Handbook, Johnson, C et al. 2008. 16.0361.01**
This practical and functional handbook provides comprehensive information on all aspects of the practice of audiology in educational settings, focusing on children from preschool to secondary school level.

**Signs of Australia: A New Dictionary of Auslan, Johnston, T. 1998. 16.0332.01**
This dictionary of Auslan has a collection of over 5500 signs used within the Deaf community of Australia. See also 16.0307.01 Software Signs of Australia - Dictionary of Auslan.

**Raising and Educating a Deaf Child : A Comprehensive Guide to the Choices, Controversies and Decisions Faced by Parents and Educators, Marschark, M. 1997. 16.0383.01**
This book offers a comprehensive summary of information including topics ranging from what it means to be Deaf and the uniqueness of the Deaf culture to the medical causes of early hearing loss. It discusses technological aids for the Deaf and ways that the environment of home and school can influence a Deaf child’s success in both academic and social circles.

**Who’s Who? - Auslan, 16.3344.01**
This game is designed to help children practice and expand their Auslan vocabulary in the area of ‘describing people’. The aim is to find out the opponent’s mystery character by asking questions using Auslan. The booklet depicts drawings of each sign, including sections on describing hair, faces, bodies, colours and clothing.

**Language Development : An Introduction, 6th Ed, Owens Jnr, R. 2005. 17.0182.01**
This comprehensive 6th edition includes reference to individual developmental differences and cultural differences. An accompanying CD ROM provides samples of dialectal and bilingual speakers and children from infancy through adolescence.

**Auditory Verbal Practice Towards A Family Centred Approach, Rhoades, E. & Duncan J. 2010. 16.0421.01**
This book examines the theoretical and practical bases of family therapy models and the development of a systematic viewpoint for practitioners, including family therapeutic strategies. Varied family based intervention models are discussed and evidence based strategies are shared.

**Toddlies Tales 2, Bilby Publishing. 16.3345.02**
The stories on this DVD are performed in Auslan for pre school children and feature ‘Bud’, a signing puppet, and members of the Sydney Deaf community. The songs included are: Ten Little Monkeys; The Wheels on the Bus; The Midnight Gang; The Rainbow Fish; The Lion and the Mouse; Going on a Bear Hunt; The Enormous Turnip; Belinda, The Ugly Duckling and Princess Smarty Pants.

**Telling The Time in Auslan, Bilby Publishing.. 16.0427.01**
This kit is designed to help teach children, whose primary means of communication is sign language, how to tell analogue and digital time. Each step includes teaching strategies and clear line drawings of the signs. It also includes a large two faced cardboard clock, a game box with self-correcting activities and a set of cards depicting signs for times.

**Auslan Weather Kit, Bilby Publishing. 16.0426.01**
This kit provides colourful pictures on cards that depict Auslan signs for the weather and days. There are both sign and finger spelt versions of each of the day cards.

**Psychological Perspectives on Deafness volume 2, 1998. 16.0386.01**
This text is a collation of recent topics in the field of Deafness research. Contents include: The impact of sign language used on visuospatial cognition; Development of theories of mind in Deaf children, Deaf young people: Aspects of family and social life, Learning Disabilities, Attention deficit disorders and Deafness: Development and use of a conversational proficiency interview with deaf adolescents.

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**continued**
Do You Hear What I Hear? Dept for Education WA, 2002. 16.0341.01
This package has been designed to consolidate awareness raising, knowledge and understanding of Otitis Media and conductive hearing loss. It assists educators in identifying the specific needs of students experiencing conductive hearing loss. It describes the impact on the social/emotional development and language and literacy development.

Auditory Skills Program for Students with Hearing Impairment, Romanik, S. 2008. 16.0410.01
This revised Auditory Skills Program addresses the needs of a range of learners with hearing impairment. The objectives of the program are to develop auditory language comprehension, intelligible speech and verbal communication.

