1. **KEY POINTS Click here for International Sign**

- The United Nations Convention on the Rights of Persons with Disabilities (UN CRPD) recognises that sign languages are equal in status to spoken languages and should be respected and promoted.
- Deaf children have a right to fully develop their cultural and linguistic identity (Article 30 of the UN CRPD).
- Deaf children have historically faced many barriers to quality education, including a denial of quality education in sign language which has led to a denial of their rights.
- Quality education in the national sign language(s) and the national written language(s) is one of key factors for fulfilling the education and broader human rights of deaf children and adult deaf learners.
- Research shows that deaf children given quality education multi-lingually (i.e. in sign language and written/spoken language) are most likely to succeed academically and become active citizens and full members of society.
- Early exposure to sign language and multilingualism, combined with strong family support for sign languages, best prepares deaf children for their future effective participation in society.
- Research shows exposure to sign language does not hinder speech acquisition or language learning.
- Specialists have recommended that all deaf children be taught a sign language immediately to maximise brain development, cognitive processing and longer term social and academic outcomes.
- Deaf children must have full access to an education in their native sign language(s), regardless of any technological devices they may use.
- Governments must implement programs to support the teaching of sign language to family members and carers of deaf children, in co-operation with Deaf Communities and deaf sign language teachers.
- Educational settings must help deaf children exercise their right to fully develop their cultural and linguistic identity in accordance with Article 30 of the CRPD, which is essential for the development of the personality, self-esteem and resilience of deaf children.
- The United Nations Convention on the Rights of Persons with Disabilities has taken a positive and proactive approach to encouraging and promoting sign languages in deaf children’s education and readings of Article 24 must promote choice in education that allows deaf children to thrive and achieve academically.
- National (and/or indigenous) sign languages must be recognised as equal to national spoken languages in all educational levels.
- The best education settings for deaf children are multilingual environments which foster and respect their cultural and linguistic identity, respect the diversity of their experience and choice, and which maximise their linguistic, academic, social and, in the long term, economic outcomes.
2. **INTRODUCTION**  

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The **World Federation of the Deaf** (WFD) is an international non-governmental organisation which promotes the human rights of deaf people worldwide. An important part of our work is the promotion of the rights of deaf people, including deaf-blind people and deaf people with disabilities, to an education in their native indigenous sign language(s). The need for natural language acquisition in sign language is crucial for all deaf people.

The **UN Convention on the Rights of Persons with Disabilities** (UN CRPD) commits governments to recognising the importance of sign languages and promoting their use. The UN CRPD also entitles deaf people, on an equal basis with others, to recognition and support of their specific cultural and linguistic identity, including sign languages and deaf culture. Being allowed to develop their cultural and linguistic identities – including in educational settings - is a key right of deaf children.

The UN CRPD also requires governments to recognise the right of all persons with disabilities – including deaf people - to education without discrimination and on the basis of equal opportunity. It recognises the need to provide lifelong education which includes deaf people and which facilitates:

a) the full development of human potential and sense of dignity and self-worth, and the strengthening of respect for human rights, fundamental freedoms and of human diversity;

b) the development by deaf people of their personality, talents and creativity, as well as their mental and physical abilities, to their fullest potential; and

c) enabling deaf people to participate effectively in a free society.

It is well documented, however, that globally deaf children face many barriers to education. Even when schools exist, many families in developing countries may not be able to afford to send a deaf child to school, may not have schools which accept a deaf child and/or may not have the means of transportation to bring their child to school.

Even when deaf children have access to education, various barriers, including a lack of natural language input, means their education level attained is often low and illiteracy is common. This is often exacerbated when education is not provided in sign language. This aversion to sign language in education has a regrettable history, with sign languages having historically been banned in many countries worldwide. In some cases, sign language continues to be effectively banned (that is, strongly discouraged and disparaged) in some countries even today, a ban which has no basis in, and is in fact contrary to, research.

Other barriers to the effective education of deaf children include a lack of trained teachers (including deaf teachers as role models), a lack of teachers who are fluent in sign language and lack of a learning environment and pedagogy that is conducive to deaf students’ effective learning; Bilingual or multilingual education does not itself guarantee educational outcomes - it must be quality education. A further barrier – since most deaf children are born to hearing parents who lack sign language skills - is a lack of comprehensive policy and programming support for sign language learning by families with deaf children. Schools in which the majority of students are hearing may present barriers to deaf students, in that they lack the supportive and inclusive signing environments that deaf students require to thrive and to acquire a strong sense of linguistic and cultural identity.

