

## Chapter 4

# Learning a sign system

“We cannot develop language apart from ideas and experiences or apart from the environment and relationships in which those ideas and experiences occur.”

(Crook and Miles 1999)



## Encouraging understanding

### The importance of the adult language model

Some children with visual impairment may face great difficulty when trying to make sense of speech. With little or no functional vision, they have no way of knowing what is being talked about unless they can touch it or have had experience of it. Their limited physical abilities can mean that they have had less chance to explore their environment at first hand, and they will be dependent on an adult to move either them or the objects around them. Their learning difficulties mean that integrating the fragmented information that they receive through touch and hearing into an experience that has meaning, is a complex task. Limited experience combined with a lack of visual referents means that they may hear speech but will not be able to make sense of it. In the end many children will “switch off” and stop listening.

Careful consideration should be given to the language model that adults provide when they speak to children. There can be a tendency to talk too much, sometimes over the children’s heads, about things that they cannot possibly understand. For these children with visual impairment, language must be about events that are happening or are about to happen. It should refer to things that they can directly experience through sound or touch.

### Non-verbal communication

In ordinary conversation a very large part of the communication is being put across non-verbally. By reading the speaker’s face, the listener gains information about the speaker, how she feels about the topic and whether she is sincere in what she says. These are the elements that colour our communication, make it more interesting and help us to form bonds between ourselves and others.

When communicating with a child with visual impairment and multiple disabilities, often the emotional content of the conversation is what is most important to them. This is the part they understand, when words make little sense. This makes it even more important that we use every means at our disposal to replace the visual elements of non-verbal communication with something meaningful, through the use of touch and tone of voice:

- **Tone of voice**

Through the voice we can convey much of the emotional content of a conversation eg enthusiasm, interest, fun, boredom. We must become more aware of using our voices dramatically, using emphasis and timing to make ourselves clear and interesting.

- **Touch**

We convey a lot of our feelings through touch and children are very sensitive to this. If we are feeling nervous, they will know immediately. Through touch we can convey eg expectation, pleasure, warmth, confidence, reassurance, like or dislike. We also send the message “It’s you I am speaking to” or more importantly, “It’s you that I want to speak to.” Touch replaces eye contact and has the effect of involving the child with visual impairment in the conversation.

At the same time, the visual elements, facial expression and body language, should not be forgotten since many will be able to see these to a greater or lesser extent.

### Children’s language

There are a number of children with visual impairment who use speech, but in an inappropriate way. They may be echolalic and repeat whatever is said to them, or use a lot of questions and learned phrases out of context. These children have acquired speech, but it is not linked to the accepted meaning. It may be used in other ways, such as gaining or holding attention with repetitive phrases or filling what to them may be a threatening silence. Sometimes they may be playing with words for the sake of it. They will be speaking without “communicating”.

It is noticeable how frequently some children use questions in their speech, often inappropriately. In addition they may have great difficulty in responding to very simple

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questions. As a result of their visual impairment many children miss out on the vital pre-verbal routines such as turn-taking and give and take games, and perhaps for this reason they have not really understood the process of question and answer. It is important at the early stage of development to avoid or lessen the frequent well meaning questioning that adults tend to indulge in. When the adult does ask a question, she should encourage the child to understand that he also has a part to play, by waiting and giving him time to respond.

A very effective way of encouraging the children's communicative understanding and of providing an appropriate language model, is through the use of sign.

### Why use sign?

- **To bring the adult closer to the child**

Close proximity helps to ensure that the communication between adult and child is successful. The child is closely involved, and better able to understand that he is the one being spoken to. Touch is essential as a means to replace certain visual elements of non-verbal communication.

- **To encourage understanding**

If the adult signs as she speaks it has the effect of slowing her speech down, and making it simpler, clearer and more relevant. This, combined with the physical act of signing, has the effect of attracting and focusing the child's attention on what is being said. The child begins to listen and spoken language starts to take on meaning. For many children this is perhaps the most important reason for signing.