Software Teach Yourself Auslan, Def Children Australia. 16.0412.01
This CD is an interactive learning tool for beginners of Auslan, suitable for learners of any age. The vocabulary sentences are based upon the Auslan for families’ DVD and therefore should be used together for optimal learning.

Introduction to Augmentative and Alternative Communication, 2nd Ed. Von Tetzchner, S & Martinsen, H. 2000. 17.0336.01
This book is designed for people working with severely communication impaired children, adolescents and adults with limited spoken language, who use alternative communication systems.

DVD Talking Hands 2 Revised Ed. Royal SA Deaf Society. 16.0363.02
Deaf SA’s Talking Hands Series provides a course of lessons in Auslan. Each lesson consists of a DVD and a student workbook. Contents includes colours, visual communication, time signs, grammar, work signs and animal signs.

Auslan Money Kit, Bilby Publishing. 16.3346.01
This kit includes Australian play money and an Auslan money booklet. Line drawings clearly show the signs for the following vocabulary, money, dollar, cents/coins and numbers for all coins and notes.

Deadly Talking Resource Kit Revised, Qld Government Health, 2002. 61.0886.02
The DVD contains early intervention ideas designed to promote listening, language and pre-literacy skills amongst Aboriginal and Torres Strait Islander preschool children. The accompanying activity pages contain lesson plans.

We’re All Ears, Hataier, M. 16.0354.01
This comprehensive resource was developed by DECD Hearing Impairment staff and consists of a range of activities to develop school based listening behaviours and an awareness of ear health issues, suitable for preschool, junior primary or primary classrooms.

Listen and Learn: A Listening Skills Program, NSW Dept of Education. 17.0319.01
This program is written for students with delayed development of auditory skills. It aims to facilitate discrimination, identification and auditory comprehension. It can be used with individual students, small groups and whole classes. A placement test is included.

Each page in this book shows a coloured photograph representing a feeling. Above the photograph is an Auslan signing graphic and a written explanation as used for key word signing (Makaton). Other titles in the series include: Opposites One and Two, Emotions/Feelings; Directions, Food, Objects, Preschool, Alphabet, Baby Animals, Primary School and Verbs

Psychological Processes in Deaf Children with Complex Needs, Edwards, L. & Crockers, S. 2008. 16.0407.01
This book, a guide for professionals working with Deaf learners and their families, draws on the latest evidence to explain the impact of hearing impairment and uses case studies to focus on the key issues for assessment and intervention.

Yarnin’ It Up: Learning to Listen and Talk : Activities for Young Aboriginal Students, 2010. 17.0191.01
This resource provides Aboriginal parents and early childhood educators with a collection of pre-literacy activities to use with young children aged from birth to 36 months, to develop strong listening and oral skills.

DVD Listen, Learn & Talk, 2003. 16.0395.02
This book and DVD is an auditory habilitation program for children with a hearing impairment from birth to preschool age and contains ideas and strategies for developing spoken language through listening. The first section provides information on the importance of parent participation, auditory habilitation strategies and an integrated development scale from birth to 48 months. The second part provides additional activities at home.

DVD Songs with Signs: Auslan/English, Aurora early Intervention, 2006. 16.0403.01
This DVD contains pre school songs in English and Auslan. Songs include: Bananas in Pyjamas, Jack in the Box, Open Shut Them, Round and Round the Garden and Twinkle Twinkle Little Star.

Healthy Little Ears, 1999. 66.0797.01
The aims of this program are to improve nose blowing skills of children and to raise the community’s awareness of issues concerning hearing problems. It includes a story book, Sniff and Blow at Pre School, a resource book for teachers, handouts for parents and merits.
Nearly half the population struggles without the literacy skills to meet the most basic demands of everyday life and work. There are 46% of Australians who can’t read newspapers, follow a recipe, make sense of timetables or understand the instructions on a medicine bottle.

Australian libraries and library associations are behind a campaign to turn 2012 into the National Year of Reading, linking together all the great things that are already happening around books, reading and literacy, and giving them an extra boost, with inspirational programs and events taking place across the country.