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Quality education in the national (and/or indigenous) sign language(s) and the national written language(s) is one of the key factors for fulfilling the education and broader human rights of deaf children and adult learners. Other enabling factors are recognition and promotion of sign language,⁴ and professional sign language interpretation,⁵ which promote accessibility in all areas of social, economic, cultural, civil and political life – these are all interlinked and require quality education in sign language.

The Declaration on the Rights of Persons belonging to National or Ethnic, Religious and Linguistic Minorities Art 4 (3) requires that States should take appropriate measures so that, wherever possible, persons belonging to minorities may have adequate opportunities to learn their mother tongue or to have instruction in their mother tongue. For deaf people, who are a linguistic minority, this is sign language.

Not having an education in sign language has a detrimental social, academic and psychological effect on deaf children’s ability to function independently and gain the same work or social privileges that many of their hearing counterparts enjoy.

The WFD reiterates the need for deaf children to have full access to a quality education in their native sign language(s), regardless of any technological devices they may use. This is in line with best practice and research findings in language acquisition and language development, which show that it is critical for deaf children to have visual language access in order to fully achieve their human potential.

Policy and programming decisions must always be supported by evidence, including robust research. To assist Governments and other stakeholders in making decisions based on research evidence, the WFD outlines below the research on language acquisition for deaf children and the research findings on multilingual/bilingual education.

The weight of this research overwhelmingly supports the need for deaf children to have access to a native sign language in their educational development. The WFD recognises deaf people as multilingual people who should be given the same opportunities to learn multiple languages as their peers.

Findings from research on linguistic rights and sign language acquisition are independent of technology, and - as such - this research is of universal relevance, applicable to deaf education around the world. Below we outline key findings from the research literature on language acquisition for deaf children, on multilingualism, and on multilingual education.

### 3. RESEARCH ON LANGUAGE ACQUISITION

**LANGUAGE ACQUISITION FOR DEAF CHILDREN** Click here for International Sign

All children need a firm foundation in a first language for their overall cognitive and psycho-social health. Sign language is the only language for deaf children that can be accessed without barriers and can be used without additional help or supports. Delayed access to language can have profoundly negative effects on a child’s linguistic development (Mayberry 1993, Boudreault 1999). Deaf children are at a higher risk of experiencing delays in language acquisition due to delayed detection of deafness or hearing loss (Apuzzo & Yoshinaga-Itano 1995, Moeller 2000, Yoshinaga-Itano et al. 1998, Calderon & Naidu 2000, Snyder & Yoshinaga-Itano 1998, Calderon 2000, Yoshinaga-Itano 2003) and a lack of comprehensive support for sign language programming in early intervention (Snoddon, 2008). Studies comparing deaf children exposed to signed language from an early age with those raised with only a spoken language, and late exposure to sign language, show that delaying the age of sign language acquisition negatively impacts proficiency in that language (Mayberry & Fischer 1989, Newport 1990, Mayberry & Eichen 1991). In addition to hindered signing skills, those who are late-exposed to signing are also less proficient.
than early-exposed signers in learning a spoken language (Mayberry & Lock 2003, Mayberry 2007). Thus, research shows early acquisition of sign language is essential for overall language development, and it provides support for deaf children’s competence in spoken and written language(s).

The importance of access to sign language goes far beyond the development of a deaf child’s linguistic skills. All children need a firm foundation in a first language for their overall cognitive development and psycho-social health. Research shows that a strong foundation in an accessible language must be in place in the child’s early years, ideally before the age of three, but definitely before the age of five. The effects on the brain of a lack of such a foundation have been outlined by Humphries and others (2014), and include trouble with verbal memory organisation (Rönnberg 2003), mastery of numeracy and literacy (MacSweeney 1998), and higher-order cognitive processing such as executive function and theory of mind (Courtin 2000, 2010, Courtin & Melot 2005, Morgan & Kegl 2006, Schick et al. 2007, Courtin et al. 2008, Figueras et al. 2008, Marschark & Hauser 2008, Remmel & Peters 2009; Humphries et al. 2014). Given this evidence, a recent panel of specialists concluded that all deaf children should be taught a sign language immediately (Napoli et al. 2015).

Sign languages allow deaf children to develop a language on equal terms with their hearing peers. Research over the past several decades shows that full and prolonged exposure to a sign language (regardless of whether a child is deaf or hearing) results in language and cognitive development that follows the same patterns and produces the same developmental results as exposure to a spoken language does for a hearing child (Courtin 2000, Mayberry et al. 2011, Woolfe et al. 2002). In the case of a deaf child, early intervention is crucial, which requires parents and caretakers of deaf children to take an active role in communicating in sign language. Deaf children need dependable access to high quality communication partners to engage in meaningful sign language activities. Research shows parents learning a sign language at the same time as their deaf child can develop communicative competence in sign language (Oyserman & de Geus 2015) and that consistent exposure to sign language at a young age is beneficial (Singleton & Newport 2004).

