Communication is the process by which individuals exchange information and convey ideas. (Owens. 1986)

Imagine your life without the ability to communicate! How would you ask for something, tell your friends about events that happen in your life, discuss issues that concern you, negotiate the purchase of a car or even learn to operate your new digital recorder? The ability to communicate is fundamental to one’s quality of life, the meaningful inclusion in learning and social activities and essential for the development of cognitive, literacy and social skills.

Learning to communicate is a social process. Children don’t learn to communicate in isolation or by observing the communication interactions of others. They learn to communicate by actively participating in communicative events.

This issue of SERUpdate explores the concept of communication for life from a range of perspectives. It begins with an article by Catherine Olsson, speech pathologist at Novita Children’s Services, in which she defines communication and its importance in our lives and describes the impact of complex communication needs on interactions with others. Julie McMillan from Flinders University also writes about children using alternative/augmentative communication devices, with an emphasis on a naturalistic approach to teaching. An article by Cathy Clarke, DECS speech pathologist, discusses the importance of play in the development of early communication skills, especially pretend play which allows children to practise or refine cognitive, emotional and social skills. Further articles offer the perspective of children with hearing impairment, autism spectrum disorder and intellectual disability. Insight into how specific impairments effect the development of communication skills underline how important it is that the unique communication needs of children are addressed.

It has long been recognised that adults play a vital role in the development of children’s communication skills and the way parents and teachers communicate with children can make a significant difference in how they develop effective communication skills and abilities. Articles on Intensive Interaction by Dr. Mark Barber and from Kilparrin Teaching and Assessment School and Service and St. Ann’s Special School give clear insight into this important role.

Carol Edwards
Project Officer
Communication Support Service
Special Education Resource Unit

Many attempts to communicate are nullified by saying too much.

Robert Greeleaf
Part 1- ‘What is this thing called AAC?’

Communication is the ‘glue’ of our lives and culture. From the first smile that a baby gives it’s parents through to the musing of leading thinkers such as Stephen Hawking, it is what underpins emotional and social development: our ability to create, develop and maintain relationships with family, friends and members of our broader community; learning to read and manage numbers; learning to manage our lives and our emotions, even our ability for analytical and abstract thought. Our quality of life and physical and mental health are linked to speech, language and communication development and ability and the way that we are able to use these skills to interact and be involved in activities out there in the ‘world’. Basically, unless we’re alone or asleep, we are communicating!

This takes us to the next ‘given’ with communication – it always involves at least two people – a sender of a message and one or more receivers of that message.

As many as two in every one hundred people have difficulty with the sending and/or receiving roles in communication because of, or in association with a physical, cognitive or sensory impairment. These people have what is called Complex Communication Needs (CCN).

When a person with CCN experiences difficulty with the sending of a message, it is very likely that this will mean difficulty for the receiver of that message – which may be you! And vice versa – difficulty with receiving a message can mean a breakdown or failure in the communication interaction which has consequences for the sender as well as the receiver. To provide a basic example – it could cause problems if your ‘message’ - a shouted ‘Look out for the car right behind you!’ were interpreted by a child with CCN as ‘I am very cross with you’ and lead to them turning around and wheeling away in a blind panic!

This is one of the reasons why the communication difficulties that a person with CCN may experience never belong just with them, but also with their communication partners. The recently developed WHO International Classification of Functioning, Disability and Health\(^1\), and the UN Convention on the Rights of People with Disabilities\(^2\) reiterate this idea – that a person’s experience of disability is as much a result of the activity and participation barriers that they may experience in their living environments as it is of any personal difficulty with body structure or function.

CCN are associated with a wide range of acquired or life long impairments, including Autism Spectrum Disorder, Cerebral Palsy, Developmental Delays, Severe speech impairment, Traumatic Brain Injury, Stroke, Intellectual disability, Physical Injury and Surgery. These needs are often long term, but may also be short term, such as when a child has a tracheotomy following surgery, or while they are recovering from a traumatic brain injury.

People with CCN can benefit from the use of Augmentative and Alternative Communication (AAC) strategies, interventions or devices to help them to increase their communication ‘competency’ (knowledge, skills and experience) or their ability to participate in activities – the sorts of activities that most of us take for granted, like reading a favourite book with our Grandma, greeting a neighbour as they pass in the street, telling someone who cares how we are feeling, sharing a joke or story, phoning for a taxi or buying a ticket for the bus.

AAC is many things; the many different communication boards, books and speech generating devices with pictures, symbols, photos, words and letters that can be used to create and share a message. It is also the provision of a range of interventions by a multi professional team to help children learn to understand and use their AAC, including one to one and group support programs; provision of information and training to people in a child’s
environment who play an important role in supporting children to develop their communicative skills; information and support for the many peers or friends that may be a part of a child’s life, such as school mates or sporting club member. AAC is also the application of strategies and ideas in everyday interactions to help provide the opportunities to engage, to be successful, and to continually learn the many different skills and competencies that make up successful communication. These strategies can take many forms, from providing more time to children while they process information and organise their bodies to make a response through to using playful ‘sabotage’, such as putting out paint and paper but ‘forgetting’ the brush, to create an opportunity for children to initiate a comment or make a request.

Advocacy is another emerging role in AAC intervention. Children with CCN may face barriers, or benefit from enablers, at many different levels (Beukelman and Mirenda, 2002), both internal and external, including the attitudes, values, knowledge and skills of the people who are supporting and working with them. These barriers are also present and impact on their social and academic participation in school.

As well as opportunity, AAC interventions are about expectations. People with CCN consistently face an environment where expectations for them are low; where people direct their questions and conversations to a parent or care worker rather than to them, and in which the assumption is that they will have nothing to contribute, and don’t hold an opinion. AAC advocacy incorporates the right to access communication in the same way that others do, including written and other forms of communication; the right of people with CCN to have their communication ‘heard’, acknowledged and respected, whatever mode it may take, even signaling likes or dislikes with crying and vocalisations. Connection with others through communication is one of the basic human needs. Everyone deserves to have their communication recognised and to be engaged with in ways that make it possible for them to participate and connect.

Porter (1997) describes the overall aims of AAC interventions as being to help a child to meet his/her varied communication requirements as intelligibly, specifically, efficiently, independently and in as socially valued a manner as possible in order to understand others and to be understood. Light (1989) talks about Communication Competence in AAC as being sufficient knowledge, judgment and skill in four areas: linguistic competence; operational competence; social competence (sociolinguistic & socio-relational aspects) and strategic competence. (see table).

<table>
<thead>
<tr>
<th>Competence</th>
<th>Description</th>
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<tbody>
<tr>
<td>Linguistic</td>
<td>Adequate mastery of the native language (vocabulary and grammar) plus mastery of the code (eg signs or symbols) required to operate the AAC system.</td>
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<tr>
<td>Operational</td>
<td>Mastery of technical skills required to operate the system - ie the motor and cognitive skills required to signal a message or to operate specific device features (pointing, signing, visual scanning, operating switches, controlling cursors, editing, etc).</td>
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<tr>
<td>Social</td>
<td>Knowledge and skill in the social rules of communication, for example making appropriate eye contact, sharing the balance of talking and listening, and using communication for a range of different purposes - social chat, requesting items, responding to others, contradicting people, etc.</td>
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<tr>
<td>Strategic</td>
<td>Flexibility in order to adapt communicative style to suit the receiver (eg signing more slowly to strangers, turning up the volume on your communication aid for grandad), or learning how to repair and extend the conversation (eg if you can’t explain something clearly on your Speech Generating Device, you might have a message that says, “Please hold up my communication chart, I’d like to explain something”).</td>
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When you consider the complexity of communication, the range, breadth and depth of the various aims of AAC intervention and the number of typical and additional competencies that children with CCN need to develop, it is hardly surprising that AAC is an area that requires a competent, knowledgeable, focused and cooperative team working to support each other and the child with CCN. And then when you look at the importance of communication in the life of every individual, it isn’t surprising that it is an area of work that so many find inspiring, rewarding and exciting. AAC can really make the difference to a child’s life, and have an amazing and powerful impact on the lives of those around them.


Communication: It takes you!

Part 2
Impacts of CCN on communication interactions and development: or Why AAC?

Let’s imagine a little scenario. An 18 month old is sitting in the back of the car, heading out to see Grandma. Suddenly, she sees an animal out of the window. Like all children, she has been exposed to thousands of words over and over in her life already. She can find the word for what she sees, amongst the many she has in her memory, as she points excitedly out the window – “Horsie!” Her mother responds…’Oh, you see the horsie. Just like the one in the nursery rhyme. Ride a cock horse to Banbury Square” and then they launch into song together. The little girl makes a connection – between the animal she sees on the trip to Grandma’s and the nursery rhyme she enjoys. She also makes a connection with her mother over her experience. Perhaps the next time she hears that rhyme she will remember this trip and say ‘Grandma’. Her mother will also remember, connect the two events and make a comment, perhaps talk about when they are next going to see Grandma, or about one of many other connected things. Social relationships, emotional development, language and learning are about making connections, and they are inextricably connected with each other.

Back to our little girl; in fact, what our little learner and life experimenter has actually seen is a donkey. If Mum had noticed this, it would have been the opportunity for another lesson increasing her understanding of the world; delivered using language, while also growing and refining language. In the early stages of their speech and language development, children often don’t get it all quite right. They may use the wrong sound in a word, or put on the wrong ending, or get the words a little out of order in the sentence – in which case an obliging adult will usually offer a repeat for the child to learn from, at that time or at another point across the day.

Now let’s think about children with CCN. They may search for the word that they want to use, and may find it in their mind – but if an adult hasn’t anticipated that they may want that word, and made the sign or the symbol available to them, they are not going to be able to ‘say’ their message. This issue - lack of access to the full range of words and the ability to say them when they are needed and appropriate- is just one of the things that impacts on communication for children with CCN. Communication interaction is a little like a dance – it takes two, each person needs experience and practice to be able to get it ‘right’, the partners need to be responsive to each other, there is a flow and a rhythm, each needs to learn their own part as well as how to put them together, and most importantly, the best and really only way to learn to do it is by …doing it.

“Communication works for those who work at it.”

John Powell
Research tells us there is a range of other ways in which communication is difficult for children with CCN, leading to them ‘doing’ communication differently and putting them at risk in their education and for social isolation. Conversations with communication partners tend to be used to meet a specific purpose rather than for general discussion or a chat\(^6\). Communication partners control conversations, possibly to try to prevent communication breakdown and the discomfort of a conversation that is not taking a typical form\(^7\). They also take more turns,\(^8\) introduce more topics and use a high level of questions and commands.\(^9\) Children take a mainly respondent role, ignoring many opportunities to take their turn and rarely initiating\(^8\). They also tend to use a smaller range of different communicative functions; mostly ‘yes’ and ‘no’ answers, acknowledgements, and simple requests for, or information about, objects within view\(^14\). These changed experiences of interaction continue throughout life and across communication partners. When we consider the way that children learn speech, language and communication, and the way that this may be altered if a child doesn’t have speech for communication, it is clear that there are potential negative impacts on children’s self expression and on their language development. Provision of AAC strategies can provide an important foundation for the development of language, act as a tool for social participation and help to facilitate children’s development of natural speech.

\(^5\)Romski M, Sevcik RA, Augmentative communication and early intervention: Myths and realities. Infants and Young Children 2005;18: 174-185

The impact of the different language learning and interactions go beyond immediate face to face communication and into the education setting and experience.\(^15\) Here, once again, children’s experiences are different, reducing their opportunities to contribute, to ask questions, to clarify meaning, to have errors or gaps in learning noticed and addressed. The links between language and learning of literacy and numeracy are well known, and language development is also a risk and protective factor when it comes to school attachment. Reduced ability to understand and use language also reduces children’s engagement and therefore their learning.
When these broad ranging and long term life impacts of reduced expressive speech skills with or without receptive language difficulties are considered in combination with the potential positive impacts of AAC, and the fact that AAC not only doesn’t inhibit children’s development of speech, but appears to facilitate it, the question shifts from ‘Why AAC?’ to ‘Why not AAC?’.

**So what can YOU do to make a difference?**

In recent years there has been an enormous shift in what AAC includes, and how it is implemented, drawing on experience, research and new ways of thinking about how to support children in their development and learning. These changes have led to a shift from providing interventions in a withdrawal situation and working on isolated skill training, to supporting children to perform real communication tasks successfully in meaningful interactions, including providing training to communication partners. This is where teachers, SSOs, peers and others in the school community come in to the picture.

When children with complex communication needs attend pre-school or school they are moving into a new and very different communication environment which offers new opportunities as well as new challenges. In this environment their communication partners don’t know them in the same way that their parents or other carers may. There are new and different communication demands that are very different from those at home, as well as lots of opportunities to learn new words (vocabulary), new ways to use words (functions such as questioning, clarification, commenting) and new ways to put words together (syntax or grammar).

Over the past decade, as part of the shift in knowledge and practice, lots of information has emerged about a range of simple (though not always easy) ways that communication partners for children with complex communication needs can help to ‘scaffold’ children’s development and help them make their way around the barriers that they face in their communication development and participation. Children with complex communication needs often are impacted by other issues such as physical disabilities or visual impairment, and sometimes also have cognitive impairment. Speech pathologists, Occupational Therapists and Physiotherapists may all be important members of the team who need to be involved in helping to create an environment and the opportunities to enable children’s communicative development and participation. It will be important to take time to share thoughts and ideas and to plan so that there is a shared focus and all team members are informed about the perspective of others, as well as to reflect on what is going well, brainstorm and problem solve.

