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Position Paper on Deaf Education in Low- and Middle-Income Countries



A classroom of deaf learners in Rwanda. Photo credit: Samuel Munana.

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Introduction

All children are entitled to a high-quality education. Children with disabilities are no exception, including deaf, hard-of-hearing, or deafblind children, or deaf children with multiple disabilities in low- and middle-income countries. But too often, lack of services leads to deaf children¹ arriving in the classroom without the knowledge to use language for communication—not any signed language, nor any written or spoken language. This occurs because the spoken language that surrounded them in infancy was not accessible to them, and the signed language that would be accessible was not made available to them. In other words, they arrive in school with **language deprivation syndrome** (Hecht, 2020). Language deprivation, rare among children who hear, has been described as an “epidemic” among deaf children (Hecht, 2020) and commonplace (Gulati, 2014). This can put deaf children at a significant academic disadvantage before schooling even begins (Humphries et al., 2013).

For years, educators globally have strived to implement effective programming so deaf students can succeed in school. Some school systems have devised good practices worth replicating and scaling up. On the other hand, some programs have implemented practices that may do more harm than good. Despite the lack of evidence backing such practices, harmful programming is often replicated and entrenched.

Purpose of this paper: Inclusive Development Partners (IDP) is committed to disseminating information and practices that are effective and evidence-based and to illuminating practices that are harmful and should not be used in the education of children with disabilities. This paper outlines IDP’s position related to deaf education practices.

This paper highlights stories from the real lives of deaf learners (in Rwanda and Ghana) and the impact their education has had on them. This paper also draws upon decades of research on deaf education and linguistics to briefly explain the evidence for how good practices benefit deaf children and why other practices do not work. Finally, this paper addresses the role of donors, implementing partners, and other stakeholders in ending poorly guided practices and implementing better-informed practices in deaf education.

Background: International Frameworks and Context

This section presents a brief overview of international frameworks and guidance around deaf education.

1994: The United Nations Educational, Scientific, and Cultural Organization (UNESCO) was the first international organization to put forth an **educational policy concerning inclusion**—the practice of a child-centered approach of teaching all children in a classroom inclusive of children with special needs (UNESCO, 1994).

Shortly after, the 1994 Salamanca Statement—as part of the World Conference on Special Needs Education—recognized that **deaf children should be educated in their national sign language** and recognized that **because of their communication needs, deaf children may be better suited to be educated in special classes in mainstream schools**.

¹ Some organizations use “person first” language to refer to disability, putting the word for person or people before the word referencing their disability—for example, “people with disabilities” or “a learner with intellectual disabilities.” But some organizations use “identity first” language to refer to disability, putting the word for their identity before the word for person—for example, “disabled people” or “blind student.” The United Nations and some organizations led by people with disabilities use person-first language. But identity, and the ways we indicate identity, is an incredibly complex and frequently sensitive topic. Many deaf people and the representative organizations they lead, including the World Federation of the Deaf (WFD), typically use “identity first” language. For the purposes of this paper, IDP is using identify first to be aligned with the WFD’s preferences.

2006: The World Federation of the Deaf (WFD), a global disabled persons' organization (DPO) representing deaf associations from 133 countries, successfully advocated for **deaf children's rights to sign language and linguistic identity in the 2006 United Nations Convention on the Rights of Persons with Disabilities (CRPD)**. See below for additional WFD guidance on deaf education.

The CRPD aligns with the Salamanca Statement, noting that sign language should be used in an environment that "maximize(s) academic and social development," and adds that teachers, including teachers with disabilities, should be qualified to teach using sign language (United Nations, 2006).

2015: Goal 4 of the 2030 Sustainable Development Goals (SDGs) calls for "**equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities**" (The Global Goals, 2015). This includes deaf or hard-of-hearing learners, from pre-primary school up through tertiary education.