- **To give children an alternative means of expressive communication**

Signing is also used to encourage expressive communication, and as a way of developing the children's personal gestures. For some children who have failed to develop speech, signing can offer an alternative means of communication and a breakthrough to understanding. It is important that the children become aware that signing is a two-way interaction and a real means of communication, not just something that they alone are expected to do. If we want children to sign, we must always sign to them when we speak. It can be difficult to be consistent about this, particularly if there is only one child in a group of non-signing children, but it is essential to maintain its use.

- **To encourage the development of spoken language**

For some children, particularly the younger ones, signing can also help in the acquisition and development of speech that is relevant and meaningful as opposed to imitative or echolalic. By providing a link between the word and its meaning, signing helps to develop and internalise concepts. Since in language development, gesture and vocalisation precede speech, it seems likely that introducing sign in this way will aid this developmental process.

Sometimes parents are concerned at the idea of introducing their child to signing, as they think this will mean that the child will not develop speech. There have been a number of studies carried out which involve using signs with sighted babies who are in the process of acquiring language. Results appear to show that these babies acquire spoken language more quickly, and that both their cognitive development, and social behaviour compare very favourably with that of other non-signing babies. (Acredolo 1997) This is in line with the now generally accepted belief that using signs alongside speech can help in the development of spoken language, and it has provided reassurance to parents.

### Meaningful signs for children who are visually impaired

#### The Canaan Barrie sign vocabulary

In developing this approach, one of the main factors was to make signing, which is a visual means of communication, meaningful and relevant to children with severe visual impairment. There was obviously a need for a sign vocabulary created with their specific needs in mind, and which would provide a multi-sensory approach by making full use of children's unimpaired sensory channels, notably touch and hearing.

Signs from British Sign Language vocabulary have been used as a base, but where necessary these have been adapted to give maximum auditory and tactile feedback. It has become evident that one of the most important features of a successful sign is that it should have a reference point on the body. Signs made out in space are too difficult, so they have been brought back onto the body, adding sound and rhythm. In some cases signs may be made away from the body, but involve hand movements creating currents of air, which can be detected by the child.

Another important feature of the adapted signs is that they are simpler. A child who is totally blind will have particular difficulties with more complex signs. His body image may not be well developed and, without a visual or tactile reference, he will find it difficult to judge direction and distance. His motor skills are also likely to be poorly developed making the finer points of a sign more difficult, for example, separating fingers or the orientation of his hands.

The Canaan Barrie vocabulary consists of 150 adapted signs (see section entitled "The Canaan Barrie signs" on page 108). There is a core vocabulary of about 50 words based on the children's everyday needs and activities. Rather than selecting a few target signs to "teach", it is important to use all or most of the signs in the core vocabulary. This has the effect of creating a signing environment which provides the children with a realistic language model and which encourages them to use the signs. It also gives them the opportunity to select those signs that interest them, rather than having signs chosen for them.

**"It has become evident that one of the most important features of a successful sign is that it should have a reference point on the body"**



## Using the signs

### General points to observe when signing to a child:

- sign only the key words in your sentence, using the tactile/auditory signs from the vocabulary
- pay attention to your tone of voice and facial expression
- observe carefully for any kind of reaction from the child and respond to it eg any movement for “yes” or “no” or any signs of excitement/pleasure/displeasure.

Signing should never be limited to special sessions. Use the system of signing when speaking to children throughout the day.

There are three methods of signing to a child:

- **in front** – signing in front of the child
- **on body** – signing on the child’s body
- **hands over** – child’s hands placed over the adult’s.

The approach used will depend on the child’s level of awareness, his visual ability and his own personal preference. Experience, observation and a close knowledge of the child will influence the way the signs are made. In general start by signing “in front” and move as soon as possible to “on body” signing.