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**Communication participation can be defined as the successful exchange of a message between a ‘sender’ and a ‘receiver’ using speech or other non-verbal means of communication.**

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McConachie h., &Pennington,L. (1997) In service training for schools on augmentative and alternative communication function,1,98-107


Clarke M. T., & Kirton, A. (2003) Patterns of interaction between children with physical disabilities using augmentative and alternative communication aids and their peers. Child Language Teaching and Therapy, 19, 135 - 151

The first, and very powerful strategy for communication partners, is to have and convey an expectation that children have something to contribute, and to provide the time for children to process what their partner is saying, formulate their expressive output (whether symbols, speech, facial expression sign or gesture) and organise their body to respond when there is an opportunity to communicate. As well as providing children with a greater opportunity to take a role in communication, this helps to interrupt the tendency of communication partners to take all of the turns and to initiate communication and topics. It is as easy as pausing and counting - for up to 10 seconds, dependent on the child and their particular needs – with an expectant look on your face and body.

This strategy is number one on a hierarchy of prompts that can be used with children with complex communication needs. There are lots of ways that children may take their turn during the pause – it may be a look towards an object or their communication partner, or a movement of their body – but taking any turn at all provides a response that can be shaped to become a more explicit, specific, clear and easily understood way of being part of an interaction. It also helps children to develop an understanding that they are a communicator – not just a responder to questions and directions. It is important to keep the communication interaction and the child’s role within it ‘real’. For example, telling a child to point to the symbol for food in order to ask for it makes it an unreal communication interaction; if you know what they want, why do they need to communicate this to you?

Some further prompts are listed below. Not all prompts are appropriate to use for all children. A speech pathologist can help to work out which prompts to use with children and help to make them available.

<table>
<thead>
<tr>
<th>Prompt</th>
<th>How it works</th>
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<tbody>
<tr>
<td>Expectant pause</td>
<td>Communication partner provides an opportunity within an interaction and pauses to convey an expectation, and provide an opportunity for a child to take their turn</td>
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<tr>
<td>Provide a ‘natural’ verbal prompt – rather than asking a closed question or asking the child to point to a specific symbol</td>
<td>To try to reduce the number of questions asked and set up an opportunity – for example pause and give the child an opportunity to request help. If the child doesn’t take the opportunity, provide a prompt – e.g. “Get your paints out” – Pause- “I think you need some help to get your paints out” -Pause “You could ask John for help to get your paints out” (This keeps it a more realistic communication interaction than you telling the child)</td>
</tr>
<tr>
<td>Light cueing</td>
<td>Passing a light across the symbols that are around and include one that a child might use, moving to pointing a light directly at the symbol you are prompting,</td>
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<tr>
<td>Verbal referencing</td>
<td>I look at John, I call out, I point to HELP, PAINTS, OUT.</td>
</tr>
<tr>
<td>Physical prompt</td>
<td>Helping a child to initiate or complete the movements to select a vocabulary item</td>
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The way we communicate with others and with ourselves ultimately determines the quality of our lives”

Anthony Robbins
The next really important strategy for communication partners is to provide children with models using the method that they are expecting children to use – using signs, or pointing to symbols on a communication board, or pointing to photos. All children need lots of modelling of communication, in the mode that they are going to use expressively, before they can start to express themselves. Typically developing children get 12 months input of speech and language before they begin to use single words, and then another 12 months before they begin to put words together into novel ‘sentences’. Expecting children with complex communication needs to develop their ability to use symbols or signs to express themselves without providing them with examples to see others using their system is a little like expecting someone to learn to speak French – but sending them to a country where everyone speaks Russian. They may learn to understand Russian, but the chance that they are going to learn to speak French is slim. Using a child's communication system when you are talking to them is called ‘Aided Language Stimulation’ (ALS). There is more information about Aided Language Stimulation in another article in this edition about PODDS. As well as providing really critical opportunities to learn to use an AAC system expressively, ALS helps communication partners to work out what words children may need to be able to communicate, and some of the challenges when using AAC. It can also slow them down; this is often a positive as children with CCN may benefit from slower input, making it easier for them to understand and be a part of interactions.


There are a number of ways that we can organise the environment to create opportunities for children to communicate. It is important when you use these strategies that children are given the support that they need to take advantage of them – and that they don’t turn into ‘demands’ for children to communicate which they don’t yet have the experience, confidence or support to succeed at. Speech pathologists can help communication partners learn how to walk the line between providing opportunities for success, and creating stressful demands.

One strategy that can be fun is sabotage, or ‘playing dumb’. This involves setting up or doing an activity and forgetting an important part of it – for example, putting out the paper and brushes for painting but ‘forgetting’ the paint- and then waiting to see whether children do anything to indicate that something is wrong. If nothing happens, you can ‘extend’ this by coming and ‘noticing’ that they aren’t painting and asking something like “Don’t you feel like painting today? I’ve given you everything you need. I was looking forward to seeing some of your gorgeous paintings” and then pausing, and interpreting any initiation from children as a communication attempt. Adults can also do something ‘silly’ as an opportunity for children to comment or reject; offering snails for lunch, or planting grown vegetables into the garden instead of seeds, or wearing clothes back the front. For older or more cognitively aware children you can use more subtle activities, but have fun!

Another similar and very easy strategy is giving small portions of what a child may need or want and making sure that the child needs and is able to request more. It might be food if that is really important for the child, but it may also be blocks, or train tracks, or coloured pencils or just about anything. You can also create situations where the child may need to ask for help – to open the lid of the box that contains their favourite toy, or to turn on the computer program that they enjoy or to get their bag out of the locker etc. With this as with all of these strategies, the aim is to create an opportunity for children to learn.
the power of communication; to connect and to engage with their world. It is important that the child doesn’t experience this as creating extra barriers to communication, so you need to be sensitive and use your judgement about when this strategy is moving from being an opportunity to succeed, to being a demand with a risk of failure.

Another powerful strategy is more a what not to do than a what to do – and that is anticipate children’s needs, and assume that they will always want to do the same thing. Even if they do want the same thing at the same time over and over, it is still a good idea to give them choices or the option to do something different – you just never know when they may want to do a different activity or do things in a different order, especially if they keep ‘getting the message’ that this is a possibility for them.

As for all children, it is important to ‘interpret’ children’s attempts to communicate, provide them with a model of that communication using their system, and ‘add’ a little. For example, if a child looks out of the window and notices one of their class members outside in the playground, and then looks towards the teacher and makes a noise, it is important to ‘interpret’ that while also pointing to the child’s symbols “Oh, you can see John outside” and to add to that “John’s outside helping”.

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<tr>
<th>Strategy</th>
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<tbody>
<tr>
<td>Pause and provide the time</td>
<td>Providing ‘spaces’ in communication interactions for children to contribute or to initiate communication, using any of their modes of communication</td>
</tr>
<tr>
<td>Aided Language Stimulation</td>
<td>Using the child’s communication modes when talking with the child (in addition to using speech)</td>
</tr>
<tr>
<td>Sabotage</td>
<td>Building in a communication opportunity by ‘forgetting’ an important tool in an activity.</td>
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<tr>
<td>Environmental arrangements</td>
<td>Provide small ‘portions’, put motivating items in boxes or jars or out of vision so that children have the opportunity to request them</td>
</tr>
<tr>
<td>Interpret</td>
<td>Notice children’s communicative signals and interpret these (including using the child’s communication system as you do)</td>
</tr>
<tr>
<td>Add and Expand</td>
<td>Provide models, using the child’s system, of what they might be saying if they could, and add a word or two to anything that they do say – again, using their system.</td>
</tr>
<tr>
<td>Make AAC a habit</td>
<td>Make sure that the board is available and used all of the time – it doesn’t have to happen straight away, but it is important to build up to. Not making AAC available conveys a clear message that a child’s communication isn’t expected or valued.</td>
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In applying any of these strategies, it is important to remember that children learn when they are engaged and enjoying an activity, and that the aim is to support them to learn to communicate more efficiently, effectively and explicitly – not just to follow a command or point to a picture or symbol, or just repeat a word or sentence. It is important to think about what we are giving children the opportunity to communicate and to make sure that it is meaningful and motivating for them, and crosses a range of communicative functions – how to reject, question and comment for example, as well as to answer questions (respond) or accept an offer to meet a basic need. Communication for children with complex communication needs can be really demanding. As competent communication partners we need to think...
about how to support successful communication for children - it is hard for any of us to be motivated to persist and practice things if we don’t get the support that we need and the opportunity to be successful.

A final but very important thing is to make sure that a child’s AAC is available for them. We are communicating all of the time, and children learn to communicate, while doing it, almost all of the time. Children with complex communication needs face lots of additional barriers in learning communication and language, being given fewer opportunities because they are only able to access their AAC systems for an hour or two across the day. This creates an additional learning difficulty. It is akin to taping up the mouth and plugging the ears of a child for most of the day.

All of the strategies that have been described are simple, important, and can make a big difference to children’s communicative development and participation - but they aren’t necessarily easy. Like any new way of doing things, it can take a while to learn and feel comfortable with applying these strategies, so it is important to work out achievable steps, get support and training from someone who is knowledgeable about AAC, work as a team and support each other, practice and persist, and celebrate the successes together. It can be hard to slow down and prioritise the time for children’s communication, and it can feel as though doing this has to mean that children’s other learning is compromised. The strong evidence linking communicative development with improved quality of life outcomes, the ability to develop and sustain relationships, and the means to engage with and exert more control over their lives is important to consider when making decisions about learning priorities for children with complex communication needs.

It takes time for these new ways of doing things to become ‘all the strategies, all day, everyday’ but it is fine to start out at ‘one or two strategies, some times, some days’ and go forward from there. It may take a little while, but the new skills and increased engagement and more fun that will result will provide the inspiration to keep at it!

**Thoughts and suggestions for Teachers - from the parent of a child with Complex Communication Needs.**

It would be particularly helpful if teachers could tackle AAC for children with CCN on four key levels:

1. **Individual (micro) Level** - a teacher might assist a young person with CCN by-
   - Recognising that each child with CCN will differ in relation to needs.
   - Gathering as much background information as possible about the child’s communication strengths/difficulties (seek multiple sources for this information).
   - Enabling opportunities for the child to exploit their communication strengths as often as they can.
   - Learning how to use the technology/communication tools accompanying a child using AAC.
   - Creating opportunities for the child/class to develop new communication skills.

2. **The Group/Curriculum Work Place Level (mezzo)** - a teacher might assist a young person with CCN by
   - Attending training/conferences/journals in the field of AAC and sharing this information with colleagues.
   - Networking with education based professionals who are particularly skilled in this area.
   - Examining the Curriculum Framework and looking for opportunities to richly incorporate AAC into the classroom setting.
   - Embrace technology - it’s fast becoming the major form of communication and is often critical to AAC users.
Recognising they are a part of a team (speech pathologist/SSO/ECW etc) and thereby it is vital that good communication begins with the members within this team.

3. The Advocacy/Policy Level (macro)
- Considering the values and attitudes within the school environment in relation to AAC - what is our view about AAC and how are we communicating/not communicating this view?
- Recognising barriers and gaps (resource, training, attitudes etc) and applying creative solutions eg seeking supports from external agencies to provide in-service training etc and to raise awareness of these gaps/roadblocks within DECS.

4. Personal Level
- Considering your own thoughts/feelings about AAC by e.g. Imagining you woke up and could not speak or write/type words and this condition was likely to last months - even years. What kind of attitudes, initiatives and approaches would you find helpful in the people who attempt to teach/communicate with you?
- Never underestimate your capacity to make a huge difference to the world of a child using AAC.
- Understand how valuable you are as a teacher to the education of a child with CCN.

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The process of developing an effective communication system for a child with autism spectrum disorder

Background:
Luca is an 8 year old girl who has autism spectrum disorder, hemihypertrophy, and macroglossia. She lives with her parents and younger sister and attends a special school full time. Luca has received speech pathology support over a number of years, focusing on assisting her to find a system of communication strategies that works for her.

Current communication strategies:
Luca currently communicates using a combination of vocalisations, gestures, pointing and several Key Word Signs (more, thanks, help, toilet, yes, no). She often has difficulty getting her message across to others. Luca has motor planning difficulties which impact on her ability to accurately coordinate Key Word Signs, and difficulty performing other fine motor tasks such as cutting, writing and keyboard use, even with a BigKeys keyboard.

Luca processes visual information better than verbal information. She can recognise text, picture symbols, photos, line drawings and a number of key word signs. Luca has a visual schedule at school, with tasks described in sentence format eg time to pack up. She can follow 2-3 part spoken instructions, but tends to have an own agenda communication style (ie only initiates communication interactions with others when something motivates her, and does not always respond to other's attempts to interact with her).

Luca has a strong interest in written text, and can identify words and manipulate text at a level higher than her age equivalent. For example, she enjoys spending time reading books, and can accurately follow each word with her finger as her mum reads the words aloud. Luca can create whole sentences to verbal dictation from a group of up to 60 和 you take

“Music . . . can name the unnameable and communicate the unknowable.”
Leonard Bernstein
individual jumbled letters. She can identify missing letters in written words, and complete word searches. However Luca is not always able to apply her literacy abilities within functional tasks.

Communication Strategies Trialed Previously:
Luca has trialed various communication strategies in the past. An Alphatalker communication device with Minspeak picture encoding was first trialed when Luca was 3 years old. During the trial, Luca demonstrated a preference for other forms of communication, particularly signing. It was agreed to shift focus towards other communication strategies and re-investigate a voice output device at a later date.

Luca also was introduced to a multi-page communication book at age 3, as well as a PECS folder with picture symbols for commonly requested items and core vocabulary messages (eg like, love, want). Luca learned to point to several symbols in her book at a time to communicate messages.

Current Situation:
The family’s overriding goal is to find a set of communication strategies that would motivate Luca to communicate, whether through a device, a book, signing, or a combination of strategies. Last year, Luca’s mum requested to investigate a communication device with larger vocabulary capabilities, as Luca’s fine motor abilities had improved, and she had begun to show greater interest in communication interactions with others.