World Federation of the Deaf (WFD) Guidance

- According to the WFD (2022), "**National sign languages have a critical role in preventing language deprivation**" for deaf children.
- Policies should enable all deaf children to access sign languages, with an emphasis on enabling deaf children to have "**rich and plentiful interaction**" with fluently signing deaf professionals and community members (WFD, 2016, 2018, 2022) from the "**earliest possible age**" (WFD, 2022).
- **Parents should be supported to learn sign language** alongside their deaf infant or child—for example, by granting parents paid release time from work to focus on learning sign language (WFD, 2016).
- In educational settings, deaf children should receive **direct instruction in sign language from fluently signing deaf teachers**, have access to deaf peers who sign, and participate in a bilingual curriculum that includes the study of sign language (WFD, 2018).
- Teachers for deaf children should have "**near-native levels of proficiency**" in a sign language, as defined by standard national or regional guidelines for language assessment (WFD, 2018).

WFD collaborated closely with other disability-led organization to develop a report from the International Disability Alliance (2020) which discourages closing down schools for deaf children. Instead, the report suggests supporting such schools in transitioning to a bilingual approach if not already using it, and opening up enrollment to other learners in the community who wish to learn or use sign language.

Defining “Inclusive Education” for Deaf Learners

An “inclusive education” may look different for deaf learners. One contentious issue within the field of education has been how to define “inclusive education” in relation to deaf or hard-of-hearing learners. The CRPD obligates those who ratify the treaty to provide an education system that is “inclusive,” “quality,” and free for learners with disabilities on an equal basis with others in their communities (United Nations, 2006); however, it does not define what an “inclusive” education system means for deaf learners. Many country governments and other stakeholders have interpreted an “inclusive” education system to mean integrating learners with disabilities, including deaf learners, into the same classrooms as their peers without disabilities (Jokinen, 2018). However, WFD, the United States Agency for International Development (USAID), and other stakeholders have argued that, for deaf learners, an environment which maximizes their academic development is a bilingual education setting where two languages are used as the mode of instruction, including both the local deaf community’s fluent signed language and the hearing community’s written version of the spoken language (Jokinen, 2018; Kauppinen & Jokinen, 2014; Hayes et al., 2018; Sibanda & Talale, 2019; Kontra, 2019)

The **Ghana National Association of the Deaf (GNAD)** underscores the importance of having a common understanding of inclusive education for deaf learners. In Ghana, GNAD notes that many disability groups and stakeholders have different understandings of inclusive deaf education, which creates difficulties in providing effective and consistent education programming.

Inclusive education for deaf learners requires a particular focus on the language of instruction and the learners’ placement. There are different approaches to deaf education; Exhibit 1 highlights a few examples. The placement of deaf learners also matters; Exhibit 2 provides examples.

Exhibit 1. Understanding Education Approaches for Deaf Learners

Bilingual education, most common in special education settings, includes the use of both (Sibanda & Talale, 2019; Kontra, 2019):

1. The local deaf community’s sign language
2. The hearing community’s written version of the spoken language

Phonics-based instruction is often ineffective for deaf learners, especially if they are born deaf or become deaf at an early age (Lomas et al., 2019). Instead, many deaf learners acquire literacy best through a combination of signing, fingerspelling, and writing (Padden & Hanson, 2000; Stone et al., 2015; Hayes et al., 2018). Teaching deaf learners with the same pedagogy as hearing learners may impede a deaf learner’s ability to obtain adequate literacy skills.

Oralism prohibits the use of sign language with deaf children and requires them to rely on speech and lip reading for communication. We oppose this practice, particularly for young children still learning language, as it risks language deprivation. Even after acquiring language, deaf and hard-of-hearing people vary widely in how well they speak or lip read. Having access to a wide range of communication tools gives users more flexibility in determining which approach to communication works best in different contexts.

Exhibit 2. Understanding Education Placements for Deaf Learners

Schools and classrooms for deaf learners: Some schools teach only deaf and hard-of-hearing learners. In other cases, a general education school may have a single classroom reserved for deaf and hard-of-hearing learners.

Integration: Deaf and hard-of-hearing learners are placed in classrooms with learners who can hear and do not sign. For many deaf learners, this may mean they have little to no contact with deaf peers or adults who sign fluently. Some schools provide the supports deaf learners need in this setting while others might not.

Co-enrollment: This includes educating deaf learners and children who hear together in a general education setting, but unlike traditional general education settings, there is a higher concentration of deaf learners. Also, the children who hear can sign, and the teaching may be done bilingually (Antia et al., 2019).