Libraries will be partnering with government, the media, writers, schools, publishers, booksellers, employers, child care providers, health professionals and a whole host of other organisations that share our passion for reading.

Three goals have been identified for the National Year of Reading 2012:

- For all Australians to understand the benefits of reading as a life skill and a catalyst for well-being.
- To promote a reading culture in every home.
- To establish an aspirational goal for families, of parents and caregivers sharing books with their children every day.

Visit the website for information about how to be involved in the National Year of Reading 2012. Special events and programs are listed for each state. [http://www.love2read.org.au/index.cfm](http://www.love2read.org.au/index.cfm)

The Literacy Room is a dedicated area in the SERU resource centre which showcases literacy resources and provides a planning area for visitors.

The high quality literacy collection supports the work of educators and includes a rotating display of resources and information based on the Big Six components that support children/students learning to read. One component is displayed at a time and includes resources, information and strategies. The first display will focus on VOCABULARY. The resources are available for loan and there is a teacher on duty to provide assistance to visitors.

Two Literacy Toolboxes are also on display, with assessment tools and resources that focus on reading comprehension, spelling, grammar and effective teaching strategies to support students experiencing difficulty with literacy. Printed information from the Literacy Secretariat is also available.

Two iPads with a range of Apps, Digital Pens and a range of low tech communication devices are also available for visitors to trial in the literacy room. iPads can also be borrowed on short term loan by families and educators.
Video Captioning – hidden benefits for all

Access to captioned content is essential for students who are Deaf or hearing impaired. The captioning helps to transmit audible information that is not so obvious including off screen narration, sound effects and background music, and dialogue that may be off screen or communicated through a television or telephone in the film itself. Access to these elements is essential for understanding.

Research also shows that access to captioned material benefits students with learning disabilities and struggling readers by boosting their literacy skills. The use of captioning has also assisted ESL students to develop a larger vocabulary and to achieve higher levels of comprehension.

An informative video outlining the benefits of using captioned materials for all students in the classroom has been produced by Media Access Australia and can be viewed at http://bit.ly/iB22jD.

Where can educators source captioned content?

1. **iTunes**
   You can search iTunes for movies and iTunes U educational content that includes closed captioning. Use the Power Search option in the iTunes Movie Store or iTunes U. From the search results menu, then check the box “Search only for movies that contain closed captioning” or “Search only for closed captioning in iTunes U.”

2. **YouTube**
   YouTube’s support for captioning has enabled the upload and access to millions of captioned videos. To search for captioned media, add ", cc" to any search, or after searching, click Filter > CC to only see results with closed captions.
   This YouTube information page outlines the latest developments and features of their captioning service http://bit.ly/yEZiqY

3. **TED**
   Technology, Entertainment and Design (TED) has just launched its education channel on YouTube. This new initiative allows content to be submitted by teachers and though in its infancy, there are already a number of videos in the area of science, nature and inventions. Most of the content is captioned. http://www.youtube.com/TEDEducation

   **Caption Your Own Videos**
   Educators can play a vital role in building the amount of captioned material made available by putting in place publishing protocols and processes for their students who are creating video.

   An excellent starting point is a web site entitled Caption It Yourself: Basic Guidelines for Busy Teachers, Families, and Others Who Shoot Their Own Video. http://www.dcmp.org/ciy/
   It provides extensive information about the benefits of captioning, caption design guidelines, and a comprehensive list of captioning software and online captioning tools.

   Note: To view captioned material on an Apple mobile device, the closed captions setting needs to be enabled. Choose Video in the Settings app and set the switch for Closed Captioning to On.

   Screenshot of ‘Dinosaurs in Our Backyard’ from the Smithsonian’s National Museum of Natural History. Subscribe to this captioned content through iTunesU.