When asked about key features that the device should have, Luca’s mum suggested:
- portability,
- voice output,
- potential for a large vocabulary, and
- literacy capability - ability to type out words and speak them aloud

Initial communication goals were set for the device trial. These included:
- making choices,
- requesting,
- talking about feelings and
- asking for help.
An Alphatalker communication device was again trialed, this time focusing on one overlay containing a series of core vocabulary messages (see below), that Luca could be shown how to combine into a range of everyday messages. After several weeks it was decided that this overlay did not offer sufficient vocabulary access for Luca.

As a next step, a Vantage Plus touchscreen communication device was then agreed on for a five week trial. Different device overlays were investigated and the Picture Word Power overlay set with 45 icons per page was chosen to trial with Luca. Picture Word Power overlays combine a core vocabulary of about 100 frequently occurring words, in conjunction with spelling, word prediction as well as fringe vocabulary organised within categories. Words are also organised in a way that promotes easy phrase building (source: Liberator website).

Throughout the process of trialing a communication system for Luca, the main aim was for communication partners to engage in interactive use of Luca’s device within daily environments. This would in turn give Luca many opportunities for meaningful communication. Aided language stimulation (modeling or demonstrating appropriate language using the child’s own communication system) was used as a teaching strategy by communication partners, to show Luca ways that she could use the device herself.

Snack times are highly motivating for Luca and provided her family with many chances to model appropriate phrases. Luca’s mum established a page of snack time vocabulary on the Vantage Plus. At each snack time, Luca would be prompted to request the item she wanted using her device. In the five weeks since beginning a trial of the Vantage Plus, Luca has already demonstrated the ability to sequence together 3-4 icon presses to create requests for snack items, e.g. ‘I want + kabana + please’.

In addition, a PODD (Pragmatic Organised Dynamic Display) communication book was also suggested as an additional communication strategy for Luca. PODDs are an approach to engineering aided symbol vocabulary. A primary aim of PODDs is to promote aided language stimulation - “a teaching strategy in which the facilitator
communication display as he or she interacts and communicates verbally to the user” (Goossens et al, 1999), for communication all the time.

PODD stands for:
- **Pragmatics** – refers to the social uses of language, the ability of natural language speakers to communicate more than that which is explicitly stated.
- **Organised** – vocabulary is organised in a systematic way to support pragmatic use of language.
- **Dynamic Display** – multiple pages

Underlying the design features within a PODD is the following general aim for using AAC:
For the person to meet his/her varied communication requirements as
- intelligibly
- specifically
- efficiently
- independently and
- in as **socially valued** a manner as possible, in order to understand others and to be understood (Porter, 1997).

Given Luca’s strong literacy skills, it was decided to initially trial a PODD that had larger vocabulary capabilities, as well as more freedom for the person to turn the pages themselves. A draft version of a 2 page per opening PODD with 48 locations per page, and a side panel was created for Luca.

**Luca’s Story**

Goals established for Luca’s PODD trial were essentially the same as those set for her device trial. Currently the aim is to trial the PODD with Luca for a period of at least 3-4 months and during this time, focus on providing opportunities for Luca’s main communication partners to **model** ways to appropriately use her PODD for meaningful communication.

An anticipated barrier was Luca’s interest in books and the need for an adult communication partner to maintain control of the PODD during interactions, otherwise Luca tends to flick through the pages like a book. Her family expect that Luca’s desire to turn pages may decrease as the novelty of her new PODD wears off.

**Results of current Equipment Trials:**
Luca’s Vantage Plus trial was recently evaluated with her mum at home. It was judged by all to be very successful, with three of the four trial goals achieved. An application for funding for a Vantage Plus device for Luca, together with **Picture Word Power** software, has subsequently been lodged.

Luca has now trialed her PODD for around 8 weeks. At this early stage it is still difficult to judge if it will be a successful communication strategy for her, particularly with the recent focus on her Vantage Plus communication device trial. However Luca’s interest in the vocabulary contained within the PODD is an ideal starting block for successful communication. If successful, Luca’s PODD will become one of a number of communication strategies that she can effectively use depending on the particular situation facing her.

**Reference:**

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A detailed article “PODDS Communication Books” by Claire provides explicit information about PODDS and is available on request. Contact Jan Kenney on 82352871.

EARLY COMMUNICATION FOR DEAF / HEARING IMPAIRED BABIES AND TODDLERS

All babies, hearing and deaf, are born with the ability to communicate their needs. Initially they communicate by crying when hungry, when they are uncomfortable or when they want or need emotional support. Through interaction with family and friends this ability develops further and babies communicate more complex messages using vocalisation and gesture. Before long most babies have learnt the building blocks of language and begin to use the language of those around them and share meaningful two way social interactions.

Sometimes this process is interrupted by a significant hearing loss. Deaf or hearing impaired children require an early intervention strategy and specific strategies to promote early communication and language skills. This will ensure they are able to develop the strong communicative abilities they will need for successful inclusion in social and educational activities.

The Early Intervention Service – Hearing Impaired works with children and families to provide a unique program which promotes the listening, language and speech development of hearing impaired babies and children. The service promotes the following with families:

- **Early diagnosis**

Research shows that early diagnosis and early amplification have a positive effect on children's later language abilities. In South Australia babies are tested at birth for hearing loss and referred to the Guidance Officer Hearing Impairment if the baby is Deaf or hearing impaired. The Guidance Officer counsels the family about available services and sends a referral to each of the Early Intervention Services. Each service provides advice to the family about what they can offer and then families choose the service they feel comfortable with.

- **Secure attachment**

Parents are encouraged to interact and play with their children. This can be done by holding, singing, reading, using facial expressions and including their babies in all the usual daily activities. The service provides families with language packs of books and toys and ideas for activities that support both quality interactions and language development.

- **Foundation learning skills**

Early literacy skills are encouraged through sharing stories, books and singing. Families are supported to promote the language and concept development of their child through play. Activities promote listening, speech and/or signing development. A program such as ‘learning to listen’ which associates sounds with toys e.g. "hop, hop, hop" for the rabbit or "t, t, t" goes with the helicopter helps children develop auditory/oral skills. The St Gabriel’s Curriculum and Monitoring Protocols are resources used to inform program development and ensure goals are developmentally appropriate.

The service is family centred – child focussed and children are supported to achieve specific language, speech and audition goals. Families are supported to understand that everyday activities, routines and experiences are learning opportunities for language development and social interactions that will enable their Deaf or hearing impaired child to become an effective communicator.

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The single biggest problem in communication is the illusion that it has taken place.  
George Bernard Shaw
The assumptions underlying this statement are many and varied and the notes below do not do justice to the broad discussion required. However a few of the assumptions include:

- using a language to communicate one’s thoughts and ideas (presumably oral English in South Australia)
- how we communicate…via speech, sign language or tactile/electronic mode
- the range of language skills required to communicate in different ‘life’ situations
- inclusion as a reflection of the current values and objectives of society
- school and its curriculum as devised and delivered by hearing people.

So how can teachers in classrooms ‘teach’ deaf students to develop language and the skills to communicate for life? Educational methodology and placement of deaf students in schools continue to present a challenge, complicated by differences of opinion, contradictory research and a tendency to only read or retain ideas and studies that agree with one’s own position! Yet DECS policies (Student with Disabilities, On the Same Basis) and structures (SACSA, futureSACE, year 10 Personal Learning Plan, NEPs and ILPs etc.) as well as DECS Strategic Directions clearly define the department’s commitment to the right of all children/students to access and achieve in learning programs. In other words, deaf students are entitled to varying levels of support to access and participate within their school’s curriculum to achieve their potential. It is easy to overlook and underestimate the impact hearing loss has on a student’s academic and social development.

Children with hearing losses often find it more difficult to acquire language and general knowledge and can start school with delays in these areas when most normally hearing children have had up to five years of immersion in a language. This means that children with a hearing loss have had less opportunity to learn how our language system works (or a sign language system). It is more challenging for them to acquire new vocabulary, concepts and expressions. However it is not a reflection of their potential or ability. According to Australian Hearing data, even children with mild hearing losses or fluctuating conductive hearing losses can struggle to process and make sense of phonological sounds, especially if rich oral language is not a part of their family context (such as the one third of junior primary classes who suffer a conductive loss on any one day). This can result in less auditory information reaching the ‘brain’ and can lead to poorer auditory memory of sounds, impoverished vocabulary and ‘mishearing’ of information required to communicate with others and to participate in class activities.

They may understand the meaning of individual words but not understand the full meaning of the sentence. This applies to written, spoken or signed language. Sometimes the inability to express feelings and emotions in words can result in poor behaviour.

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The ability to communicate is fundamental to meaningful inclusion in school and social activities” (Knuckey)

“This deaf student can hear when they want to.... ...they have selective hearing”

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For the purposes of this article, ‘deaf’ includes all children and students with any hearing impairment (including fluctuating conductive loss) who are attending their local school. They may use spoken English or Auslan as their mode of communication.

When people talk, listen completely. Most people never listen. 

Ernest Hemmingway
Speech may be difficult to understand or they may not be able to monitor the loudness of their speech. This is not a reflection of their intelligence.

The listening conditions of the classroom or the learning area (gym, hall, music room, oval etc.) are important for listening too. Reverberant surfaces such as shiny painted walls, high ceilings or lots of windows can diminish a child’s ability to hear what is being said. Distance from the teacher is also important, especially if the teacher ‘walks and talks’ or if they frequently turn their head or face a computer screen.

Any combination of these factors can mean that a student may hear well enough on one day in one listening setting but not in another.

Coordinators do this by undertaking classroom observations, speech perception testing, listening assessments and discussions with the school staff and parents. An initial referral report is completed which outlines recommendations, accommodations and strategies for good practice. The Coordinator Hearing Services provides inservice for school personnel working with the student on a needs basis at an individual, school or regional level, attends NEP and ILP meetings, provides support for parents and students and liaises with other service providers and allied organizations to facilitate positive outcomes.

There is a Coordinator Hearing Services for each school site (and preschool in the country areas) based at the local regional office who on a needs basis can work collaboratively with schools to provide information, advice, assessments and programs in order to support the access of students with hearing impairment to all areas of the school curriculum. In the greater metropolitan area Early Intervention Service–Hearing Impairment Project Officers provide these services to preschools and kindergartens and offer a consultancy to regional Coordinators Hearing Services.

The Coordinator Hearing Services role is to highlight the listening and learning needs of the individual student, recognize their strengths and preferred learning styles. They can support class teachers to understand their responsibility to address these student’s needs in their teaching. They work collaboratively with the school community to respond to the uniqueness of each individual in their particular context.

Successful education of deaf students in a local educational context will rely to a significant extent on the attitudes, knowledge and skills of classroom teachers. These attributes plus resources are the most important things a school can work towards when exploring diversity and difference within their school. New ways of communicating can be learned and innovative teaching methodologies can be investigated and explored. An examination of classroom discourse between deaf students, hearing peers, teachers and SSOs (and interpreters/communication aides) can reveal useful information about respectful interactions, acceptance of difference and improved self-esteem for all class members. Inclusion as equals can not exist when deaf students are the ones who have to make all the accommodations.

What is meant by ‘meaningful membership of the school and class community’? Have the deaf student themselves been asked what their preferences are? Or is it assumed we know what’s best?

The opportunity to make contact with a wide range of professionals and problem solve issues can lead to an enrichment of the school’s highlights symbols on the user’s and
the teacher's ability to work towards meeting the needs of all the students in their community. The support services team which also includes the psychologist, speech pathologist and the disability coordinator can support the school to be inclusive of all students. Outside agencies and allied organizations, such as Australian Hearing, DeafCanDo and CanDo4Kids can provide input as well.

Technology can support the targeted needs of deaf students in schools and the following are just a few of the examples of inclusive strategies occurring in our schools
- Use of computer software programs that develop a student's listening skills (Earobics amongst many others. Check SERU’s resources for more ideas)
- ‘State of the art’ digital hearing aids, cochlear implants and personal FM systems
- Interactive whiteboards and data tablets have fabulous potential for visual learning techniques across curriculum areas
- Video conferencing in country and rural areas to facilitate Auslan learning via Deaf Can Do organization (Leigh Creek As, Crystal Brook PS)
- Infra red soundfield systems for classrooms to improve the teacher signal to noise ratio (Forbes PS, Quorn AS, Nuriootpa PS and others)
- ‘Read and Write Gold’ computer programs to assist whole school literacy as well as reading and writing for individual deaf students
- Downloading TV programs with captions and purchase of DVDs with subtitles (Urrbrae Agricultural HS)
- Employment of a ‘typist’ and purchase of a laptop and memory sticks to provide a note taking service to academically able deaf students in senior years (Urrbrae Agricultural HS)
- Promotion of hearing awareness lessons in classes and deaf awareness weeks in schools and attendance at the annual statewide hearing impairment camp

By continuing to develop our understanding of children’s language acquisition (whether oral or signed) and appreciating the culture of the particular school and home setting, our teaching skills will be furthered. Thought will be given to what access provisions are required and what communication opportunities are necessary for all children and students in our sites to reach their learning potential. Without an effective communication system these students are denied fundamental human rights.

**Good teaching and learning strategies for deaf students are good strategies for all students**

Contact your local Coordinator Hearing Services for more information.

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The most important thing in communication is hearing what isn't being said.

Anonymous
Communication
Communication in all its forms, is the basis of our community. We are constantly sharing and receiving information and changing or adding to our perception of the world because of this flow of information. Children begin the process of learning to communicate from the first day they are born. They respond to the language and touch of their caregivers, they look at those who interact with them and they cry or vocalise in response to their needs. The responses and reinforcements of caregivers to these early interactions provide the basis upon which the skills required to engage in other more complex communication exchanges can be developed.

Play
Play has been referred to as the occupation of children (Bray & Cooper 2007). In the first few years of life children develop from being newborns that are dependent on the adults around them to meet their needs into toddlers who are (typically speaking) independently mobile, increasing the complexity of their thinking and reasoning, are able to have their needs understood and met through a range of communication means and are actively exploring the world around them. This is their occupation or what is their primary concern. Play is the medium through which children moderate this development. Play encompasses a diverse range of endeavours and activities. These activities or experiences are physical, cognitive, emotional and/or social in nature.