Although bilingual education programs for deaf learners have traditionally taken place in special education settings, they can also be implemented in general education settings with learners who can hear (Jokinen, 2018). Bilingual education for deaf learners focuses on how learners are taught. Co-enrollment focuses on who is taught (McGuire, 2021; Antia et al., 2019; among others) and is an approach that has the advantage of placing deaf learners with teachers trained to teach literacy without reliance on phonetics (which presumes the ability to hear) and allows learners to communicate with their teachers and peers (both deaf and hearing) in a natural sign language (Marschark et al., 2019). See Exhibit 3 for more details on what makes a setting “inclusive” for deaf learners.

Exhibit 3. Characteristics of Inclusive Education for Deaf Learners versus the Conventional Interpretation of Inclusive Education

	Evidence-Based Definition of “Inclusive Education” for Deaf Learners	Conventional Interpretation of “Inclusive Education” for Deaf Learners
Placement of learners	Placing deaf learners with deaf peers and other signing children such as children of deaf parents	Placing learners with disabilities in the same classroom as learners without disabilities
Language of instruction	Providing direct instruction in sign language from teachers with, at a minimum, “near-native” fluency as demonstrated through an appropriate assessment tool	Placing deaf learners in classrooms where the primary language is a spoken language
Curriculum	Teaching sign language as a subject in the curriculum, as are spoken/written languages	Treating sign language as an “accommodation” for deaf learners, not as a subject to be taught within the curriculum

Current Barriers for Deaf Learners

Due to accessibility barriers and other challenges, children with disabilities are more likely than their peers without disabilities to be out of school at every level of education (UNICEF, 2022). Deaf children are no exception to this exclusion. But even for deaf learners who are successfully enrolled in school, further barriers can still prevent them from receiving a quality education. According to the WFD (2016),² many countries today still strongly discourage or disparage the teaching, learning, and use of sign language, despite research showing that deaf children need sign language from an early age. Furthermore, many countries only have a few teachers who are trained in deaf education pedagogy or in communicating effectively with sign language (WFD, 2016).

Challenges in Rwanda and Ghana

Both the **Rwanda National Union of the Deaf (RNUD)** and the **GNAD** observe that the majority of teachers in their respective countries have rudimentary or no sign language skills. This is not enough to provide learners with proper access to the curriculum and often results in learners passing from one grade to the next having learned little, if anything, the year before.

Although some countries are attempting to remove these barriers, many of these attempts have been inadequate. For example, instead of providing teachers with years of intensive training in sign language—the same amount as needed to achieve fluency in any new language—some programs only provide a couple of weeks of very basic sign language training. Basic signing skills are not adequate to effectively teach deaf children (Ngobeni et al., 2020)

IDP's Position

IDP's overarching position is aligned with the WFD and International Disability Alliance in that we view environments where everyone signs fluently as the ideal setting for young deaf learners. In this section, we present our position on:

1. Early intervention for families and infants
2. Educational settings and alternate solutions
3. Practices that are not supported

This is not a comprehensive discussion of every practice in deaf education. Rather, this paper provides a few of the most salient highlights.

Early Intervention for Families and Infants

Position: IDP recognizes the critical importance of beginning intervention at the earliest age feasible (ideally, the first weeks of life). IDP also recognizes the crucial role of families in nurturing their children's growth and development during their infancy and childhood. We support programs that:

- ✓ **Bring deaf adults into family homes to teach local sign language to deaf and hard-of-hearing infants and their entire family.** Here, families include parents, siblings, and other adults and children who have regular contact with the deaf or hard-of-hearing infant.
- ✓ **Support deaf adult mentors to teach families about deaf culture and how to enable their deaf or hard-of-hearing child to be an active participant in daily family and community life.** Families can

² The WFD is a DPO, i.e., an organization led by people with disabilities.

benefit from understanding their children's strengths and needs, knowing how to advocate for their children and how to help them develop and learn, and having support and needed services in the community (Watkins, et al., 1998; DesJardin, 2003).