   **Clicker 6**
   Clicker 5 has been a popular tool of choice for many special educators for many years now. Its wide range of assistive features has enabled their students to access and participate in the curriculum and achieve greater literacy outcomes. Clicker 5 has not had major update since its release seven years ago and its continued relevance in the classroom to assist learners of all abilities is testimony of the qualitative features of this curriculum access tool.

   A major upgrade of the program has now resulted in the release of Clicker 6. This new version still adheres to the familiar principles of the program but it now has an even greater emphasis on student independence to create their own content such as their own talking books and presentations. The program has been reconfigured to open with a quick start word processor where students have access to the familiar tools to support them in the writing process.
The program has been reconfigured to open with a quick start word processor where students have access to the familiar tools to support them in the writing process. There are also some additional features to support writing including access to:

- a word prediction tool
- built-in paint tools
- and, web cam support to instantly include photos in to a document or cell of a grid.

The key principle behind every Clicker feature is personalisation. Even though the word prediction database has 60,000 words aimed at the primary years, the settings can be adjusted to modify the level of word complexity offered to students. Unlike other word prediction programs, the Clicker 6 lexicon of words cannot be modified. However, additional topic words will appear in the word prediction from word banks which are open in the background.

Clicker Paint is now included in Clicker 6 and the tool can be instantly accessed to create images and stamps in the word processor and cells in the Clicker Sets. The instant inclusion of visual supports is extended to web cam capture. This feature would be extremely useful for a student with a hearing impairment as a key word sign can be instantly captured and immediately utilised in the document or as a permanent vocabulary resource in a grid of cells. Clicker grids are now called Clicker Sets and a number of new templates are available. The two most significant changes are the ability to now add tabs to a Clicker Set template and the ability to instantly create an A-Z bank of topic words from a body of text. These have long been a feature of Write Online and are a welcome addition to Clicker 6. The use of tabs allows the ability to categorise groups of words according to any set criteria or to provide a writing frame where each tab can contain phrases and words for a specific section of the text type.

The use of visual supports is enhanced with a new Clicker library of over 2500 images. These images are available for use in documents, Clicker Sets, the word predictor and the spellchecker.

Please note: The SERU Inclusive Technologies team will commence providing initial support for Clicker 6 next term. More in depth training workshops are being developed by the team and these will be offered during the July school holidays.

### App Bits

**Sorenson Buzzcards**

BuzzCards is an app designed to help Deaf people communicate more easily with people who don’t know sign language. The app works like a deck of flash cards except you get to decide what’s written on the cards.

**Auditory Figure Ground**

This app is designed to allow students the chance to practice listening in noise. However, it is also extremely useful in providing a means to demonstrate to staff and parents the difficulty hearing impaired students have hearing in background noise. This app allows the user to vary the signal to noise ration as well as the type of background noise.

**Hearing Loss Simulator**

This app allows you to choose a specific hearing loss configuration and then listen to sounds as though you have that particular hearing loss. The Hearing Loss Simulator contains pre-recorded common sounds and has the option to let you record your own voice for playback through the different hearing loss configurations. A useful app for awareness raising activities in professional learning sessions.
Decibel

This app provides an accurate decibel reading but educators should use this reading as a guide and source professional grade equipment where assessment reports are required.

RIDBC Auslan Tutor: Key Signs for iPad

The Auslan Tutor is a video based Australian Sign Language (Auslan) teaching application.

Word Magic

Word Magic is designed for preschooler and kindergarten children between the ages 3 to 6. It is an excellent application for kids to have fun with words and their spellings and learn them.

Idioms Lite

Idioms is a multiple choice quiz system for English which provides 700 common idiomatic questions across different topic and categories with explanations of 619 Idioms with meanings and examples. Idioms was designed to provide a method of acquiring idiomatic expressions and a context for using them in everyday English conversation.

3Dv Magic Words

Reveal all the words that you can before time runs out. There are two modes of play, thousands of levels, time bonuses, and hints.

Mad Math Lite

Mad Math provides practice in addition, subtraction, multiplication, and division facts. Students can draw right on the flashcard. Mad Math keeps track of the stats from multiple users. Each student gets a report of which facts they are struggling with and can email their progress.