Communication & Play
One ‘type’ of play that promotes communication development is ‘pretend’ or ‘socio-dramatic play’. This kind of play allows children to explore new ideas, organise their thoughts, regulate their emotions and practice or refine skills. These skills include; language, fine and gross motor and navigating social interactions.

Pretend or social dramatic play occurs when children act out real life situations or imagined events (eg doing the shopping or being an alien from Mars). (Segal in Zigler et al 2004). This kind of play allows children to:

- learn new words (vocabulary) associated with the play scenario
- string a series of actions together to tell a story
- to develop an understanding of the characteristics of others (eg being the butcher or the customer in the shop both have different roles to play)
- including other materials/characters in the play (eg using the doll as part of the trip to the moon as a fellow astronaut and treating them like a real character with feelings, emotions and responses)
- learn to use things for a purpose other than the one they were initially designed for (eg a shoe box can be more than a storage container but it could be a boat, a house, a hat or a mixing bowl)

The fruits of investing in play
Segal (2004) uses the analogy of a play tree. She suggests that by feeding and nurturing the play tree will result in the production of quality fruits.

The fruits of investing in pretend play in the early years can be seen in both the immediate and longer term. Immediate fruits include: the child engaging in fun and meaningful activities, learning new language skills and feeling safe in their setting. Some of the longer term fruits of investing in pretend play include establishing the ability to use symbols (important for reading and writing), building up a strong language foundation and the ability to tell stories (important for all literacy tasks) as well as being able to understand the motives and feelings of others.
How do you effectively nurture a developing ‘tree’?

Segal (2004) suggests the roots of the play tree are strengthened through three things: secure attachment, a developmentally appropriate environment and nurturing interactive adults. The following identifies a number of different roles that adults can take in children’s play.

Westby (2006) describes six of roles adults can take when supporting children’s play development. These are:

1. Uninvolved—here the adult does not pay attention to what the child is playing.
2. Onlooker—the adult watches the child as they play but does not add or contribute to the play.
3. Stage manager—the adult helps children prepare for play and gives assistance when play is happening. The adult may make suggestions about what available resources may be helpful or responds to a child’s request for an item. The adult may also support the play by making adjustments to the physical environment (e.g. by adding music or blocking off an area so others do not disrupt the play).
4. Co-player—the adult joins in play and becomes a play partner. They join the play scenario without redirecting it or taking on a leadership role. The adult should take cues from the children engaged in the play.
5. Play leader—the adult joins play and actively attempts to enrich/extend the play situation. As a play leader the adult takes an active role and adds something (i.e. in the sandpit may introduce a new action or tool into the play).
6. Director or instructor—the adult takes control of play and directs the child in what to do or redirects children’s attention. This may be when the adult notices that the child appears to be at a loss to know how to engage in play or to promote a change from repeated play actions.

The body or trunk of the tree is strengthened when play actually happens. Play is not completing adult directed or set activities but rather play is fun, chosen by the child is non-literal and often non-linear – this means the child can and does go beyond the constraints of an ‘adult’ or realistic understanding of the world when playing.

From the trunk or the play experiences, the branches of the play tree are reinforced and built up and include—making friends, developing thinking skills and strategies and building positive self esteem.

A final thought

Play is the most meaningful and natural way for children to develop, practice and refine new skills, especially for communication. Play can positively set up children for successful life-long learning and communicating. Segal (2004) writes “The qualities that a teacher looks for when children first enter school; the ability to make friends, strong communication skills, a good self image, self assurance, persistence, creativity and an eagerness to learn, are the qualities that children gain through play”.

Play is something everyone can do! For additional strategies on how to support children in play speak with your preschool or school teacher, fellow colleagues or for children with identified additional needs, get in contact with the regional support services staff for more ideas and strategies.

References:


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The lives of many individuals with severe or profound intellectual and multiple disabilities are frequently dominated by long periods of boredom, or the routine experience of days filled with activities which, although they might recognise - they don’t understand. Left to fill in time, they frequently generate their own sensory events eg making vocal noises; rocking; mouthing; hyperventilating; head rubbing; grinding teeth. These sensations can be understood as being events that stand out from the rest of the day in that they are events that can be accomplished when the learner wants them to be accomplished. But perhaps more importantly, these events can be stopped as and when they wish them to be stopped. To the observer, they frequently don’t appear to have any reason behind them – but before we make that judgement, ask yourself—why is it that when you sit on a bus or a train, you invariably see someone repeatedly spiralling a lock of their hair around their finger? (Answer: because ‘its nice’). Why do many people cross their legs when they sit down? It has no reason, and indeed might be bad for circulation……so what’s the point of that? These behaviours are usually quite pleasant for the person doing them and they appear to address a need of some sort, and for whatever reason, these self directed, repetitive unitary behaviours often become quite a feature of what we see someone with a profound intellectual disability demonstrating, when they have no other focus for their attention. It must also be remembered, that for someone with a profound intellectual disability, who is described as ‘preintentional’ (ie they don’t know about communicating on purpose), social conventions of politeness are completely unknown.

‘Learners with Profound Intellectual Disability clearly differ from pre-intentional infants without disabilities…. they have had much longer than infants without I.D. to learn repeated patterns of unusual behaviours e.g. stereotypic or self-injury (Ephraim, 1997; Caldwell, 1996) as ways to reduce stress and shut out the unsafe external world ……. or to provide interest in an otherwise understimulating environment.’ Samuels (2003).

People experiencing severe-profound intellectual disability, with what are known as ‘autistic spectrum disorders’ sometimes demonstrate what many people consider to be unusual behaviours, although the reasons for them doing so are often very different. The cycles of behaviour might act as a smoke screen which obscures, or takes their mind off, the often scary and unpredictable world around them. But they might also be a less socially restrained version of the ‘sensory conversation’ we have with ourselves, when we sit on the sofa, cross one leg over the other and watch TV. Whether they are repeated cycles of behaviour, or just one or two of the limited range of physical movements that the learner has discovered that they can do, they are different from the myriad other events that the person experiences in a given day, because the learner initiates them and recognises them as their own.

**Intensive Interaction**

Intensive Interaction is an approach to supporting the development of very early communication and social agency and provides a context in which learners can explore the behaviours which sustain interaction. The approach is based on using behaviours that the learner will recognise as their own to develop a two way dialogue, through which the fundamental communication skills and enjoyment of social interaction can be learnt. (eg Hewett & Nind, M 1998; Nind& Hewett1994; 2001;2006).
Starting Intensive Interaction
Having decided that this approach might be appropriate for a learner you’re working with, you should begin by observing them closely, and note the behaviours that they use to ‘talk to themselves’ or use to have a ‘sensory conversation’. Initially you might imitate the behaviours you see, to advertise your presence; intriguing or attracting the learner’s attention from what Caldwell [1996] calls ‘solitary space’ or the internal pleasure loop that the person finds in the predictable comfort of their behaviour. When the learner looks around and recognises ‘their’ behaviour happening somewhere else, their interest and focus momentarily moves from focussing on internal pleasure, crossing into ‘social space’ ie they focus their attention on you, the practitioner and what you are doing.

Imitation might continue to attract the learner’s attention and at some point they may pause in their activity to monitor you, to check if you are still doing it. Once there appears to be a ‘recognition’ or connection between the two communicators [and this might take a few approaches], you might begin to ‘reflect’ the learner’s behaviour ie making sure you pause in your imitation when you see learner restart their activity. At this stage, it’s all about responding and being recognisable.

Once the ‘game’ is established and there is some level of established mutual recognition (or recognition of the ‘game’), it may be time to ‘converse’. This might take minutes or hours, or more rarely, repeated encounters over days.

Before going on to conversing, an analogy:
I had spent four days in a huge South American hotel where nobody spoke English. I ate breakfast and dinner in a room with over 100 other residents and could not converse with them. When I entered the dining room I saw a sea of faces, but related to none of them. As I left the hotel on the Friday morning, I heard someone checking in, in English, at the desk. I glanced around and saw him for around 5 seconds as I left the building to get my taxi to work. That night, as I entered the dining room, I scanned the sea of faces and immediately recognised the other English speaking resident……I remembered him because he was suddenly significant – he spoke my language.

When you attract someone’s attention using Intensive Interaction, you find common ground; you begin to share a language; you immediately make yourself prominent; you stand out from all of the other events, people, sensations or sounds that wash over them and around them, as they effectively ‘free- fall’ through their day.

Conversations
Conversations involve mutual adjustment. They often involve exchanges of ideas, topics and themes. When we converse we look for common ground and explore it. Conversations dominated by imitation don’t really satisfy either partner. But it is possible to vary the topic while still following the same subject – eg talking about cars might involve Fords, Toyotas, Chryslers, Datsuns, convertibles, 4X4s, SUVs, dragsters, hatchbacks and F1. Similarly, conversations in Intensive Interaction can vary around topics. Through games and dialogues based on the sounds and/or movements that the learner makes, the exchanges enable the learner to explore and experiment, so over time they learn to recognise what it is s/he does, that makes us do the things s/he wants us to do. At the same time, as the skilled communicator, you are already equipped to be able to assist the learner to explore ‘game formats’ in which you can join with their focus; explore mutual anticipation; eye gaze ; physical dialogues; patterns of touch, reciprocity, expressing emotions, remembering and returning to familiar games. The practice of Intensive Interaction involves enjoyment of social time and using communication as a context for developing an awareness of others.
Understandable social transactions are a profoundly important aspect to anyone's quality of life. Conversations and dialogues based on familiar content and mutually negotiated rules help to break the remorseless cycle of isolation and passive recipience that many learners with complex intellectual disability routinely experience.

As these dialogues progress, as the skilled communicator, we may be tempted to assign intent to the behaviours of some learners, by reading their facial expressions and/or body language. But important as this may be; our purpose is not only so that we can acknowledge their communication and then act accordingly, but that the learner, who is unaware that they are communicating, learns that s/he has control – that s/he comes to understand that it’s their actions that cause our response.

This is not something we can task analyse and teach step by step; rather, learning occurs when we provide the environment that allows the learner to recognise something is happening because of something s/he does.

It is sometimes tempting for practitioners to concentrate their attention on teaching the performance of communication. The actions associated with communication present data which is quite convenient to record, train and generate predictive goals around. However it is more valuable to gain evidence of the level of a learner's involvement in the process of communication. The functions of communication are something we learn by experience and involvement – they are not behaviours we are taught.

References:


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“We take communication for granted because we do it so frequently, but it’s actually a complex process.”
Joseph Sommerville, PhD
Connecting with a Symbolic Communicator with Intellectual Disability and Autism’

This article ‘Aspire to Social Closeness: Connecting with a Symbolic Communicator with Intellectual Disability and Autism’ is drawn from the paper of the same name presented at the Speech Pathology Australia national Conference 2009. The conference theme encouraged us as a professional group to ASPIRE (Advancing Speech Pathology Innovation, Research and Excellence) in our practice.

*student name has been changed

The ability to intentionally and effectively communicate initially involves conveying a message to another individual. This is achieved in early development through the use of gesture, vocalisation and eye gaze combined with co-ordinated attention to an object or person, further developing to the use of speech or sign language (Yoder & Stone, 2006). Initiating joint attention, requesting and turn taking are the three major pragmatic functions used for intentional communication in the pre-linguistic period and are often significantly impaired in individuals with Autism (Yoder & Stone, 2006).

Nind and Powell (2000) note that intentional communication requires a sense of social agency, also considered to be an area of difficulty for individuals with Autism. Nind (1999) states that to be effective communicators we have to want to communicate and therefore need to have a concept of what communication is about, simultaneously applying many complex and interrelated skills. These most complex of skills are typically learnt in the first twelve months of life through the intense periods of face to face, reciprocal exchanges between the infant and primary caregiver (Zeedyk, 2006). Harwood, Warren & Yoder (2002) suggest that the notion of social agency, ie the understanding that one's behaviour is capable of effecting one's environment and those in it, might be a crucial first step in the development of intentional communication. Social agency motivates infants to explore their environment and those in it in search of other contingent responses.

Let us now consider Michael. Michael is a twelve year old individual with a diagnosis of Autism and significant Intellectual Disability. Michael is considered to be an intentional communicator due to the presence of symbolic language. Work with Michael has begun at a symbolic level. He is provided with the tools to decode and label his environment and to express basic needs; visual schedules, visual timetables, chat books and personal communication dictionaries (Hogdon, 1996; Larkey 2001); tools that also help him organise himself and assist him in being able to predict his routine.

A typical interaction with Michael follows a very predictable script; he ‘checks in’ with me every time he sees me, and indeed every other member of staff, about the sequence of the days of the week, what will be happening after recess, then after lunch until home-time. The interaction always finishes with ‘back to school tomorrow’ unless of course it is Friday, then it’s, ‘back to school on Monday’. This takes no more than a minute, with little or no physical proximity, eye contact or indication from Michael that he has understood that it is me he is talking with. I have had no part in the interaction, other than to acknowledge his initial contact- often an arm grab, ‘bump’ as I walk past. The focus of the interaction has been the target action or object rather than the communication partner. Once the action or object has been achieved, ‘communication’ ends (Light, Parsons, & Drager, 2002). In the case of the interaction described above, the target action has been for Michael to deliver his script.

Communication leads to community, that is, to understanding, intimacy and mutual valuing

Rollo May
**ASPIRE TO SOCIAL CLOSWNESS**

But do Michael’s scripts of interaction enable him to experience social agency? Despite being labelled as an intentional communicator, does Michael have an understanding of what communication is all about? Is the presence of symbolic language enough? Although we may have taught Michael to learn and store language, the skills to socialise with that language (Harwood, Warren & Yoder, 2002) appear to be absent.