- ✓ **Encourage the formation or continuation of family support groups**, where families of deaf children can connect with each other to share successes and brainstorm solutions to challenges.
- ✓ **Address potential barriers that could prevent a family's participation in programming that aims to support their deaf child**, such as reaching out to families in rural areas or working with families whose spoken language is not the same as the national spoken language of their country.

Five Core Outcomes for Families of Deaf or Hard-of-Hearing Children (DesJardin, 2003):

1. Families understand their child's strengths, abilities, and needs.
2. Families know their rights and advocate effectively for their children.
3. Families help their children develop and learn.
4. Families have support.
5. Families access desired services, programs, and activities in the community.

Educational Settings and Alternate Solutions

Position: IDP recognizes that once deaf learners begin formal schooling (preferably at the early childhood level), the ideal setting should immerse them in a sign language-rich environment where teachers and peers sign at near-native fluency or better. It is crucial to keep young learners within their own families and communities as much as possible. In some situations, this ideal setting may not be achievable. In these cases, alternate solutions should strive to model the ideal as closely as feasible. We support alternate solutions that:

- ✓ **Collaborate with government ministries to support the development of a phased plan that progressively realizes inclusive deaf education over the short, medium, and long term** by taking stock of existing resources and identifying critical limiting factors (e.g., teacher supply, appropriate teaching and learning materials, stigma in the community, etc.).
- ✓ **Identify barriers that hinder deaf adults from becoming teachers and progressively remove these barriers.** For example, aspiring teachers who are deaf may need assistance enrolling in teacher training programs and accessing the curriculum and classroom discussions.
- ✓ **Pair each teacher who is hearing with a co-teacher who is deaf** in inclusive, co-enrolled, or special education classrooms with deaf learners.
- ✓ **Foster a bi- or multi-lingual school environment with co-enrollment (as applicable) of hearing learners along with deaf learners.** This ideally should include an emphasis on enrolling hearing siblings of deaf children, hearing children of deaf adults, and other relatives of deaf people. All learners, including learners who hear, would learn sign language as a subject in school, and the language of instruction would center sign language while also using written language.
- ✓ **Create classrooms for deaf learners with signing teachers in general education schools.** Deaf learners can take some of their classes in a bilingual sign language and written language setting with signing teachers, while also taking some classes in a general education setting with the support of a sign interpreter.

- ✓ **Engage local DPOs, including organizations led by deaf individuals, as well as deaf teachers/administrators/staff** in creating innovative programming for deaf learners.
- ✓ **Engage universities in the country to build capacity**, particularly when doing so could facilitate collaborative efforts between universities and local DPOs—for example, engage a university to help train deaf adults as sign language teachers and mentors or to train deaf adults as teachers.
- ✓ **All learning environments for deaf learners should follow the same national curriculum taught to deaf learners’ peers in general education programs**, adapting pedagogical practices as needed for teaching this curriculum.
- ✓ **Ensure that teachers meet a minimum standard for sign language skills**, for example, by instituting government-endorsed certification exams administered by deaf adults trained in evaluating sign language skills. One example of a tool for assessing sign language skills is the American Sign Language Proficiency Interview (ASLPI) used in the United States (Gallaudet University, n.d.) and Canada (Sign Language Institute Canada, n.d.)
- ✓ **Explore options for deaf and hard-of-hearing learners to participate in general education classrooms** as long as they have appropriate supports. Supports may vary depending on factors such as the learner’s literacy skills and signing skills, the presence of additional disabilities, and so forth. But a few examples of supports could include highly skilled and certified sign language interpreters, note-taking support, and real-time transcription by a skilled transcriber

Highlight: The Importance of Considering Contextualized Solutions

Many school systems separate deaf learners from their hearing peers, often with substandard academic practices that do not follow the same curriculum as other schools. Others place deaf learners in general education schools without appropriate communication access or adequate supports that enable them to learn.

A more detailed analysis is beyond the scope of this paper, as is a detailed discussion of the specific supports that individual deaf learners require. But as a rule, IDP supports contextualized solutions that address the need for adequate support, accommodate the need for fluent language models for the youngest learners, provide high-quality instruction for all learners, enable full communication for all ages of learners to access their environment, and empower learners to be full participants in family and community life.