The WFD strongly encourages governments to implement programs to support the teaching of sign language to family members and carers of deaf children, in co-operation with Deaf Communities and deaf sign language teachers. This support should not be an economic burden for parents. It may include paid release time from work to enable parents and carers to attend sign language classes, which should be provided without cost to the families. Such support is in line with the UN Convention on the Rights of the Child, and recommendations from the UN Committee on the Rights of the Child that States Parties should render appropriate assistance and support to parents [and legal guardians] in the performance of their child-rearing responsibilities, including ensuring they are provided with opportunities to learn sign language in order to foster communication within the family with the deaf child.\footnote{Committee on the Rights of the Child (2006), \textit{General Comment N° 9: The Rights of Children with Disabilities}, para 41.}

**BENEFITS OF MULTILINGUALISM** \textit{Click here for International Sign}

While some parents may worry that exposing a young child to multiple languages may cause confusion and linguistic and cognitive delays, this is only a misconception. Research studies show that fluency in a first language supports, rather than hinders, the acquisition of fluency in a second language (Scheele et al. 2010). For children learning a signed and a spoken language, the use of a signed language does not negatively impact a child’s inclination to also learn speech (Swanwick 2001). It is a myth that exposure to sign language hinders spoken language acquisition. Recent studies from the United States (Davidson et al. 2014), the Netherlands (Giezen 2011, Giezen et al. 2014), Iran (Hassanzadeh 2012), Brazil (Quadros et al. 2012), Italy (Rinaldi & Caselli 2009, 2014) and Belgium (Mouvet 2013) all find that deaf children with cochlear implants successfully showed spoken language acquisition.\footnote{Committee on the Rights of the Child (2006), \textit{General Comment N° 9: The Rights of Children with Disabilities}, para 41.
development while exposed to a sign language. Jimenez et al. (2009) found in a comparative speech development study of deaf children with a unilateral cochlear implant that bilingual children had better verbal expression than children who did not know sign language. A longitudinal study by Preisler, Tvingstedt and Ahlstrom (2002) also found that deaf children with the best spoken language skills also had the best sign language skills. Additionally, a child’s communicative development is positively influenced by the use of sign language, which also has a positive effect on the quality of interactions with parents and peers (Hyde 2007).

This demonstrates that exposure to a sign language while learning a spoken language does not impede the development of spoken language. Unfortunately, many families of deaf children do not receive this information and, as a result, deaf children are placed in educational settings which put them in danger of language deprivation. Speech outcomes, regardless of the amount of practice or technology, are not a reliable measure of success for all deaf individuals around the world, especially those who cannot afford speech therapy or technological resources, and equating speech with intelligence hinders a child’s socio-emotional and academic development. Language, regardless of whether it is spoken or signed, is a predictor to reading success (Mayberry et al., 2010). Both modalities foster cognitive growth; however, given the nature of the biological inclination towards visual learning (Hauser et al., 2010), sign language provides the most accessible means for the deaf child’s socio-emotional wellbeing and secures a strong foundation in expressive and receptive skills that support the underpinnings of spoken language, which varies in input.

In fact, a study of children in Quebec, Canada who acquired Quebec Sign Language (LSQ) and French achieved their early linguistic milestones at the same time as monolingual children and children acquiring English and French. Far from causing confusion, the ability to communicate in two languages helps deaf children to communicate better in both languages because the ability of a child to learn new words and develop grammatical awareness is strongly correlated to their lexicon size or how many words they already know (Lederberg & Spencer 2009, Sebastián-Gallés & Bosch 2009, Lee 2011). Learning a sign language enhances deaf children’s ability to learn the surrounding spoken and written language(s).

There are cognitive benefits in deaf children’s use of sign language. By cognitively managing two languages, bilingual children experience linguistic benefits such as earlier meta-linguistic awareness than monolinguals (Galambos & Goldin-Meadow 1990, Bialystock 1988) and better phonological awareness, which directly encourages reading development (Schwartz et al. 2008). They also experience non-linguistic benefits such as increased attention and inhibitory control (Bialystock & Feng 2009), better conflict resolution (Costa et al. 2008) better working memory performance (Engle 2002) and enhanced spatial cognition, especially in mental rotation tasks (Emmorey 2002). For deaf children, being bilingual in a signed language and a spoken/written language mutually encourages the development of both languages and leads to academic achievement in both languages (Hoffmeister 2000, 2005). With these points in mind, encouraging bilingualism makes the most sense for the deaf child. Being bilingual affords the deaf child full access to a visual language, maximal access to people to learn from and interact with, and the flexibility to choose how to communicate in varied contexts.