It is argued that our goal as educators of learners with Autism and Intellectual Disability should be to facilitate the development of a conversational competence (Capps, Kehres & Sigman, 1998) or a social use of communication. How then might we go about teaching one of the most complicated things a human being learns, typically in their first year of life?

Intensive Interaction is an approach developed in the United Kingdom in the 1980's by Melanie Nind and Dave Hewett. It is an approach based on the infant caregiver relationship and provides opportunities for learners to rehearse and explore the fundamental skills of communication which enable people to engage each other.

Intensive Interaction is an approach for children and adolescents with learning difficulties who have not readily established relationships, informal communication and are unable to easily access the curriculum available to them (Nind, 1999). Intensive Interaction facilitates learning through:

> ...the creation of mutually pleasurable interpersonal games, playful ritualized routines, facial, vocal and gaze behaviours typical of those that infants elicit, altered timing of behaviours with essential rhythms, repetitions and pauses, imputing of intentionality, contingent responses, following rather than leading” (Nind & Powell, 2000, p.102).

The development of pre-linguistic behaviours such as turn taking, joint attention, and social agency have been identified as areas of difficulty for learners with Autism (Harwood, Warren & Yoder, 2002). The interactive episodes in Intensive Interaction provide for the learner in their ‘language’ the concept that, “…other people can be a source of pleasure, that they themselves can be ‘good to be with’, and they can act with effect within social situations” (Nind & Powell, 2000, p.101).

Whilst Michael is able to initiate contact and use language, he has difficulties in these foundational areas of learning which will continue to affect the way he communicates with those around him.

Work with Michael using the principles of Intensive Interaction began approximately 9 months ago. Whilst this work with him is at a very early stage, it was noticed that Michael is responding to the contingent response to his script by his communication partner and has begun to manipulate that script in order to achieve a reciprocal reaction to his manipulation. He has also begun to ‘play’, initiating games of chasey with familiar staff, often enlisting one or more players. Our data collection began with baseline video and continues with regular recording of interactive episodes. I expect that this work will continue with Michael, with deeper analysis to follow.

Michael still relies very heavily on the visual supports used throughout the school day and probably always will. The importance of these tools cannot be underestimated in facilitating the negotiation of his environment. However these tools cannot replace or replicate the dynamic, face to face contact of true, rich social interaction based on mutual trust, respect and in a way that is meaningful to both participants in the exchange. Communication as defined by Light (1997, p.61) is a much broader construct than having basic needs met and indeed contributes to the quality of life:
Communication is about touching other people and about having our lives touched by others. Communication is about laughing and arguing, learning and wondering why, telling stories, complaining about what is or what isn't, sharing dreams, celebrating victories. Developing communicative competence allows us to realize the essence of our humanity…"

We are beginning to learn Michael’s language and it is through this that he is being enabled to realize the ‘essence of [his] humanity’ rather than ours.

References


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It’s good to shut up sometimes.

Marcel Marceau
Intensive Interaction is an approach which develops in people with profound disabilities and/or autism the ability and desire to communicate and participate in social interaction.

This approach aims to develop:
- Sociability, including the ability and desire to be with others.
- Fundamental communication skills including eye contact, turn taking and emotional engagement.
- An understanding of social cause and effect.

In March 2007 all Kilparrin staff members received basic training in Intensive Interaction followed by the Advanced Practitioner training later in the year. The Intensive Interaction approach is now established within the Kilparrin curriculum as a means of interacting with and engaging in communication with students who are non-verbal and pre-intentional communicators. It is not used for all our learners but primarily for those who must rely on adults to interpret what they want to convey. This may lead to misinterpretation and an entirely different outcome from what the learners intended.

Each day students have uninterrupted time with an adult as their communicative partner. The learner leads the “conversation” using their unique tapping, rubbing, smiling, eye contact or vocalizations, with the adult responding to “their conversation” in a similar fashion. Students come to recognize the partner’s behaviours as their own and conversations develop. Each session lasts between 10 and 20 minutes with the learner determining how long the session lasts. Intensive Interaction sessions are videoed several times each term and used to view and recognize development in the student’s communication and to identify ways to extend student’s communicative abilities.

The benefits from Intensive Interaction for this group of students (to date) are evident in their desire to “be with” the adult communication partner and their engagement in the interaction. Students now show developing skills in smiling, eye contact, turning towards the adult, vocalizing in significant ways, listening and turn taking. It is delightful to witness two students communicating with each other using unique behaviours they recognize, for example tapping, to have a 2 way “conversation”.

The leadership team at Kilparrin recognizes the value of the use of Intensive Interaction for identified learners and of the need for ongoing training of staff. The Intensive Interaction approach to early communication involves a rigorous moderation process within a structure that has established terms of reference. A group of staff use a process and framework to study pieces of video taken of interaction and then formally assess and agree on the learners’ achievement levels. This has enabled the staff at Kilparrin to assess the progress of individual learners even when their communicative abilities are very basic. Intensive Interaction goals, levels of achievement and progress as agreed by a group of trained staff are included in regular reporting to parents.

In May of 2008, three staff members went to the inaugural Australian Intensive Interaction conference to hear key note speakers from the UK and to share the Kilparrin experience with staff members from similar school situations throughout Australia. We have also established a network with several Catholic schools who are also implementing Intensive Interaction. This has been a great forum to exchange ideas, learn from each other and keep the momentum going in SA. We are also available to share Intensive Interaction with interested people.

On August 13th and 14th August 2009 Kilparrin is hosting “Intensive Interaction - Two Day Introductory Course” presented by Dr Mark Barber.
INTENSIVE INTERACTION AT KILPARRIN

Mark introduced and established Intensive Interaction in Australia and is the sole trainer for people interested in learning how to use this approach. He has been to Kilparrin on two separate occasions to provide further training for staff and to observe and support the further development of Intensive Interaction being used in our classes.

Brenda Paterson,
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THE FUNDAMENTALS OF COMMUNICATION

The fundamentals of communication include things like:

- Enjoying being with another person
- Developing the ability to attend to that person
- Extending concentration and attention span
- Learning to do sequences of activity with a person
- Taking turns in exchanges of behaviour
- Sharing personal space
- Using and understanding eye contacts
- Using and understanding facial expressions
- Using and understanding physical contacts
- Using and understanding other non-verbal communications
- Vocalising and using vocalizations verbally (Including speech)
- Learning to regulate and control arousal levels

Learning the FOC’s is absolutely crucial because:

- It is the first learning in usual development
- It is foundational and underpinning to all other learning
- If the FOC’s are not learned, it is difficult to learn anything else

From: Intensive Interaction Practitioner Training, Mark Barber, Adelaide 2007

LEARNING STORIES AND INTENSIVE INTERACTION AT ST ANN’S SPECIAL SCHOOL

What are Learning Stories?
Learning stories are a narrative form of recording and assessment that helps to:

- Document what we are noticing, recognizing and responding to
- Offer opportunities for children, families and educators to revisit learning and learning experiences

(Learning Stories Workshop, Lady Gowrie Centre, 25/07/08)

How do Learning Stories and Intensive Interaction relate?
The following is a Learning Story written about an Intensive Interaction. I believe that this is a positive and effective means of analyzing an interaction. It is a good way to share a child’s learning experiences with parents and other staff.
LEARNING STORIES AND INTENSIVE INTERACTION AT ST ANN’S SPECIAL SCHOOL

Story:
Mackenzie was outside digging in a corner of the sensory garden. Daz went over to have a chat. They had a little talk. Mac signed ‘more’. Daz copied. Mac signed again. Daz copied. Mac took her hand and put it on a nearby plant. Daz stroked the plant. Mac kept putting her hand on the plant and Daz kept feeling it. Mac got up and walked over to another plant. Daz followed. Mac took her hand and placed it on the plant. Finally Daz got it! She broke a small piece of plant off and gave it to Mac. He went to another plant and Daz did the same. Mac was content.

Analysis:
Mackenzie has learnt that he will be listened to. He knew what he wanted and kept communicating until he was satisfied. He has learnt to trust his communication partner and is gaining confidence in his own communication skills.

What next:
To provide Mackenzie with many opportunities to practise his communication skills, particularly through Intensive Interaction and with a wide range of adults.

Jo Mc Donagh
Teacher, St Ann’s Special School
Tel: 8296 8777

HOW MANY KIDS CAN YOU INTERACT WITH AT ONCE

Madeleine and I had been enjoying a lovely chat in the sunshine. We were joined by Mackenzie who wanted a piece of the ‘interactive’ action! This proved to be such fun, that our collective laughter (and there was lots of it!) attracted the attention of Grace who was also keen to be in on the party. Gradually, Grace and Mackenzie drifted away, leaving Madeleine and I to the important business of catching up!

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Being a Supportive Communication Partner

Teaching communication is vital. Being a supportive communication partner is a very important part of any communication programme, particularly when the child may process information differently to us.

When communicating with young children who have an autism spectrum disorder:

- Use the child’s name first. Then pause before saying the rest of what you want to say. This will allow the child time to focus his/her attention on what you are saying.
- Use positive language that tells the child what he/she can do.
- Allow the child time to process (think) and respond. Allow the child plenty of time to process your instruction. If he/she doesn’t respond (you may need to wait a minute or more), repeat but do not rephrase the instruction.
- Be dramatic so that the child’s attention is more likely to be drawn to you. He/she is also more likely to be able to interpret your body language if you exaggerate.
- Use one word more than the child is using.
- Sing and/or chant – as well as tapping different neural pathways to speech, singing and chanting calms the child as well as helping him/her self-regulate his behaviour.
- Lower your voice or use a monotone – children with autism may have auditory sensitivities particularly with high frequency sounds.
- Do not insist that the child looks at you. Adults with ASD report that it actually hurts to have to make eye contact; that they can’t look and listen at the same time.
- Use visual communication strategies as well as speech. The visual symbol is a constant whereas speech is transitory.
- Use visual sequences for daily routine; child’s work schedule; any change that is going to happen.
- Use specific praise, eg “Good putting” rather than “Good work” or “Good boy.” The latter comments do not tell the child what it is that he/she is doing that you like.
- Avoid sarcasm. Children with autism spectrum disorders are literal – they may start hopping if you tell them to hop along to the bath!
- Choose the time of day when your child is most happy and relaxed to focus on language activities.

Exert from NEW Book “Practical Communication Programmes” by Sue Larkey & Jo Adkins.

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Helping Children With An Autism Spectrum Disorder To Communicate

To be diagnosed with an Autism Spectrum Disorder, a child must have a qualitative impairment in social interaction, communication and restricted repetitive and stereotyped patterns of behaviour, interests and activities. Autism SA works with lots of children who present with little or no functional communication or who have difficulty using communication to have their needs met.

Communication can be defined in terms of content, form and use (Bloom and Lahey, 1978). Content refers to the meaning of the message or what the communication is about. Form is the attachment of a symbol to the message- this can include the spoken word, a picture or a sign. Use refers to the reason for communicating.
All three components must be integrated for communication to be effective. Children with an Autism Spectrum Disorder can have a breakdown of any one of these components which can result in an inability to communicate.

A child who has deficits in their understanding of the world or who fails to understand the meaning of a message will need lots of experiences of the world around them as well as having consistent routines to expose them to language. To assist a child with autism develop a greater understanding of how things go together, we work on play skills. This may mean helping a child who likes to spin the wheels on cars to learn to drive the car on a simple car mat and introduce things like toy animals or dolls into the play sequence. To assist with understanding, pictures or signs are used to support comprehension of words, activities and transitions between activities, choosing a task or completing a task. Basic skills such as matching and sorting and completing simple inset puzzles are also developed.

A child who has deficits in attaching a symbol to a message, needs to be taught a new way to communicate either through teaching verbalizations (eg. sounds), pointing, the names and functions of objects and activities or through alternative and augmentative communication strategies (including sign or The Picture Exchange Communication System). PECS is one of the main alternative communication systems used with children with autism. When we first meet a child diagnosed with autism, they often communicate through behaviours such as pulling or bringing objects or tantruming when they don’t want to do something. To decrease the frustration of not getting their message across, PECS can be introduced so that a picture can be exchanged to request a favourite object. At the same time we model the word that labels that favourite object.

Lastly, a child who has deficits with using their communication needs to be taught new reasons to communicate. Children with autism are often good requesters but fail to develop other reasons to communicate. This includes making a choice, greeting and farewelling, directing attention, commenting and giving information. One way to teach a child both their name and to say “Hello” is through the use of a “Hello” song. We also model the gesture to wave hello and goodbye and model this each time we see the child. As a child with autism can struggle to make choices, we use visual aids such as choice boards to assist with this. Choice boards do not have to include everything the child may want, but may be engineered to include activities that the child may not prefer.

At Autism SA, a range of strategies are used to assist or enhance communication rather than having only one way of supporting children to become effective communicators.

References:

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An Approach For Children Who Have Disorders In Relating and Communicating

Many families are finding this approach is making a difference for children who have disorders in communicating and relating to others. It is used with children with Autism Spectrum disorders, developmental delays, special needs and severe regulatory problems.

The Developmental, individual Difference, Relationship-based model DIR® model is a comprehensive model of assessment and intervention developed by child psychiatrist Stanley Greenspan MD and Serena Wieder, Ph D. The model provides a framework for intervention and addresses the individual differences of children and how these and the interactions of caregivers impact on the child's ability to calm and attend, engage and relate, interact, problem solve, think abstractly and develop higher level reasoning.

“Floortime™ is the tool that is at the heart of a DIR® intervention program. Floortime is the spontaneous play and interaction that has the goal of helping parents and caregivers to attune to the child, and then once in a shared world with the child, develop a continuous flow of interaction” (www.sensoryconnections.com.au)

“Floortime™ is a specific technique to both follow the child’s natural emotional interests (lead) and at the same time challenge the child towards greater and greater mastery of the social, emotional and intellectual capacities.” (http://www.icdl.com/dirFloortime/overview/index.shtml)

The objectives of the DIR®/Floortime™ are to build healthy foundations for social emotional and intellectual capacities rather than focussing on skills and isolated behaviours. (http://www.icdl.com/dirFloortime/overview/index.shtml)

For further information visit:
www.icdl.com
www.sensoryconnections.com.au

SUPPORTING COMMUNICATION DEVELOPMENT AT PRESCHOOL

The Briars Special Early Learning Centre is a DECS preschool for children with a diagnosed disability and / or a significant developmental delay. All children attending this specialised preschool require support across most areas of their development, in particular with their communication development.