Some examples of support needs include, but are not limited to:

- Making instructional materials accessible, such as adding captions or sign language to videos
- Ensuring deaf learners can understand the teacher’s teaching and engage in discussions with their peers, for example, via the use of fluent sign language or visual aids
- Integrating principles of Universal Design for Learning into teaching and learning materials

Practices IDP Opposes

IDP has identified some concerning practices that are contrary to decades of research exploring best practices in the field of education of deaf learners. Some examples of practices that we do not support include:

- ⊘ **IDP opposes programs that provide inadequate sign language training to teachers** (for example, only a few months or less), especially when the same programs fail to enable deaf learners with the “rich and plentiful” communication they need with deaf adults and peers who sign fluently.

Instead: Recognize that Effective Sign Language Training is Critical

Deaf learners need teachers who are near natively fluent signers—not novice signers. Within a year of intensive training, a hearing educator may learn enough sign language for basic communication. But when deaf or hard-of-hearing children have teachers with only basic levels of signing skills, they struggle to learn from their teachers (Bienvenu, 2008; National Association of the Deaf, 2016; Knoors & Marschark, 2012).

- ⊘ **IDP opposes using sign languages imported from other countries (for example, American Sign Language [ASL] or British Sign Language) when a local sign language already exists**, even if the local language has not been fully documented or recognized as an official language by the government.

Instead: Encourage Use of Local Sign Language

Engaging with local organizations led by deaf adults is key in ensuring that deaf children can be exposed to the sign language already in use by local deaf communities.

- ⊘ **IDP opposes using code systems³ based on the grammar and sentence structure of local spoken languages** in lieu of natural signed languages used in local deaf communities.

Instead: Recognize that natural Sign Languages are Unique Languages

Unlike code systems, natural sign languages have their own grammar and syntax that often differ from the grammar and syntax of the local spoken languages (Sandler & Lillo-Martin, 2006). As with any other language, natural sign languages also have unique vocabularies that may not always translate well to local spoken languages or vice versa. Meanwhile, artificial code systems, such as Signing Exact English or Signed Spanish, select signs from a local sign language, such as ASL, but put them in the grammatical order of the spoken language instead of the sign language’s grammar. Critics assert that modifying natural sign languages to force-fit them into the rules of a spoken language distorts them and makes them “unintelligible” (Supalla & McKee, 2002).

³ Sometimes well-intentioned educators believe that deaf children might better learn their national spoken language by seeing signs ordered in the exact same grammar and structure as the spoken language. To do this, they may borrow signs from the local natural signed language but strip away important grammatical markers that help each sign make sense in the context of a particular sentence. Instead, grammatical markers from the spoken language may be inserted into a sentence in a way that may make sense for people already fluent in the spoken language but seem nonsensical for people not yet fluent or literate in that spoken language. For example, manually coded forms of English may use a separate sign for “-ing” or “-ed” or “un-” meant to indicate the suffixes and prefixes of the sign immediately after or before it.

- ⊘ IDP opposes programs that neglect the need for deaf education teachers to have specialized training in adapting pedagogy for the needs of emerging deaf readers.

Instead: Understand that Pedagogical Methods of Teaching Literacy to Deaf Learners is Unique

For example, deaf learners acquire literacy best through a combination of signing, fingerspelling, and writing, rather than through phonics (Padden & Hanson, 2000; Stone et al., 2015; Hayes et al., 2018). Deaf learners also need to acquire the local sign language as their first language where feasible; teachers can then build upon deaf learners' first-language knowledge to help them learn a written local language.

Case Studies: Experiences of Deaf and Hard-of-Hearing Learners

In this section, we present examples⁴ from two contexts—Rwanda and Ghana—that highlight some of the challenges and successes of deaf education programming. These case studies demonstrate practices we believe deaf education should avoid, such as teachers who cannot sign or who have only basic communication skills in sign language. Kwesi's story below also highlights the crucial importance of involving deaf adults as role models for young deaf learners.