Toddler counting

Toddler Counting is designed by parents in coordination with preschool teachers, it helps teach basic counting skills, and even makes counting fun for toddlers.

Phonics

Alphabet section: introduces the phonetic sound of each alphabet and builds the foundation. Words section: teaches the child how to sound out a word to spell it. It presents words from common word families and speaks out the phonetic sound of each letter when building the word.

Small Talk Phonemes

The SmallTalk Phonemes app provides a series of speech-exercise videos, each illustrating the tongue and lip movements necessary to produce each of the phonemes in the English language. These articulation videos allow practice with English phonemes. Because each exercise comes as an individual video, you can focus on just the phonemes you want to practice and repeat them as many times as you like.

Phonetics Focus

This App is packed with 20 activities, including interactive Phonemic Charts, Listen and Record, Phonetic Typewriter, scored quizzes, practice tools and printable full-colour flashcard sets (8 sets/350 flashcards), supported with high-quality native-speaker audio.

SoundAMP

SoundAMP provides crystal clear sound at the maximum volume possible. Its advanced technology reduces volume over the limit and controls allow you to tune the sound with the equalizer, adjust background sound levels for each situation, and replay the last 30 seconds. The app can be used to capture lectures, presentations, interviews, or other important information. Bookmark the recording to remember important points! Export recordings to your computer.

A Story Before Bed

A Story Before Bed is a service that lets you record a children's book online with audio and video. Children can play back the recording as often as they like on iPad, iPhone, Mac, or PC. This tool offers great scope in the production of signed videos for each page of a book. Pre-recorded books can also be purchased. A free book can be recorded at http://www.astorybeforebed.com/.
Quality Instruction for Students with Autism Spectrum Disorders Pack, Carnahan, C & Williamson, P. 2010. 19.0140.02
The contributors link each aspect of literacy instruction to the unique cognitive, social and communication issues inherent in ASD. They connect research with practice and case studies that illustrate pedagogy, frameworks and hands on activities.

Articulate the Fast Talking Description Game for Kids, Ventura Games. 61.1063.01
Articulate is a team game in which moves are made around the baseboard by correctly guessing what a team member is describing. The 2000 words are organised into 6 categories of person, world, object, action, nature and random and give practice in describing, listening, reasoning and making connections.

Emotional Bingo, Mitlin, M. 2008. 66.1478.01
The aim of this bingo game is to teach children how to respond empathetically. It is played with a small group led by an adult, who can explicitly teach empathy.

Learners on the Autism Spectrum Preparing Highly Qualified Educators, Dunn Buron, K & Wolfberg, P. 2008. 19.0135.02
This resource is a collection of contributions by some of the foremost authorities on ASD in the world to date. Each chapter begins with a vignette of a student relating to the topic to be discussed. It offers a comprehensive and practical resource for anyone working with students.

Moving House Start To Read Series, Duke, S. 2006. 63.3312.04
This pack is suitable for secondary aged beginning readers. The text is a simple recount about a young couple moving house. There are one or two sentences on each page with accompanying coloured photographs supporting the text. It contains sentence strips that students can put in the correct sequence, flash cards of key words, A4 pictures and a set of BLM’s that focus on comprehension, word identification, spelling and letter formation.

My Sensory Book: Working Together to Explore Sensory Issues and The Big feelings they Can Cause, Kerstein, L. 2008. 18.0223.01
This workbook provides information about sensory Integration. Each sensory system is describe and strategies to manage the emotional and physical reaction to sensory stimuli are suggested.

Coffee Time Start to Read Series, Duke, S. 2006. 63.3312.05
This pack is suitable for secondary aged beginning readers. The text is a simple recount of two friends who meet for coffee one afternoon. There are one or two sentences on each page of the reader with coloured photographs. The kit also contains sentence strips for sequencing, flashcards of key words, A4 pictures to match with the text and BLM's that focus on comprehension, word identification, spelling and letter formation.