The primary communication needs within the context of The Briars are associated with disabilities and additional needs relating to autism, vision impairment, hearing impairment, global developmental delay, and severe and multiple disability. All staff in the preschool work very closely with the family, DECS Regional Support Services and each child’s support agency to ensure that appropriate goals are established, and that consistent strategies are planned and implemented. We rely, too, on the expertise of the Visiting Teacher service from Kilparrin when programming for children with significant vision and hearing impairment.

A fundamental outcome of our shared professional learning at The Briars has been to honour children’s individual communicative attempts whether expressed verbally, or signed, using body language or behaviour, and to respond consistently as if words were being used. We understand that it is our professional responsibility to be ‘interpreters’ for children, and we open the door to reciprocal communication. This also acknowledges the importance of our children initiating communication, rather than becoming ‘cue-dependent’.

Along with this key understanding that behaviour = communication comes our commitment to the use of visual cues and adequate processing time.
When a child fails to co-operate with a request the most common explanation is inadequate time to process the instruction. We try to remember to ‘cue, stop talking and wait’.

An overview of some of the resources and strategies used in the preschool setting to facilitate communication development include:

**Music**
Staff employ music and movement to transition children gently to new activities and to encourage and model communication in a positive and non-threatening way.

**Visual cues**
Photos, Compic, object cues and Boardmaker are used. All staff carry a set of basic visual cues at all times to cue children. Visual cues and object cues (props) are always used in group times for songs, stories and repetitive routines to develop familiarity.

**Schedules**
Schedules are used to cue children with 2 or 3 steps in an activity. They are also used for ‘first this, then…’ (e.g. first toilet, then computer).

**Key-word signing**
All staff use signing as part of the daily routine to cue all children. Similarly, spoken requests consist most often of single key words and short phrases to reduce the processing load for children and model functional language.

**Conversation boards**
These are laminated A4 sheets of Boardmaker symbols with language relating to a range of activities (playdough, sand play, music time, mealtimes). The purpose is to expose children to rich and varied language in a visual form just as children who are learning to speak are surrounded by spoken vocabulary. Staff point to symbols as they speak during the activity. There is no expectation for children to use the boards, but they become familiar with visual language as a preparation for using symbols in the future.

**Voice-output devices**
Big Mack, Go-Talk, Step-by-Step. Staff record phrases such as ‘hi everyone’ for children to use on arrival; ‘I want to go outside’ on the door; ‘Can I have a drink, please?’ near the tap, etc. The Step-by-Step may have each page of a favourite story recorded in sequence to give children a turn at story time.

**Social stories**
Some examples of Social Stories at The Briars are ‘Safe Walking’, ‘A day at The Briars’, and personalised photo books for individual children. These facilitate children’s understanding and ability to participate in activities.

**Exchanging**
This is based on PECS (Picture Exchange Communication System) where children exchange visual cues for motivating items and activities.

**Language Kits**
A range of kits are available for borrowing by families. Kits comprise a favourite story books accompanied by objects relating to the story. Families are encouraged to share the stories together with their child and to use the adjuncts to enrich the story. Each kit includes suggested play activities.

As a staff team, we are currently exploring the principles of DIR-Floortime and Intensive Interaction to expand our understanding of communication development. In addition, we are trialing the use of video footage to capture the more subtle expressions of children’s individual language across the preschool day and to use this as a tool for reflection and planning. It is proving to be a valuable way to focus more closely on children’s communication attempts, and to highlight the ‘magic moments’ we can share with families and build upon as educators.
There is nothing of greater importance to our communication program than a trusting relationship with children, their families and their support providers. Communication is primarily about shared meanings, and our responses and interactions have a critical impact on each child's communication development.

Phoebe Caldwell, who has done extensive work in the area of 'Intensive Interaction', notes that by our interactions we show we genuinely value children when we take the trouble to learn their language. If we keep that as our highest priority, then we’re on the right track for providing children with a strong foundation for their communication development.

Jenny McGinn
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Promote Initiation
Students with Complex Communication Needs (CCN) often require the use of an Alternative and/or Augmentative Communication (AAC) system to functionally communicate with others in their environments. While AAC systems provide access to communication, equally as critical is the ability to control interactions and spontaneously communicate intent (Carter, Hotchkis, & Cassar, 1996). Many individuals with severe disabilities have difficulty initiating communication, even after developing receptive vocabularies and demonstrating the ability to use responses upon request (Hamilton & Snell, 1993).

For students with CCN, interventions promoting the development of spontaneous communication are critical (Beukelman & Mirenda, 1998). Providing opportunities for individuals with disabilities to initiate and experience control over interactions and their environment (Carter, Hotchkis, & Cassar, 1996), using readily available communicative means is essential (Mirenda & Schuler, 1988). Therefore, educators must have not only the skills necessary to operate AAC systems, but also the skills to create opportunities for AAC system use within the classroom learning environment (Soto et al., 2001).

Create Varied and Multiple Opportunities for Communication
Research has clearly demonstrated that multiple opportunities for communication are a necessary component of teaching learners with CCN. The use of learners' AAC systems should be embedded within routine classroom activities such as meal times and self-care, and programmed to allow students to communicate a variety of functions (DiCarlo et al., 2000). A sample of communication functions are summarised in Table 1.

"To effectively communicate, we must realize that we are all different in the way we perceive the world and use this understanding as a guide to our communication with others.”

Robert Greeleaf
### Functional Communication Categories (Interactive Only)

<table>
<thead>
<tr>
<th>Category</th>
<th>Specific Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requests</td>
<td>1. For attention</td>
</tr>
<tr>
<td></td>
<td>2. Social interaction</td>
</tr>
<tr>
<td></td>
<td>3. Play interactions</td>
</tr>
<tr>
<td></td>
<td>4. For affection</td>
</tr>
<tr>
<td></td>
<td>5. For permission to engage in an activity</td>
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<tr>
<td></td>
<td>6. For action by the receiver</td>
</tr>
<tr>
<td></td>
<td>7. For assistance</td>
</tr>
<tr>
<td></td>
<td>8. For information/clarification</td>
</tr>
<tr>
<td></td>
<td>9. For objects</td>
</tr>
<tr>
<td></td>
<td>10. For food</td>
</tr>
<tr>
<td>Negations</td>
<td>1. Protest</td>
</tr>
<tr>
<td></td>
<td>2. Refusal</td>
</tr>
<tr>
<td></td>
<td>3. Cessation</td>
</tr>
<tr>
<td></td>
<td>4. Denial</td>
</tr>
<tr>
<td>Declarations/Comments</td>
<td>1. About events/actions</td>
</tr>
<tr>
<td></td>
<td>2. About objects/persons</td>
</tr>
<tr>
<td></td>
<td>3. About errors/mistakes</td>
</tr>
<tr>
<td></td>
<td>4. Affirmation</td>
</tr>
<tr>
<td></td>
<td>5. Greeting</td>
</tr>
<tr>
<td></td>
<td>6. Humour</td>
</tr>
<tr>
<td></td>
<td>7. Response/Answer</td>
</tr>
</tbody>
</table>
Reichle (1997) stated that “effective communication intervention must fully utilize naturally occurring interactive contexts.” Additionally, individuals with CCN should be provided with multiple opportunities for learning, practising, and using skills which may not occur naturally across the school day, requiring planning of communicative opportunities (DiCarlo et al., 2000; Downing, 2000; Rush & Williams, 2001). Hamilton and Snell (1993) recommended that communication be taught in natural contexts throughout the day and that many opportunities for communication must be offered to facilitate the development of communication skills.

Communication instruction using naturally occurring communicative contexts in typical settings has been referred to in the literature.

Examples of structured contexts for assessment Light, Collier & Parnes (1985)

By structuring these contexts the communication partner can assess the extent to which the learner is able to express varied communication functions.

They may also be used for instruction once it is established the learner does not exhibit sufficiently varied functions. The number of varied functions selected for instruction will depend on the learner and their communicative competency.

Speech Language Pathologists should be consulted and will be involved in collaboration and consultation on the design of the communication program.

| TABLE 1: Structured Play Contexts to Elicit Communicative Functions |
|-------------------------|------------------------|
| Context                          | Communicative Function |
| 1. As child enters room, indicate adult's presence.   | Social convention: greeting |
| 2. Ask child about an experience. Hold a brief conversation. | Provision of information |
| 3. During conversation, tell child “I don't understand.” | Provision of clarification |
| 4. Tell child “Show me mumble” | Request for clarification |
| 5. Put two telephones on the table. Take one yourself and start to dial it. (Don't offer the other to child.) | Request for object |
| 6. Hold short routine conversation on the telephone with the child. (“Hi,” “How are you?”). | Social convention: social routine |
| 7. Tell child that you have to go. Pause. Hang up. | Social convention: closing |
| 8. Take cut opaque container with toy inside. Peek inside, but don't show child. | Request for information |
| 9. Introduce a “guessing game” to find out what’s inside container. Encourage the child to ask questions to solicit clues about mystery item. | Request for information |
| 10. Give child the container (closed tightly) with toy inside. | Request for action/ assistance |
| 11. Offer child a choice of toys (a book or a puppet). | Request for object (within choice making context) |
| 12. Give child the toy(s) she didn't choose. | Expression of self protest |
| 13. Check child's choice. Did you want (toy not chosen)? | Denial/ injection |
| Did you want (toy chosen)? | Confirmation |
| 14. As child plays with toy, inappropriately put a stoker on your nose. | Request for attention |
| 15. Tell child it's time to leave. | Social convention: closing |
as naturalistic language teaching (DiCarlo et al., 2000; Rodi & Hughes, 2000; Sigafoos et al., 1994). Although the definition of and approach to naturalistic teaching varies across research studies (Hancock & Kaiser, 2002; Kaiser, Ostroksy, & Alpert, 1993), environmental arrangement and milieu teaching techniques are often implemented as components of the naturalistic approach to language instruction (Kaiser et al., 1993). Because the use of naturally occurring communicative contexts may not provide sufficient opportunities for instruction for students with severe disabilities (Reichle, 1997), environmental arrangement strategies are an essential component of naturalistic or milieu teaching. Environmental arrangement uses non-intrusive cues to promote communicative initiations and to increase learners’ opportunities for communication (Kaiser et al., 1993; Ostrosky & Kaiser, 1991). The classroom or school environment is engineered such that there is an increase in opportunities for the student to initiate communication using their AAC system across activities that typically occur during the school day. Examples of environmental arrangement strategies are summarised in Table 2.

Table 2. Environmental Arrangement Strategies (McMillan, 2009)

<table>
<thead>
<tr>
<th>Environmental Arrangement Strategies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blocked access</td>
<td>Materials are placed within view of the child but out of reach, or access is blocked such as holding materials until a request is made.</td>
</tr>
<tr>
<td>Assistance</td>
<td>Materials are provided with which the child needs assistance.</td>
</tr>
<tr>
<td>Inadequate portions</td>
<td>Small portions are provided so the child must request additional materials.</td>
</tr>
<tr>
<td>Sabotage</td>
<td>Do not provide all the materials, hide/move materials stored in a familiar place, or provide the wrong materials the child needs to follow an instruction or complete an activity.</td>
</tr>
<tr>
<td>Protest</td>
<td>Have the child engage in an activity they do not like or do something that the child does not want you to do such as temporarily remove materials from child or interfere with a game.</td>
</tr>
<tr>
<td>Comment (initiation)</td>
<td>Create a silly or ridiculous situation that defies the child’s expectations of an activity or routine (e.g., wear sunglasses while teaching, put your coat on backwards).</td>
</tr>
</tbody>
</table>
Develop a Systematic Approach to Teaching

Milieu teaching techniques have been described as a naturalistic strategy for teaching functional language skills (Kaiser, Yoder, & Keetz, 1992) with specific techniques described by Hart (1985) as mand-model, time-delay, and incidental teaching. Milieu teaching incorporates several features: (a) following the child’s lead, (b) using multiple natural occurring contexts, (c) prompting language production, (d) using natural consequences that are associated with the teaching context, (e) using teaching that is embedded into ongoing interactions with the teacher and student, and (f) following an antecedent-response-consequence paradigm (Kaiser et al., 1992). Table 3 provides a summary of specific milieu teaching techniques.

Table 3. Summary of Milieu Teaching Techniques

<table>
<thead>
<tr>
<th>Technique</th>
<th>Milieu Teaching Techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mand-model</td>
<td>The teacher directs the child’s attention using interesting materials, mands a response when the child approaches the materials, provides a model if the child does not respond to the mand, then praises and gives the child the material for responding to the mand or model.</td>
</tr>
<tr>
<td>Time-delay</td>
<td>Time delay requires the adult to be in close proximity to the child while providing an expectant look and displaying interesting materials. The adult then delays prompting for up to 15 seconds. If the child does not respond, the adult models the correct response. When the child responds to the model the materials requested are provided to the child. The model can be repeated using the delay each time if the child does not respond to the first model. Alternatively, a higher level prompt can follow if the child does not respond to the model (e.g., a physical prompt).</td>
</tr>
<tr>
<td>Incidental Teaching</td>
<td>The incidental teaching process requires a child to initiate language or communication. The teacher then: 1. requests elaboration; 2. prompts or models the elaboration if the child does not respond; 3. repeats and confirms the correct elaboration and; 4. gives the child materials related to the initiation.</td>
</tr>
<tr>
<td>Combination</td>
<td>Any of the above techniques can be combined to suit the needs of the child and their system of communication. For example, a prompt hierarchy might be used where a time delay is the first step, followed by a model if no response and then followed by a physical prompt if no response to the model. Physical prompts obviously cannot be used with speech but can be used with AAC systems.</td>
</tr>
</tbody>
</table>
The use of each technique is based on the needs of the individual learner. The mand-model procedure is typically used to teach new communicative responses, whereas time delay may be used to teach previously demonstrated behaviours that are rarely initiated but exhibited in response to an instructional prompt. However, time delay has been shown to be effective in teaching new behaviours if the teacher begins with a zero second time delay for the first few opportunities (ie uses a model immediately, without the delay for the first 3 to 5 opportunities). The incidental process is used to teach individuals language elaboration, requiring individuals to initiate approximations (Reichle & Sigafoos, 1991).