Case Study: Rwanda

In Rwanda, Samuel Munana, Executive Director of RNUD, notes that most successful deaf adults had to “fight to beat the odds” to complete an education. However, he points out that Rwanda has part of the foundation needed for better quality education for deaf learners, including the “availability of deaf persons who are fluent in Rwanda Sign Language (RSL) and were previously trained by RNUD to serve as role models, teachers, and master trainers.” He also cites the potentially important role of model inclusive schools in Rwanda, which should strive to “provide an environment to build upon and try new things that increase the inclusion of deaf learners in a meaningful way” even though they do not currently have all the resources in place to do so (e.g., sufficiently trained teachers on RSL and effective pedagogy for deaf learners).

However, even with this foundation in place, challenges remain. Similar to many countries, teachers do not widely use RSL in school, even in Rwanda's inclusive model schools, according to Mr. Munana. Instead, teachers use “simultaneous communication,” a system in which they force-fit RSL signs into English word order, violating the grammar rules of RSL. As a result, deaf learners “constantly miss” what teachers say. He notes that very few teachers are proficiently skilled in RSL. Moreover, deaf teachers in schools with deaf learners are rare because there is “little or no support for deaf adults who want to attend Teacher Training Colleges to become teachers.”

⁴ Names of learners in this section have been changed.

Learner Story: Kofi from Ghana **The Dangers of Discounting Sign Language**

Kofi became deaf during primary school, and he quickly found lip reading to be an ineffective means of communication. However, he was able to learn Ghana Sign Language from his deaf friends in primary school. Despite working at a school for deaf learners, most teachers at Kofi's school knew no sign language or only learned bits and pieces from their own students. Kofi notes that, although some teachers had been teaching deaf learners for more than a decade, they still *"could not master sign language."*

Kofi says, *"One thing that baffled me was that some of the teachers advised me to use my speech instead of sign language. I feel that they were rather discouraging me from using sign language and undermining my deaf identity. Since they wanted me to talk instead of signing, my participation and contribution in class was extremely challenging."*

Richard Doku from GNAD understands Kofi's situation. He notes that teachers inexperienced in deaf education often pressure deaf learners who have some speaking capabilities to stop signing and use only speech in the hope of helping them maintain their speech ability. However, this pressure can come at the expense of the learner's academic progress.

Because teachers teach using speech and not sign language, Kofi says, *"We [learners] hardly comprehended lessons and most of the teachers did not bother."* In his final year of school, 87 deaf learners sat for a secondary school certificate exam, but only three learners passed five out of the seven subjects, and only one passed all seven subjects.

Kofi suggests that teachers who are trained in deaf education and sign language should be posted to deaf schools and that in-service training in deaf education and sign language should be provided to newly posted teachers. He also suggests that teachers who fail to sign within a certain period should be transferred out of deaf schools.

Learner Story: Kwesi from Ghana **The Importance of Deaf Role Models**

Kwesi, a deaf learner in his late teens in Ghana, experienced bullying and unfair treatment at his secondary school, a setting for deaf learners. As a result, Kwesi says, *"I could not learn. In my first year, I almost stopped school because of the bullying and other problems.... I cannot remember what I learn[ed] no matter how hard I try.... I decided to stop school."*

Kwesi's parents came to the school to discuss his decision to drop out and learn tailoring instead. The housemaster called in four deaf teachers to support Kwesi and help convince him to stay in school. Kwesi says, *"The deaf teachers told me not to stop. They told me there were better opportunities if I completed senior high school. They also told me I could switch to the Home Economics program if I wanted to learn clothing and textiles. I liked their idea. They also promised to talk to the seniors who were bullying me. So, I did not stop school. It was good the senior housemaster called the deaf teachers in, otherwise, I would have stopped school in my first year. I want to go to TTU [Takoradi Technical University] after here."*

Mr. Doku notes that in Ghana, almost all schools for the deaf have deaf adults as either professional teaching staff or national service persons. He says, *"It is becoming clearer that deaf adults who are teachers ... could play significant roles in the education of deaf learners.... Deaf adults who are teachers in the school should be engaged to support the counseling services with their rich experience as deaf persons."*

Moving Forward

How do we end poorly guided practices and replace them with research-based practices demonstrated to improve the language, literacy, and academic skills of deaf learners?

Below, we present recommendations for donors and implementing partners to consider.