## Signing in front

- sign close in front of the child
- make the signs near to the child’s face so that he is aware of your hand movements and the sounds and currents of air they create
- if the child has some sight we need to adapt our signing position to take into account the nature and extent of the visual impairment. Children with peripheral vision will need signs made to the side of them rather than in front, as may children with severe nystagmus. Children with patchy vision or with a severe visual field loss may need signs made at a greater distance to enable them to take in the whole sign.

## Signing on body

- signs can be made on the child’s body, as long as the child has no objections (most children positively enjoy it). For example, “good” (two taps on the chest), can be signed by the adult on herself or on the child. This direct physical contact provides another clue to help differentiate the signs. Always warn the child when you are going to sign on his body – you could gently touch the child on the shoulder at the beginning of your conversation, to establish initial contact. Be careful not to take the child by surprise.

## The “hands over” approach

As the children’s awareness and understanding of signing grows, they will start to use Canaan Barrie signs as well as any personal gestures they may already be using. Those with some sight may learn the signs visually, although some will still need additional guidance, since imitating a movement pattern may present problems.

Those children with very little or no sight will need more help from the adult, although some signs may be acquired through “on body” signing. In the early stages, the adult should not automatically model signs by taking the child’s hands and manipulating them, since this is intrusive and may well be counter-productive. The hands of a child with visual impairment are very important to him for gaining information. If his hands are constantly held this cuts off one of his main avenues of learning, and can be compared to blindfolding a sighted child.

Many visually impaired children are extremely tactile defensive, and can dislike having their hands touched at all. Manipulating these children’s hands in the wrong way and at the wrong stage will inevitably set up barriers against signing from the start, as well as denying them any control.

**“The hands of a child with visual impairment are very important to him for gaining information”**

At the same time if a child with little or no sight is to use signs to express himself and communicate, he will need help from an adult to enable him to learn them. Once the idea has been established that specific signs or gestures stand for specific objects or activities, the child can be invited to put his hands over the adult's or hold them as she signs. Having reached this stage of understanding the child will often reach out of his own accord, as he becomes aware of the adult signing in front of him and wants to know what it means. With his interest thus engaged he is no longer resistant to having his hands used. Moreover, with his hands over or holding the adult's, he can remove them should he wish to do so. Gradually, by participating in the conversation in an interactive way he begins to pick up the signs and adopt them for himself.

### Procedure

- invite the child to reach out and feel your hands
- keep your hands under the child's, or encourage him to hold a finger and continue signing
- if the child withdraws his hands, then continue your conversation, signing in front as before
- when using the "hands over" method, difficulties can arise with the direction of signs. As a rule, always make the sign on the child's body even though it is the adult who is speaking, ie the adult says, "I am going to go out" – the go sign should be made down the child's arm. This avoids confusion when the child comes to use the signs himself and avoids problems that could arise if the child had to learn to reverse the signs. This is particularly important when working with non-sighted children.

Most conversations involve a mixture of signing methods depending on the child's preferences, the signs used and the situation in which the conversation is being held. There are no hard and fast rules, success will be dependent on the adult knowing the child and monitoring his understanding. Signs can be repeated or the words altered, until the adult is satisfied that she and the child have achieved mutual understanding.

### The later stages

The adult should be aware that the "hands over" method of signing with children is mainly a way of teaching the sign, and she should be aiming to withdraw her hands, so that the child uses the sign on his own. It is important to do this gradually and sensitively. A possible exception to this is the child with an additional hearing impairment who may need to keep contact with the adult in order to understand her.

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Some children feel the need to use the adult's hands with which to make the signs and this can continue for some time. It may be the child's way of ensuring that the adult is listening and, as such, should not be discouraged. It may denote a lack of understanding on the part of the child that he can form these signs on his own and still be understood by another. Many children will remain at this stage.

If and when a child is ready, gradually remove adult support. The child should be allowed to keep in contact by, for example, touching the adult's wrists when she signs. While waiting for a reply, the adult may lightly touch the child's forearm to show that she is listening. Once the child has learned the signs, return to signing "in front" and "on body". He will know what the adult is signing by associating her words with the sounds and air currents created by her hand movements.

