

Preventing Language Deprivation

Kate Rowley and **Dani Sive** discuss the importance of every deaf child acquiring language and access to support that allows the child to communicate and thrive in the language that is most accessible and natural to them

To language is to be human. Language is how humans connect with one another, through interactions in the family home, in school, at work and out in the world. Access to language is a basic and fundamental human right; thus, we have a responsibility to ensure that every child, including deaf children, has sufficient opportunities to acquire language.

For most people, acquiring language is an effortless process. Hearing children in speaking families will acquire spoken language simply by being exposed to the language that surrounds them. Of course, the quality and quantity of the language they're exposed to will have an impact on their vocabulary and world knowledge but generally, most will have basic language skills. Deaf and hearing children in signing families will also acquire sign language through exposure. Similar factors influencing the usage and fluency of spoken language in hearing children also apply to deaf and hearing children learning sign languages, eg the extent of parent-child interaction, parents' education level, socio-economic status, etc.

Due to the nature of deafness, ie being unable to fully access the full range of speech sounds, many deaf children will struggle to acquire spoken language without extensive rehabilitation and the support of hearing technologies. Even then, many deaf children still struggle with spoken language acquisition. Impoverished access to language has many consequences, most of which are severe and long-lasting.

Psycholinguists have long recognised that there is a critical period for first language acquisition. The critical period is a brief time window, usually between the ages of 0 and 5 years, where the brain needs good quality language input. If children do not have the opportunity to learn language within the first five years of their lives, they usually never develop fluent language skills. The critical period also applies to sign languages.

Often, deaf children do not have full access to language during the critical period. This is known as 'language deprivation'. This lack of access to language causes significant delays in language development. Language deprivation does not only impact language, it also has a significant impact on other areas of human development. In the US, researchers refer to this as 'language deprivation syndrome', where deaf children have an acquired language disorder due to a lack of access to language in the first few years of life.

Being deprived of language has serious implications for neurological development. Neurological development could be seriously altered, to the extent where deaf

children will never be able to achieve fluent language skills, which has an impact for further learning.

"Exposure to a fully accessible language has an independent influence on brain development separate from only the auditory experience of hearing loss. Indeed, recent neuroimaging studies indicate the presence of adult neurostructural differences in deaf people based on timing and quality of language access in early childhood."
– Hall, Levin & Anderson, 2017.

Several research studies show that language skills support the development of cognitive skills. Language skills predict theory of mind skills (Woolfe et al, 2002), working memory skills (Marshall et al, 2012) and executive function skills (Botting et al, 2017). These studies found that deaf children with strong language skills performed better on different tasks that assessed their cognitive skills. This pattern was found in deaf children with strong language skills in either spoken or sign language, ie native signers often performed age-appropriately on different cognitive tasks as they had had full access to sign language from an early age.

Language deprivation has an impact on many other developmental outcomes, such as school readiness, literacy, academic performance, employment, emotional health, physical health, peer relationships, family relationships and identity (Hall & De Anda, 2020). In relation to emotional health, 40% of deaf children have mental health issues compared to 25% of hearing children, and deaf children who have problems communicating with their families are four times more likely to have mental health issues (NDCS, 2017). This highlights the importance of language, which is why it is a fundamental part of being human.

Usually, the risk of language deprivation is more prevalent in deaf children of hearing parents, who will usually not have had any experience or exposure to deaf people, thus they are unsure how best to communicate with their deaf children. In the very early years, or as soon as the child is identified deaf through the newborn hearing screening programme, hearing parents will usually experience the trauma or grief of having a baby that cannot hear, and will feel unable to provide the very basic forms of early communication. Professionals therefore have a large role to play in preventing, reducing or minimising language deprivation in deaf children by ensuring that parents receive appropriate support. Deaf children should not be at any further disadvantage than hearing children from achieving their language milestones, whether this be in speech or sign. Note that we emphasise language

milestones, not speech milestones or signing milestones.

The key professionals in the early years of a newborn deaf baby's life are usually the doctor, the Qualified Teacher of the Deaf (QToD), the Speech and Language Therapist and the Audiologist. More often than not, it will be the Qualified Teacher of the Deaf and the Speech and Language Therapist, who will have had formal training in language acquisition of children and should be aware of a typical child's language milestones. A typical deaf child, even with powerful audiological technical devices, such as a digital hearing aid or cochlear implant, will not naturally achieve the speech development milestones of a typically hearing child, as they will most likely not be able to hear the same speech sounds. This automatically puts the deaf child at a disadvantage. Qualified Teachers of the Deaf and Speech and Language Therapists in their professional capacity should be able to provide information, support and advice to parents to ensure that their deaf child is not put at any disadvantage of achieving their language milestones, and thereby not at risk of language delay or language deprivation.

While most hearing parents of deaf children will naturally want their child to learn and use the same spoken language that they and their family use (and this may well be possible), it's crucial that parents are aware of and understand the types and features of early pre-lingual language development that is not necessarily dependent on sound. These strategies are highly effective in building the blocks of early communication until the deaf child starts to use more formal language structures to express him or herself. These include responding to cries, eye contact, tapping or waving for attention, touch, gesturing, pointing, playing games that involve communication, etc.