1. **Consult with local deaf-led DPOs** to understand the local context and needs.
2. Only support or implement **sign language training** for general education teachers or others in the following circumstances:
 - If deaf children lack frequent and enriching exposure to fluent sign language, then entrenching opportunities for this exposure needs first priority. This includes:
 - Training current and future teachers of deaf learners to the point of near-native signing fluency, requiring a year or more of intensive training. Basic communication skills in sign language are not enough for effective teaching.
 - Educating and mentoring family members to sign with the deaf child, even if not fluently.
 - Creating opportunities for deaf children to mingle with other fluently signing children.
 - In situations where deaf children already have frequent and enriching contact with near natively signing teachers and other adults and children, then it may be appropriate to expand sign language training to include additional adults and peers in the same schools and neighborhoods, even if not everyone intends to attain near-native fluency. This can include general education teachers and others who might not have primary responsibility for teaching deaf learners but have some contact with them.
3. **Prioritize holistic approaches** to deaf education that go beyond sign language instruction for teachers to include:
 - Programs that teach the local sign language and provide an orientation on deaf culture for families of deaf infants.
 - Programs that teach families about laws that protect their child’s rights, resources that can help their child and family, and skills that build their confidence as caregivers and advocates for their child.
 - Programs that support deaf adults to become teachers and include a focus on specialized pedagogy for deaf learners.
 - Programs that enable deaf learners to have rich and frequent interaction with fluently signing teachers, community members, and peers.
4. **Avoid supporting programs that:**
 - Deprive deaf children of access to sign language and interaction with adults who have near-native levels of fluency in sign language.
 - Use a coded system of signs, such as Signing Exact English, that violate the natural grammar rules of sign language.
 - Replace an existing local sign language with an imported sign language from another country.
 - Do not include deaf people in the planning and implementation of their programs aimed to support deaf learners and their families.

Evidence to Support IDP's Position

Early Sign Language Acquisition

The newborn brain is primed to learn languages, whether spoken or signed, but to attain native fluency, a child must be exposed to natural language users as early as possible (Bavelier et al., 2003). The window of opportunity, when it is easiest to acquire language from parents or caretakers, diminishes after the first few years of life (Friedmann, 2015; Newport & Meier, 1985; Pakulak, 2018). Practically every child with normal hearing receives accessible linguistic input from birth, but 96% of deaf and hard-of-hearing children are born to hearing parents whose natural language is a spoken language, a language mostly inaccessible to a deaf or hard-of-hearing child (Mitchell & Karchmer, 2004). Many parents lack the opportunity to learn sign language (e.g., Opoku et al., 2020; Weaver & Starner, 2011) or are discouraged from pursuing such opportunities by medical personnel (Rosenblum, 2015).

Although cochlear implants are uncommon in low- and middle-income countries, their growing use in high-income countries has increased interest in making them more easily affordable elsewhere. Implants do not restore natural hearing: even the most successful users must invest years of training to retrain their brains to interpret sounds from an implant, and not every user experiences ideal results (American Speech-Language-Hearing Association, n.d.).

Despite years of rehabilitation, many deaf children are unable to access spoken language sufficiently for normal language and cognitive development (Giraud & Lee, 2007; Hall, 2017). This can leave deaf children, with or without implants, behind their peers developmentally and unable to communicate effectively with others (O'Reilly et al., 2008; Martin et al., 2010; Yoshinago-Itano, 2006). When parents do not use a visual⁵ sign language, which is accessible to all deaf and hard-of-hearing children, the children lose the window of opportunity for full language acquisition (Humphries et al., 2012; Corina & Singleton, 2009). Some parents and even doctors mistakenly believe sign language delays cognitive development and interferes with learning a spoken language. But research shows quite the opposite. Deaf and hard-of-hearing children living with signing families follow the same developmental stages and experience the same linguistic and cognitive gains as hearing children who use a spoken language (Courtin, 2000; Mayberry et al., 2011a; Woolfe et al., 2002; Mayberry et al., 2011b). In fact, people who are deaf and learned sign language from an early age continue to have stronger literacy skills as adults than adult peers who learned sign language at a later age (Radoman & Nikolic, 2013; Chamberlain & Mayberry, 2000, 2008; Hoffmeister, 2000; Padden & Ramsey, 1998; Strong & Prinz, 1997, 2000; Chamberlain, 2002; Freel et al., 2011).