Over several years of study and practice, researchers and educators in communication intervention have demonstrated that the use of functional communication, environmental arrangement and milieu teaching can be used effectively by teachers, parents and service providers to substantially increase the communication skills of children with disabilities who require the use of AAC. Educators and support personnel may consider teaching communication to learners with CCN using a functional 3-step approach as summarised in this article:

1. Consider assessing and teaching a range of communication functions (Table 1).
2. Engineer the environment to plan and create multiple opportunities for communication and instruction throughout the day using environmental arrangement strategies (Table 2).
3. Once an opportunity is created or arises naturally, use a systematic approach or procedure to teach the learner that best suits their needs and their level of communicative competence (Table 3).

This approach not only provides consistency for the learner with CCN as well as the communication partners and educators, each step is supported by a strong evidence base over a number of years in the field of special education. Further information can be found by consulting the attached list of references.

References


Teaching Functional Communication to Students with Complex Communication Needs


Julie McMillan
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At Modbury Special School communication is an important component of the core business. All children have communication goals in their Negotiated Education Plan and visual supports are consistently used across the site to support learners understanding, participation in school activities, as well as their social interactions. This approach is particularly important to empower learners for whom behaviour is their communication. They require effective ways to express themselves and to be understood.

Prior to commencing at Modbury Special School new learners have several sessions in their prospective classroom and receive a Transition Booklet. This supports them to make a smooth transition from preschool. They have an understanding of both what the site looks like and experiences they can expect.

On attendance at Modbury Special a referral to Regional Support Services requesting a speech pathology assessment is made for each child. It is very important that explicit communication goals are set by utilising assessment information and the expertise of the Speech Pathologist.

The collective wisdom of staff at Modbury Special is valued and is used when planning whole site initiatives. All service providers are involved with the learner and they work in collaboration with relevant staff to build on success, and address issues.

At Modbury Special, the staff has developed an extensive range of visual supports using real objects, photographs and board maker symbols. These are displayed in glass cabinets in the Resource Room dedicated to the making and displaying of visual resources. Resources are available for families to borrow or they are welcome to make their own adapting the ideas on display. This initiative has resulted in a consistent approach between home and school and is a supportive way to share with parents effective ways to enhance their child’s communicative ability. The display includes visual supports and social stories for various rules (e.g. computer, group, class, yard), understanding our world, personal care routines, community access programs, money programs, social skills, sexuality and routines at home to support families.
Another successful initiative has been the introduction of Smart boards into all teaching spaces. These have had a dramatic impact on the use of group time to develop children’s skills in turn taking, making choices and expressing feelings to name a few. Each staff member is also provided with a folder that contains all the basic visual supports for the classroom, including subjects, eating, social interactions, yard play, taxi routines and other daily routines. A whole school visual timetable enables staff to schedule activities in the art room, sensory room, and the daily living skills classroom.

The induction of staff and ongoing professional development reflects the commitment to optimising each child’s communicative abilities. New staff receive intensive induction and there is an ongoing focus on communication in staff professional development activities. The expertise of other service providers, agencies and other specialists is utilised in this. Staff are also supported to attend relevant conferences for example Spectronics in Queensland or visit other sites interstate.

In addition a Communication Group convenes twice each term to reflect on practice, discuss strategies and problem solve issues. This is open for all staff and initially was coordinated by the DECS Speech Pathologist. This group has a focus on a whole school approach and is a great forum to extend the understanding and skills of staff. Another whole staff meeting convened twice a term is for Student Intervention. This group reflects on the data provided around learner behaviour, issues and concerns and develops strategies to be trialled and reviewed at the next meeting. Often learners are using behaviour to communicate their needs/concerns and team members reflect on what alternative can be introduced to replace negative behaviours.

Communication is everyone’s core business at Modbury Special. A collaborative culture and shared commitment to use the collective wisdom of families, teachers, SSOs and service providers from relevant agencies is achieving positive communication outcomes for learners. The strength of this culture and commitment is evidenced in the appointment of two staff to make resources for teachers and parents. This includes setting up Smart boards and talking books. Teachers are then able to focus on furthering the communicative abilities of learners.

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Adapted Learning web site
Mayer Johnson, the software company behind the range of Boardmaker products, has recently established a new web resource for users of their programs. The web site is called www.adaptedlearning.com/. It is built around a range of Web 2.0 tools and membership is free. Once logged in, users can use the search tools to locate Boardmaker files to download. Members can also upload their own files to share. This feature has led to many members providing a growing number of files being made available for download. Many of the files are also compatible with Boardmaker Plus or Boardmaker Speaking Dynamically Pro.

Members have at their disposal a range of tools including sophisticated ways to manage their searches for files, add friends from the Boardmaker online community, become members of groups, send messages and post comments in the forums.

Boardmaker Plus Player
Mayer Johnson has recently released a player for activities created with Boardmaker Plus. The player is an inexpensive alternative to purchasing extra licences of the Boardmaker Plus software. It gives schools the ability to increase access to the dynamic multimedia activities created with Boardmaker Plus. The player can also be used to open and print files.

Visual Tools CD
SERU has developed a Boardmaker resource called Visual Tools CD. This CD installs hundreds of ready made Boardmaker files on to the computer. The CD also installs its own database developed with FileMaker. The database has a powerful key word search feature. As well as locating boards by file name, a search can also be conducted to list all the boards which contain a button with the key word. Boardmaker files can be opened directly from the search engine listing.

Users can also add their own boards in to the database. The database allows you to add a list of key words. This ensures an efficient method can be used for future searches of a particular board. The Visual Tools database also allows the entry of files created with Boardmaker Plus or Speaking Dynamically Pro.

The CD can be purchased for $33.

Proloquo2go – AAC for your iPod
www.proloquo2go.com/
Proloquo2go is a new product from AssistiveWare that provides a full-featured communication solution for people who have difficulty speaking. The software has been specifically designed for use on an iPod Touch or an iPhone. Its features are based on sound research. The result is a very intuitive interface with advanced features such as natural sounding text to speech, picture and/or text-based communication, automatic plurals and possessives for nouns, an extensive collection of 8000 SymbolStix symbols. The SymbolStix symbols are similar to the PCS symbols distributed by Boardmaker and they are quickly becoming the British and European standard for symbols.
The developer has chosen to make the software available as an iTunes purchase. This is one of the key factors to ensuring that the software is available as cheaply as possible. Users who already have an iPod Touch or iPhone can buy Proloquo2go from the iTunes store for approximately $190.

An amplified speaker is required for the speech output to be heard. The iMainGo is a portable stereo and protective case designed for iPods and sells for $70.

The Proloquo2go can also be purchased from Spectronics. It is sold as a bundle – this includes an iPod Touch (with Proloquo2go pre-installed) and amplified speakers. Spectronics also provides free ongoing support to users who prefer to purchase the bundle.

Talking Photo Albums
The Talking Photo Album lets you record up to ten seconds per each of its 24 pages. The pages are plastic sleeves and a recording can be made on both sides of the sleeve. This easy-to-use speech output device holds standard 4” x 6” photos or your own picture/text cards. The user squeezes the play button to activate the recorded speech.

Talking Photo Albums can be borrowed from SERU.

Pictures That Talk
Pictures That Talk is designed to be used with a Talking Photo Album. The resource has a host of ideas on ways to use a talking photo album that can improve student social interaction skills, increase independence and enhance communication between families and professionals who work with them. The ideas for making album pages are illustrated in full colour. The book has suggestions for pictures, text and recorded messages.

This resource is available for loan from SERU.

Voice Pod
The VoicePod is a digital recording and playback system ideal for photos, language cards and personal mementos. It features 36 reusable, two-sided sleeves, each with an ID strip to access recordings. That means you can have up to 72 messages stored on the easy-to-use, portable VoicePod.

The sleeves can hold photos, symbols and text. The bottom of the card has a magnetic strip which stores the recording. Each side of the sleeve can hold 9 seconds of recorded speech. The Voice Pod has a built-in speaker to play back the recording. The sleeves can be re-recorded as often as required.
WEBLINKS

Visual Aids for Learning
http://www.visualaidsforlearning.com/products/index.htm

Novita Children’s Services

Children, Youth & Women’s Health Services

American Speech Language Hearing Assoc.
http://www.asha.org/public/speech/disorders/LBLD.htm

LD Online- Speech & Language
http://www.ldonline.org/indepth/speech

Spdsupport.org.uk (Semantic Pragmatic Difficulties)
http://www.spdsupport.org.uk/

Talking Point
http://www.ican.org.uk/TalkingPoint/Home.aspx

I Can – Information Services
http://www.ican.org.uk/information.aspx

Royal College of Speech & Language Therapists
http://www.rcslt.org/resources/links/

Speech Teach UK
http://www.speechteach.co.uk/

Speech pathology Australia –fact sheets

Elizabeth Love and Sue Reilly

Education Queensland - Professional Community

AGOSCI, a group representing people with complex communication needs
http://www.agosci.org.au/

ISAAC, a worldwide alliance working to create opportunities for people who communicate with little or no speech.
http://www.isaac-online.org/en/home.shtml

South Australian AAC Special Interest Group – formerly the Statewide Complex Communication Needs Project

AAC-RERC, a collaborative research group dedicated to the development of effective AAC technology.
http://www.aac-rerc.com/

"The basic building block of good communications is the feeling that every human being is unique and of value.”
Unknown
JOURNAL ARTICLES

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Bolick, Teresa Ph D
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Adams, Catherine; Lloyd, Julian
British Journal of Special Education Vol 34 No 4, December 2007 SERU1555

IMITATION, INTERACTION AND DIALOGUE USING INTENSIVE INTERACTION: TEA PARTY RULES
Barber, Mark
Support for Learning Vol 22 No 3, 2007 SERU1481
RESOURCES RELATED TO COMMUNICATION

**Diddly Dots Too!** Payne, H; Ahang, S, 1993. 66-1006-01.
This publication is a collection of games and activities which support the development of the learner's communication and social skills. The collators believe that games and activities that encourage effective listening and responding and cooperating contribute towards the development of a stable and cohesive class group in which true communication can occur.

In this book, developmental phonological disorders are described as a group of language disorders that affect children's ability to develop speech that is easily understood by the time they are four years old because the sound patterns of language are disrupted. The second part describes clearly and simply how the treatment program works.

**Working with Children's Language,** Cooke, J; Williams, D, 1985. 17-0122-01.
This is a handbook and resource guide designed to stimulate language in children with language delays. It provides a theoretical base for the various ages and aspects of language acquisition, together with a wide range of practical ideas and activities for implementing language therapy programs.

**Developmental Phonological Disorders:** Bowen, C, 1998. 17-0160-01.
In this book, developmental phonological disorders are described as a group of language disorders that affect children's ability to develop speech that is easily understood by the time they are four years old because the sound patterns of language are disrupted. The second part describes clearly and simply how the treatment program works.

**Music Therapy: Another Path to Learning and Communication for Children on the Autism Spectrum,** King, Betsey. 68-0090-01.
This interactive book is designed to introduce the principles and effective use of music therapy. This is an intervention technique designed to assist individuals with autism to improve in the areas of verbal/augmentative communication, social interactions, attention and academic skill.

This book focuses on how to foster communicative competence in young children through an emphasis on the pragmatics of language. The acquisition of communicative competence is seen as being closely related to self image and social development. Three chapters are devoted to activities for children 0-2, preschool and primary age. Communication and language disorders are also addressed.

**It Takes Two To Talk,** Manolson, A, 1997. 17-0151-01.
This guidebook, written in simple language and using colourful illustrations, shows parents how to help their child communicate and learn language during everyday activities. It is a useful resource for professionals who provide support to families of young children with language delays.

**Learning Language and Loving It,** Weitzman, E. 17-0152-01.
This book is a guide to promoting children's social and language development. It is designed to assist early years educators to promote the language learning of all learners, but particularly those requiring extra assistance. It is a resource with practical strategies for people who work with young children.

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RESOURCES RELATED TO COMMUNICATION

You Make the Difference in Helping Your Child Learn, Manolson, A. 17-0150-01.
This easy to read guidebook, written for parents of young children, uses colourful illustrations and cartoons to show a simple step-by-step approach to interacting with their children.

This resource, written by classroom teachers, describes how they implemented the Picture Exchange Communication System (PECS) in their classrooms. It contains practical suggestions to assist teachers to begin child initiated communication. See also: 17-0315-01; 17-90162-01.

Teaching Communication Skills to Students with Severe Disabilities, Downing, June, 1999. 17-0167-01.
This easy-to-read book details strategies for assessing the communication skills of students with very complex and multiple disabilities. Information is provided on how to determine student’s needs and put them on the track to school success; how to assist students with peer interactions in typical settings and across the age span and intervention techniques to promote alternative forms of communication such as gestures, body language, signing and using both objects and pictorial devices.

This book focuses on disorders of speech, language and communication, bringing together the techniques of analysis, assessment and treatment. It covers cognitive, linguistic, social and educational aspects of language disability and therefore has relevance within a number of disciplines including speech therapy, education, teachers of the deaf and English as a second language, and educational and clinical psychology.