Full access to a signed language can have a positive effect on a deaf child’s mental health and development. In a study by Dammeyer (2010), the psychosocial development of deaf children was examined. He found that while psychosocial difficulty in children with a hearing loss was 3.7 times greater than a comparative group of hearing children, if there was evidence of good language skills, whether signed or spoken, this psychosocial difficulty was not evident.
MULTILINGUAL EDUCATION Click here for International Sign

Education for the deaf child should allow for full language comprehension and expression. Any alternative cannot be expected to promote learning. Research shows that education, then, is best done in a bilingual setting, ideally with all discussion and reading of written text in a sign language (Grosjean 2010, Hoffmeister 1990, Snoddon 2014). A bilingual setting develops social and academic proficiency in both a sign language and a spoken language. A signing deaf child can answer open-ended questions and can use language to organise events and convey emotions, and thus is primed for academic work.

A fundamental aspect of multilingual education is early access and frequent exposure to a full, natural sign language, which begins the language acquisition process in a first language and creates the possibility of multilingualism (Grosjean 2008, Johnson et al. 1989). Ample studies have shown that the deaf child who has good first language skills has an academic advantage; the deaf child who signs well does better academically than the deaf child who doesn’t, regardless of all other factors, and most attribute this to the fact that the signing deaf child is not at a linguistic disadvantage (Freel et al. 2011). This finding has been replicated with numerous sign language and spoken language combinations, including American Sign Language and English (Padden & Ramsey 2000, Strong & Prinz 2000, Hermans et al. 2008, Chamberlain & Mayberry 2008, Mayberry et al. 2011, Clark et al. 2014), British Sign Language and English (Cormier et al. 2012), Quebec Sign Language and French (Dubuisson et al. 2008), German Sign Language and German (Mann 2007), Chilean Sign Language and Spanish (Alvarado et al. 2008), Australian Sign Language and English (Trezek et al. 2010), Israeli Sign Language and Hebrew (Miller 2013), Amharic Sign Language and written Amharic and English (Ludago 2014), and Hong Kong Sign Language and spoken Cantonese and written Chinese (Tang et al. 2014).

The best preparation for academic success is good first language skills. Among hearing children, academic success is variable; much of their learning occurs during incidental learning, overhearing conversations by native users of the language, and exposure to language models through frequent shared reading activities (where adult and child read a book together). The latter activities are strong correlates to later academic success, not because of teaching the alphabet or any other pedagogical activity, but because of extensive language interaction while sharing the books, particularly interaction that is enjoyable for both adult and child and uses open-ended questions (Erting 2001). In this way, the child understands characterization, setting, and plot – keys to comprehending text of any sort (Anderson et al. 1985, Grabe & Stoller 2013). Deaf children exposed to sign language role models gain the same opportunities for incidental learning and learning of complex syntactical structures and conceptual representations in signed discourse. Language modeling and language-based play activities support the child’s transition from conversational to academic proficiency in sign language. Phonological awareness is developed through sign language, which contributes to better literacy skills (Corina et al. 2014, McQuarrie & Abbott 2013). When reading English words, deaf bilinguals in ASL and English mentally call upon ASL signs (Morford et al. 2011). Further, if the signing deaf child is exposed to appropriate shared reading activities (such as bilingual-bimodal e-books and shared reading in sign language) or to sign language storytelling, they gain a good understanding of characterization and plot, and is just as primed to understand text as the hearing child who has participated in shared reading activities (Bahan 2006, Rathmann et al. 2007, Sutton-Spence 2010, Napoli et al. 2015).
4. INTERPRETING UN CRPD ARTICLE 24 IN SUPPORT OF SIGN BILINGUAL EDUCATION

The research presented in this WFD Position Paper clearly shows the need for deaf children to be educated in environments which allow for full access to sign language among teachers and peers. This is supported by Article 24 (education) of the United Nations Convention on the Rights of Persons with Disabilities (UN CRPD) which was drafted to articulate how to overcome barriers to education and work toward the achievement of full realisation of the right to education for all children with disabilities globally. The aim of Article 24 is to improve the participation of all children (and adults) with disabilities (including those who are deaf) in education that meets their access needs.