As his understanding of signing increases the child may be happy to receive more direct guidance, and thus some of the later more complicated signs can be taught by moulding his hands.

Very often a child with visual impairment will form signs which are inaccurate since he lacks the ability to monitor his gestures through sight. When he starts using the signs himself do not insist on accuracy, so long as the meaning is clear. Accuracy will develop later once the signs have been established (just as when the young sighted child starts to babble he is not expected to speak clearly straight away). The adult can encourage more accurate signing by moulding the child's hands as long as she is sure what it is the child is trying to say and as long as the child is ready to learn in this way. Adults who know the child well will not find this a major difficulty.

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Some areas of confusion can occur when a child has developed a personal gesture that is different from the accepted sign in the Canaan Barrie vocabulary. Should we continue to respond to the personal gesture, or should we be trying to change it? The answer to this is both. Remember the young boy who tapped his cheek with his forefinger as a personal sign for a biscuit. Staff responded to the sign by reinforcing it on his cheek, but also gave him the Canaan Barrie “on body” sign on his elbow. The parallel with language development is relevant here. We accept the baby word for something, often repeating it ourselves, but at the same time provide the proper word.

Always accept and respond to the child’s own signs, and show him he has been understood by reinforcing that sign, whilst at the same time providing the correctly formed sign.

## Recording

An up-to-date record should be kept of the individual child’s personal gestures and signs, and everyone who comes into contact with the child should be made fully aware of them. Good links and regular communication between home and school are particularly important. Since the child is at home more often than he is at school, many personal gestures will originate at home, and school staff should make sure they are aware of these. Likewise, when particular gestures or signs are being used at school these should be made known to the parents, so that they are reinforced at all times. Consistency of response is vital.

## How the signs are used

The way the Canaan Barrie sign vocabulary is used will depend on the child. It has been widely and successfully used with non-verbal children in different ways, and for slightly different reasons. It has also been used to encourage children whose speech is repetitive or echolalic to develop language that is more meaningful and relevant. For many of those with complex multiple disabilities the main purpose of using sign is to develop an understanding of spoken language. Some children continue to use their own personal gestures alongside signs they have picked up from the vocabulary, while others will use only Canaan Barrie signs. Some use signs and speech together.

**“Always accept and respond to the child’s own signs, and show him he has been understood by reinforcing that sign, whilst at the same time providing the correctly formed sign”**

## Progression to standardised sign systems

A few children may use a considerable number of signs and be ready to progress on to a standardised sign system such as Signalong or Makaton. How successful this will be may depend to a large degree on their level of vision. In our experience children with relatively good vision seem to find the changeover comparatively easy whereas children with very limited vision still need the kind of additional tactile and auditory feedback and the simplified signs provided by the Canaan Barrie vocabulary. Further research in this area and an expansion of the adapted sign vocabulary are perhaps projects for the future.

- Daniel was a three-year-old blind child who had had a tracheostomy since birth so did not speak. When he came to the unit he already had a few personal gestures which he had invented himself, and which had been recognised and responded to by his family. He went on to acquire a wide vocabulary of Canaan Barrie signs. Where these were not available, he used his own. Of interest to us was the fact that his own signs nearly all had a reference point on his body – a characteristic that had been of paramount importance when we were adapting the signs.

To allow him to increase his vocabulary when he went to school, Daniel was introduced to a standardised sign system. However, it quickly became evident that many of these signs would still need to be adapted to enable him to use them. As a blind child, Daniel’s fine motor skills were not well developed, and he found the signs complex in terms of movement pattern, orientation and hand shape. In addition, some of the signs were based on very visual concepts. The process of adapting further Canaan Barrie signs was started.

About this time, Daniel’s tracheostomy was reversed and he began to speak. Instead of starting to use single words or two word phrases, he spoke in reasonably well constructed sentences, showing a level of language ability that was in line with the rest of his development. It was apparent that his communication needs had been well served by his signing. Now he is speaking well and making up for lost time with his incessant chatter!