This book contains an updated description of the Picture Exchange Communication System (PECS), an augmentative / alternative communication system developed for use with young children with autism and other social-communication deficits. It can be used by individuals in a variety of settings, including the home, classroom and community.

This book describes numerous strategies to enhance communication interactions for students who either have autism or moderate to severe communication disorders. This is a 'how to' book, full of practical examples and illustrations and describes specific strategies that capitalise on the visual strengths and learning styles of these children/students.

This book is an introductory text written for practicing professionals, pre-professional students and facilitators who are interested in learning more about communication options for people who are unable to meet their daily communication needs through natural modes such as speech, gestures or handwriting.

This book, for parents and professionals, focuses on speech and language development from birth to the stage of making three word phrases. Research based, it offers information on: articulation and phonology; speech and intelligibility; hearing loss; apraxia; pragmatics; reading and literacy; assessment and treatment; augmentative and alternative communication.
This book is designed to be used by teachers running social skills group for children with social communication difficulties. The package provides a structured program in communication, body language, conversations and assertiveness.

These cards focus on sensory and social emotional aspects of communication. They can be used in a variety of ways including: requesting needs and wants; expressing feelings or making choices; asking or answering questions, making sentences; identifying or labeling pictures; sequencing activities to create schedules.

Toddler Talk: A Family Centered Intervention Program for Young Children, Schoberphetserson, D; Cohen, M, 1999. 61-0798-01.
This book is designed to promote speech and language development of children between 12 months and 36 months of age. It provides parents of young children with strategies for facilitating the development of basic communication skills in the home environment. As they participate, parents learn techniques for creating enriching language experiences in a variety of everyday contexts.

Functional Vocabulary for Children—Kira Likes to go to School, Reeve, C, 2005. 61-0930-01.
This book is one in a series designed to assist learners with autism spectrum disorders or delayed language development to use basic vocabulary functional to their everyday lives. The books are interactive and the repetitive text allows nonverbal learners to participate by recording on voice output communication devices. See also: 61-0930-02—Kati Gets Dressed; 63-0930-03—Ramon play on the playground.

This game, for 5-12 year olds, is designed to assist players to pay attention to tone of voice, observe body language and note how these cues affect the message. Players deliver brief messages and get immediate feedback. They learn to adjust volume, expression, gestures and other physical cues in order to communicate effectively and achieve greater self control.

This practical book, detailing both research and strategies, provides information on improving the social and communication skills of learners with developmental disabilities. It details how social and communication skills develop, interact with social and cultural factors like friendship experiences and linguistic development and influence social, academic and vocational outcomes.

This book uses a primarily visual strategy to teach social skills. Each skill is formatted sequentially, similar to a cartoon strip, with digital pictures of children combined with text and cartoon bubbles to denote what is being said. Included are right and wrong ways to act with accompanying text. See also: 66-1343-01 The Social Skills Picture Book for High School and Beyond.

Learning Language and Loving It, Weitzman, E. 17-0152-01.
This book is a guide to promoting children’s social and language development. It is designed to assist early years educators to promote the language learning of all learners, but particularly those requiring extra assistance.
NEW RESOURCES

Noah’s Ark Pack. 62-0120-01.
The Noah’s Ark Pack, collated for learners in the Early Years, could assist in the development of a wide variety of skills; classification, sorting, visual discrimination, matching, basic concepts, counting, socio-dramatic play, creativity, fine motor, expressive/receptive language. The range of materials allows for use as a group or individually.

This book contains photocopiable materials suitable for learners from ages 5 to 7. Using familiar contexts, the activities provide opportunities for learners to develop observation skills, make measurements, plan and carry out investigations and draw conclusions. Contents include: Life and Living Processes; Materials; Physical Properties.

One in the Learning to Get Along series, this book has full page coloured illustrations which provide visual cues to the simple text which teaches the basic skills of cooperation, making friends and being a friend. Designed to be read aloud, the book discusses the joys of friendship as well as the responsibilities. There is a section for adults which includes discussion questions, games and strategies.

This book is a guide to identifying children’s strengths and needs across multiple domains of emergent and early literacy in the Early Years. Areas include phonological awareness, print awareness, narrative, vocabulary, and motivation.

This profile, designed to promote staff reflection, can be used as a framework for considering programs being provided and identifying areas of strength and aspects for improvement. Individual reflections can then provide the basis for discussion between personnel resulting in a composite profile for the centre as a whole. This should assist in: planning and evaluating; performance management processes; communication with families and communities; analysis of professional development needs/priorities.

This book contains basic practical lesson plans for Level 2 Perceptual Motor Programs designed for learners in preschool and the first year of Junior Primary school. The author states that regardless of age or grade level, learners should not attempt Level 2 until they have satisfactorily completed Level 1. The 25 weeks of activity stations, including detailed illustrations, are sequenced according to difficulty and include objectives, program set up information, equipment construction diagrams and an evaluation scale.

Addressing Literacy in Society and Environment (a middle years resource), Dumbleton, M, 1999. 73-0049-05.
This book examines specific literacy issues faced by Middle School learners in the context of Society and Environment. It offers a framework to identify and address issues to improve student learning outcomes.

This book, containing black line masters, is suitable for learners in Years 5-6. It features units focusing on grammar rules, punctuation, spelling rules and creative writing.
NEW RESOURCES

This book is intended for learners with ADHD or Autism Spectrum Disorders who also have sensory integration difficulties. It was written by the parents of a boy with these conditions from a child's perspective. The book encourages learners to work with adults in overcoming sensory difficulties.

Learn and Sort Helicopter, VTech. 82-0592-01.
This colourful, interactive battery operated helicopter has a number of different functions. Spinning the propeller, pulling the helicopter along, playing the piano keys or pressing the buttons activates phrases, animal noises, music, flashing lights and songs. Balls can be dropped down a chute, situated at the top and watched as they drop into the body of the helicopter.

Based on two decades of practice and research into developmental disabilities such as Autism, PDD, Down Syndrome, ADD and Cerebral palsy, this book offers a step by step approach that is designed to initiate and sustain children's mastery of the most important developmental milestones. The book is presented in three parts: Discovering Each child's Unique Strengths, Developmental Capacities and Challenges; Encouraging Emotional and Intellectual Growth; and Family, Therapy and School.

This book contains movement activities, designed for children of all ages, that develop strength, endurance and rhythm. Each double page spread contains a different activity and details the relevant music to use which is on the accompanying CD. The activities are recorded in clear instructive photographs with accompanying explanatory text.

This book is intended for reading aloud and sharing. It includes a section for adults, with discussion questions to share, ideas to explore, and empathy games to play. Easy to understand text and supporting illustrations assist learners to understand that other people have feelings that can be similar or different to their own.

One of the Gum Tree Farm series about Matthew, Sarah and their dog Bluey who live on a farm in the Australian outback, Bluey’s Bone tells the story of Bluey burying a bone and how the subsequent search for it unearths a dinosaur's bone.

Smart Thinking: Developing Reflection and Metacognition, Wilson, Jeni, 2008. 66-1364-01.
This book provides information and practical ideas for educators working with students to develop the abilities of reflection and metacognition in a range of contexts.

Quality Circle Time in the Primary Classroom, Mosley, Jenny. 66-1393-01.
This book is a guide designed for educators wanting to initiate or further develop the Circle Time strategy. It provides ideas for developing positive relationships and the steps that can be taken to create calm and self-disciplined behaviour. Included are a range of ready to use lesson plans based on themes such as Getting To Know You, Co-operation, Solving Problems and Friendship.

Key to Inference: Copy Masters, Parkin, Chris et al, 2000. 63-3220-01.
Key into Inference is organised into 3 age group levels: 8-10 years, 10-12 years and 12-14 years. At each level the learner progresses from reading single sentences to paragraphs and finally to longer complete pieces of text. Within each sample of text the reader is required to infer by connecting clues. Both fiction and non fiction examples of text are presented.
NEW RESOURCES

19-0218-01.
This book, providing visual language strategies for individuals with Autism Spectrum Disorders, is divided into three sections. It discusses 'How individuals with ASD Learn'; 'How Learning Language Affects Social, Behavioural and Academic Development' and 'Language based Learning Strategies: strategies and interventions for the visual brain.'

16-0415-01.
The authors of this book, themselves members of the Deaf community, are also scholars who study its language and society. They explain how deaf culture works, what it means to its members, how members define themselves within the culture and how they interact with the hearing world.

**The Out of Sync Child Has Fun**, Kronowitz, Carol, 2006.
18-0187-01.
This practical book contains activities for learners with Sensory Processing Disorder under the acronym SAFE - Sensory-motor, Appropriate, Fun, and Easy. Activities are based around touch, balance & movement, body position, sight, hearing, smell and taste.

73-0050-06.
Addressing Literacy in Science is a handbook in a series for teachers of Middle Years students with a cross-curricula literacy focus. This volume provides practical strategies for addressing literacy issues in the context of science to improve student learning outcomes.

61-0689-01.
This book, written by South Australian teachers details the four roles of the literacy learner: code breaker, text user, text participant and text analyst. There are two cards per page and 6 to 10 sentences per page. The learner is required to either "finish the sentence with the correct ending" or "make a choice" between endings. The book is designed for students from R to 7 and can be used with small groups or a whole class.

**Smart Thinking—Developing Reflection and Metacognition**, Wilson, Jeni; Wing Jan, Lesley, 2008.
66-1364-01.
This book provides information and practical ideas for educators working with students to develop the abilities of reflection and metacognition in a range of contexts.

**Asperger Syndrome and Difficult Moments**, Smith-Myles, B; Southwick, J, 2005.
19-0224-01.
This revised and expanded edition of the same title published in 1999, has an entire chapter devoted to the rage cycle, including often missed warning signs, interpretation of the behaviours and the crucial role played by adults in the outcome of the situation. Another chapter, by a parent, offers practical suggestions for day-to-day issues that confront families including morning, homework and bedtime routines.

**Trundle Wheel**,
Invicta, 2008.
64-1491-01.
This trundle wheel, operated by aligning the start with an arrow, features a rubber tyre to maintain accuracy, pointer on the wheel to measure intermediate distances and an adjustable clicker with three positions; off, click every 10cm and click every metre.

67-0546-01.
This book, containing black line masters, is suitable for learners in Years 5-6. It features units focussing on grammar rules, punctuation, spelling rules and creative writing.
**New Resources**

*Multilit Reading Tutor Program Revised, Macquarie University, 2008.*
63-2792-02.
The MULTILIT Reading Tutor Program has three key elements: MULTILIT Word Attack Skills; MULTILIT Sight Words and MULTILIT Reinforced Reading. MULTILIT has been specifically designed for readers in Years 2 to 9 who are reading at a level considerably below what might be expected for their chronological age. The Program is suitable for High Interest/Low Vocabulary readers.

*Let’s Use Money—Finding Out About Australian Money, Young, S, 2007.*
64-1494-01.
This book is a collection of practical junior primary maths activities based on money. It covers a range of activities from coin and note recognition to more complex problem solving activities: shopping, money values and giving change.

*Bringing the Outside In: Visual Ways to Engage Reluctant Readers, Kadjer, S, 2006 36-0271-01.*
In this book, Kadjer shows teachers how to engage reluctant students in literacy by extending their own traditional understandings of literacy and repertoire of teaching strategies to include the reality of student literacy outside the classroom and the tools students use for it. Particular attention is paid to visual literacy.

*Quality Circle Time in the Primary Classroom, Mosley, Jenny, 2000.*
66-1393-01.
This book is a guide designed for educators wanting to initiate or further develop the Circle Time strategy. It provides ideas for developing positive relationships and the steps that can be taken to create calm and self-disciplined behaviour. Included are a range of ready to use lesson plans based on themes such as Getting To Know You, Cooperation, Solving Problems and Friendship.

*Little Tikes—Tap-a-Tune Piano.*
81-1452-01.
This colourful tap-a-tune piano, is suitable for children aged 6 to 36 months. Depressing the coloured keys produces a musical note.

43-0091-01.
This book contains movement activities, designed for children of all ages, that develop strength, endurance and rhythm. Each double page spread contains a different activity and details the relevant music to use which is on the accompanying CD. The activities are recorded in clear instructive photographs with accompanying explanatory text.

65-0337-02.
The series Design & Materials Technology has been developed for educators who require modified, curriculum-focused activities for secondary students with a reading comprehension age of 6 to 9 years. Designing & Making provides a range of activities that explore key concepts around generating, developing, planning and evaluating design ideas. The CD contains the complete book, and illustrations that can be used for other worksheets.

*Kilparrin Teaching and Assessment School and Service*  
**Intensive Interaction Two Day Introductory Course**

**Presented by:** Dr Mark Barber

**Date**  
Thursday 13 and Friday 14 August 2009

**Venue**  
Education Development Centre—Hindmarsh

**Cost**  
$200.00 (incl GST) (morning tea, lunch and materials will be provided)

**Contact Pam—Kilparrin for registration information**—8277 5999
The 6 annual Special Education Expo is a major initiative of DECS. It provides workshop presentations and displays to support the education of children and students with learning difficulties and disabilities.

The workshops will:
- Show case good practice in supporting diversity
- Present new initiatives or inquiry research findings
- Highlight programs and projects to ‘make a difference’ in promoting successful learning outcomes for all, Early Years to Post Secondary.

The 2009 Expo will continue to focus on:
- Inclusive Technologies
- Communication
- Behaviour
- Well Being
- Disability
- Pathways/Transition
- Learning Difficulties

Two new focus areas are also included – Hearing Impairment and The Arts across the Curriculum.

The workshops and presentations are 90 minute sessions held across 3 days. Full day workshops are being held on the Saturday.
(Please see insert included with this SERUpdate.)

Participants can choose to attend one session on a single day, several sessions in the one day or a range of sessions over the three days. Some sessions will be broadcast live on the web.

The program is published on the Expo website.

The Expo web site is http://www.decs.sa.gov.au/speced/