From the moment a baby is born, they communicate. When they cry, this is to let their carers know that they are hungry, tired, dirty or in need of a cuddle. It is important that parents respond to this. This is a crucial part of parent-child interaction, which is a strong predictor for later language development. In the first few weeks, babies begin to smile and this is because they are imitating their caregivers. They are also able to respond to tickles, stick their tongue out, open their mouths, etc if their caregivers interact with them in this way – they have a natural inclination to imitate those around them. Babies also babble or mabble (manual babbling if exposed to sign language) at around six months of age, which is them attempting to copy the language they have been exposed to, to try and make sense of it. They also use gestures (showing objects, stretching their arms out to request cuddles, open and close their hands to request something) and they use a lot of pointing. This occurs in *both* deaf and hearing babies, whether they are exposed to sign or spoken language. Through this early communication and interaction with their caregivers and those around them, the baby develops communication skills which then lead to language. Research studies show

that *hearing* babies and parents who use a lot of gestures in the first year of life have better language skills compared to those who do not (Rohlfing, 2019). Studies into parent-child interaction in both deaf and hearing babies, regardless of language modality (sign or speech), show that the more parents/caregivers interact with their babies using various strategies, the more babies usually go on to develop stronger language skills compared to parents/caregivers who interacted with their babies less.

These studies show that it is essential that parents use and develop these skills, particularly in the first two years of a child's life, without fear or worry about their child's language path, whether this be speech or sign, or both. In addition to these strategies, based on our experiences of working with deaf children and their families and growing up as deaf people, we strongly recommend that professionals encourage families to use a few key signs with their babies in the first few years of life to ensure that they do acquire language regardless of how much they can or can't hear. These key signs can be signs that are a part of everyday communication in the first year of a child's life, eg hungry, tired, mummy, daddy, nappy, food, drink, etc.

While some deaf children do very well with hearing technologies such as cochlear implants, they usually do not have this until they are around 14 months of age and even then, it takes months or years for them to learn to make full use of them. Early communication is clearly vital for later language ability. It is not advisable to wait until a child can use their hearing technologies fully, as this has serious and long-lasting adverse consequences. Furthermore, and crucially, hearing technologies do not always succeed. By adopting the recommendations outlined here, including the use of sign language to communicate in at least the first years of life, deaf children are far less likely to experience language deprivation.

At the identification of deafness stage, it is nigh on impossible to know what that child's language journey will be. Will that child develop spoken language, even with powerful hearing aids or cochlear implants, or will he/she struggle to acquire spoken language, and develop a natural affinity to using sign language, or will they acquire both in the first five years of life? The majority of Qualified Teachers of the Deaf and Speech and Language Therapists will not necessarily have much experience, if any, of using sign language, or have very limited skills in using British Sign Language (BSL), and may naturally support parents with their desired goal to ensure their child achieves their speech milestones. They may also not be well-informed or sufficiently trained in the similar comparative milestones between speech and sign language and of the fact that the brain develops language in similar areas.

Contrary to the myth that a deaf child learning sign language will impede the potential or ability to learn spoken language, research shows that learning both

simultaneously is beneficial for a number of reasons. Indeed, there is a growing number of deaf parents opting for their deaf children to have cochlear implants. Research into those families shows that those deaf children are developing both sign and spoken languages simultaneously and achieving similar language milestones as hearing children of the same age (Davidson et al., 2014). Deaf children of deaf parents with cochlear implants are performing better compared to deaf children of hearing parents with cochlear implants. The main difference between those two groups is that the former group has full access to language from birth, which is usually sign language.

If more professionals made parents aware of this fact, it's possible that more parents will be open to learning sign language in the early years, as well as using speech, to ensure that their child is not at risk of language deprivation and is more likely to achieve their language milestones. As the deaf child develops their language skills, they will naturally use one mode more than the other, or they will use both equally well. Teacher of the Deaf courses should equip all qualified QToDs to advise parents on language acquisition in both English and BSL and encourage parents to use both languages to ensure their

deaf child maximises their language learning potential. Just because the majority of deaf children are placed in mainstream settings using spoken English is not an excuse not to provide early bilingual opportunities in the very early stages of language development.

Of course, the reality is that sign language courses are expensive, costly and often unavailable in many areas, and there is also the issue of time and commitment for many parents, so learning BSL is a challenge. With the advances in technology and improvements in video conferencing and the wider availability of Wi-Fi and internet, the challenges of learning BSL could be reduced or overcome through online courses. Together, we should begin to look at every deaf child as a bilingual individual and advocate for a bilingual approach in the early years. This will ensure that every deaf child acquires language and avoids the risk of language deprivation allowing the child to communicate and thrive in the language that is most accessible and natural to them. ■



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Exams and Access Arrangements (deaf learners) – Post event package

Due to the interest expressed in the webinar on Exams and Access Arrangements (deaf learners) held on 21st September, BATOD and the Scottish Sensory Centre (SSC) are able to offer individual access to the session recording for 30 continuous days starting from the date the login and password are emailed.

Cost: £30

Programme outline

- Housekeeping, welcome, intros
- Overview of access arrangements including practitioner input
- Overview of access arrangements including practitioner input (Scottish specific context)
- Role of BATOD in the modification of the language of examinations
- Q&A based on these presentations
- 2 breakout groups: Access arrangements including use of BSL in Scotland & access arrangements in England/Wales/NI
- Feedback from two breakout groups
- Live Q&A to panel of above speakers
- Next steps for BATOD and SSC and Evaluation

www.ssc.education.ed.ac.uk/courses/deaf/dsep21a.html

Preferred payment is through the University's online payment format (ePAY). Please see link below:

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The cover features a collage of five photographs: two women standing outdoors, a boy and a woman at a table with cards, a man signing, a woman with a child, and a child holding dolls.