In particular Article 24 requires that:

- States Parties must ensure an inclusive education system at all levels (Art 24(1));
- States Parties must facilitate the learning of sign language and the promotion of the linguistic identity of the deaf community (Art 24(3)(b));
- States Parties must ensure that education, particularly of deaf children, is delivered in the most appropriate languages and modes and means of communication for the individual, and in environments which maximise academic and social development (Art 24(3)(c)); and
- States Parties must take appropriate measures to employ teachers, including teachers with disabilities [ie: deaf teachers], who are qualified in sign language ... and to train professionals and staff who work at all levels of education. This training needs to incorporate ‘alternative modes, means and formats’ of communication, and in educational techniques and materials to support deaf children (Art 24(4)).

Much confusion has arisen around the definition of ‘inclusive’ education in Article 24. Some have argued that it means all children, including deaf children, must be in ‘mainstream’ education settings and that deaf schools are ‘segregated’, by definition ‘bad’, and should be closed. This is not supported by the drafting history of the UN CRPD, which clearly shows that governments and other stakeholders understood the need for deaf children (and deaf-blind, and blind children) to be educated with others like themselves with dignity and as a matter of choice, to acquire critical skills for learning to facilitate their lifelong social, cultural, economic, civil and political participation. Stakeholders in the UN CRPD process (including civil society organisations representing deaf people) recognised the need for deaf children to have a choice to be educated with peers and in sign language environments. Thus Articles 24(3) and 24(4) stress the unique needs of these groups of children. Article 24 makes clear that no mainstream school may exclude a deaf child from attending if this is his or her choice. However Article 24 should not be misread as mandating mainstream schools as the only modality of education for all deaf children.

It is also important to note that in interpreting Article 24, it cannot be interpreted in isolation. The Article must also be read in conjunction with broader principles and Articles in the UN CRPD which require States Parties to

- recognise the equivalency of sign language to spoken language (Article 2, definition of ‘language’);
- respect and promote sign languages (Article 21(e));
- recognise and support the cultural and linguistic identity of the deaf - including sign languages and deaf culture (Article 30(4));
- recognise the importance for deaf people of their individual autonomy and independence, including the freedom to make their own choices (Preamble (n));
- recognise deaf people should have the opportunity to be actively involved in decision-making processes about policies and programmes, including those directly concerning them, (Preamble (o));
- respect the evolving capacities of deaf children and respect the right to preserve their identities (Article 3(h)); and
- consult organisations representing the deaf on matters affecting them (Article 4(3)).
Hence any interpretation of Article 24 that would deny schools being the locus of deaf children enjoying all the above rights cannot be supported. Any interpretation must allow room for evidence-based decision making about what will best help deaf children achieve their academic potential, dignity, identity and flourish as human beings. Central to this is choice, including choice to be in schools which teach entirely in sign language as the language of instruction.

5. CONCLUSION Click here for International Sign

It is critical that decision-making about deaf children’s educational choices be based on evidence and robust research. The academic and social development of deaf children and their future effective participation in society depends on choices we make today. We have outlined research on deaf children’s multilingual language acquisition and the way the UN CRPD has taken a positive and proactive approach to encouraging and promoting sign languages in deaf children’s education, building on the skills, experience and knowledge of deaf people.

WFD argue strongly for quality multilingual approaches, combined with government measures to support families to learn sign language to support their child. There are many models of deaf education which can work: schools for deaf children with deaf/signing teachers, large resource bases in mainstream schools to allow a sizeable signing peer group, early years sign intensive environments or nurseries, co-enrolment programmes where half of each class is deaf and half is hearing. National-level associations of deaf people around the world are assets on which governments can draw to assist with the reform of deaf education in each country. Deaf people are involved in deaf education and sign language teaching in many countries around the world. Their experience is valuable for policymakers and educators. Whatever models of multilingualism develop, it is crucial that deaf people’s experiences inform them, and that accessible pathways are open so that deaf people are active participants in the education of deaf children. Deaf people should have the opportunity to become qualified teachers, nursery workers and school administrators and to train families of deaf children in sign language.

The research reported here shows that deaf children educated multilingually in a high quality education system are most likely to succeed academically and become active citizens and full members of society. Deaf people should not be denied their choice of an education system that fosters and respects their cultural and linguistic identity, respects the diversity of their experience and choice, and which maximises their linguistic, academic, social and, in the longer term, economic outcomes. Early exposure to sign language and multilingualism, combined with strong family support for sign languages, best prepares deaf children for their future effective participation in society. This is equality and non-discrimination in educational choice, and allows for education which is fully inclusive of deaf learners and their needs, rights and preferences.

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ABOUT THE WORLD FEDERATION OF THE DEAF

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The WFD Board approved the Position Paper on 7 September 2016.

Mr Colin Allen
President
World Federation of the Deaf

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