The Eclipse Model Teaching Self Regulation, Executive Function, Attribution, Sensory Awareness. Moyer, S. 2009. 19.0352.01
The model presented in these books addresses four key challenging area for individuals with Asperger Syndrome: self regulation, executive function, attribution retraining and sensory awareness. The model compliments the Ziggurat Model and Comprehensive Autism Planning System by providing the content to support these planning models.

Comic Strip Conversations, Gray, C. 1994. 19.0143.01
This book describes how to use Comic Strip Conversations to teach social interaction skills to students with Autism Spectrum Disorder. Simple line drawings of people and symbols illustrate the dynamics of conversation and provide support to students with ASD.

This game pack aims to increase student’s awareness of phonemes, syllables and words. Targeted skills are phoneme rhyming, identification, discrimination, manipulation, blending, deletion and segmenting. It is suitable for students from early years to approximately years 3/4.

Early Years Movement Skills Description, Diagnosis and Intervention, Chambers, M. Y Sugden, D. 2006. 26.0171.01
This resource describes and analyses motor co-ordination difficulties in young children up to the age of seven years. It explores the expectancies of typically developing children, how to assess difficulties and intervention strategies.
Teaching Strategies for Literacy in the Early Years, Swan, C. 2009. 36.0286.01
The literacy strategies offered in this book are appropriate for students in the first three years of school. The strategies have an easy to follow format and offer a wide range of ways to develop reading, writing, viewing, listening and speaking.

One of a Kind: A Self Esteem Card Game, Creative Therapy Store, 2008. 61.1055.01
This game aims to build self esteem in students by engaging them in discussions on topics such as criticism, peer pressure and friendship. The resource is suitable for students primary years and up.

Teaching Reading Part A Literacy Skills, Downs Syndrome Society (SA). 09.0201.01
This resource is a program tailored to the needs and characteristics of students with Down Syndrome. It is designed to be used in conjunction with the reading and writing programs.

Guidelines for Teachers of Students with Down Syndrome in Upper Primary, Middle and Secondary Schools, Downs Syndrome Society (SA). 09.0200.01
This resource provides a short general overview of the characteristics of students with Down Syndrome in primary through to secondary years of schooling. Subject areas analysed are; mathematics, society and environment, the arts, technology, science and health and PE.

High Functioning Autism/Asperger Syndrome in Schools. Sansosti, F. et al. 2010. 19.0360.01
This book, grounded in evidence based practice, offers a wide variety of practical tools and strategies for improving the academic behavioural and social outcomes of students with high functioning autism and Aspergers syndrome.

Vehicle Sound Blocks. 81.1262.02
When the two wooden cubes are places to match in the wooden tray, children hear the sounds of six vehicles; fire engine, steam train, motor bike, airplane, tug boat and police car.

With Open Arms Creating School Communities of Support for Kids with Social Challenges sing Circle of Friends. Schlieder, M. 2007. 66.1470.01
The author of this resource introduces and shows school staff/parents, how to implement the ‘Circle of Friends’ programme stratégie that is designed for students who have difficulty with social interactions. The programme can be used with students of any age.

Where the Wild Things Are, Puppets. 62.0452.01
The four puppets in this pack have been created from the picture book by Maurice Sendak ‘Where the Wild Things Are’. The puppets are the main character Max and three ‘wild things’.

Shop 'til You Drop Beginner Reader Series Bodie, M et al, 2001. 63.3317.01
This reader contains four short stories about things that can happen when people go shopping. Before each story, the reader is supported by being asked to think about two or three elements that are found within the story and is supplied with a glossary of vocabulary to be encountered. A CD containing a reading of the story accompanies the book.

Memory Garden Bereavement Healing Cards, Bright Spots Games, 2007. 61.1054.01
These cards are designed to be used by professionals to help students who have suffered a personal loss, in working through the grieving process.
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The theme for the next edition of SERUpdate is ‘Intellectual Disability.’