In addition, learning a natural language (sign language) at an early age develops a strong conceptual and linguistic foundation for the child to become proficient in a spoken language, such as English (Clark et al., 2016; Tang et al., 2015). Deaf and hard-of-hearing children can even benefit from hearing parents who may not sign fluently as it gives them some early access to their first language. Yet, after a few years, the child's sign language needs will outgrow their parents' sign language skills. Most hearing parents are not fluent in sign language (most do not sign at all), resulting in less-than-optimal parent-child communication as the child ages (Meadow-Orlans et al., 2003; Kasulis, 2017). To become fluent natural users of sign language themselves, deaf and hard-of-hearing children must be exposed consistently to natural users of sign language, usually adults from the deaf and hard-of-hearing community or the few adults who sign and work in schools (Corina & Singleton, 2009).

⁵ In the case of deafblind children, sign language would be tactile rather than visual.

Key Takeaways from the Research: Early Sign Language Acquisition

- The majority of deaf and hard-of-hearing children are born to hearing parents who are unfamiliar with sign language.
- When deaf children are exposed to sign language from an early age, they are more likely to achieve full language acquisition, setting them on a path to achieve the same linguistic and cognitive gains as hearing children.
- Deaf adults and teachers of deaf students play a critical role in partnering with hearing parents to support deaf children to become fluent natural users of sign language.

Deaf Education

By the time most deaf and hard-of-hearing children begin school, they most likely have not yet acquired natural fluency in either sign or spoken language, but it is not too late for these children to become fluent if exposed to natural signers. There is a common false belief that a deaf or hard-of-hearing child is achieving full access to language through the support services of the school staff when most likely these professionals themselves are not fluent in sign language (McKee, 2008; Russell, 2010; Schick et al., 2006; Singleton & Newport, 2004). All languages, including signed languages, are composed of distinct grammars.

Deaf and hard-of-hearing signers can only comprehend 50% of what is communicated when a person speaks and signs simultaneously, as many educators do. When a person speaks and signs simultaneously, they usually violate the sentence structure of the signed language to comply with the sentence structure of the spoken language. For comparison, consider how it would sound if a speaker used English words but followed the grammar rules of Japanese (Tevenal & Villanueva, 2009). A deaf or hard-of-hearing child can learn neither the grammar of their country's spoken language nor the grammar of their country's signed language when teachers or others speak and sign simultaneously. Additionally, research shows deaf and hard-of-hearing people understand less than 50% of what an individual says through speechreading alone (Commission on Education of the Deaf, 1988). Likewise, educational interpreters interpret less than 50% of what is said in the classroom (Schick, 2008). While the classroom teacher and hearing learners communicate easily, the deaf or hard-of-hearing child does not participate in classroom discussions or social interactions and mostly interacts with a possibly non-fluent support staff they do not completely understand (Schick et al., 2006).

Given the limitations of sign language interpreters for deaf learners in the classroom, teachers of deaf learners must be natively or near natively fluent in their national sign language. Academic literature and research on how long it takes hearing adults to learn sign language is limited. However, experienced sign language users and teachers estimate it typically takes a few months to attain enough sign for basic-level communication, while near-native fluency takes at least a year and often several years (for example, Oxenham, 2022; Handspeak, n.d.; The Stews, 2015). Teachers learning sign language also should be trained in the pedagogy of sign language, both as a first-acquired language for infants/children and as a second language for parents/families.

Key Takeaways from the Research: Deaf Education

- Signed languages are distinct languages and, as such, deaf learners need to be exposed to teachers who are natural signers.
- Deaf learners are placed at a disadvantage if they are in an educational environment where teachers are speaking and signing simultaneously.
- Similarly, the use of sign language interpreters limits a deaf learner's ability to fully participate in lessons as interpreters do not always capture 100% of what the teacher says.

- Not only do teachers need to have native or near-native levels of fluency in sign language, they also need sufficient training on pedagogical approaches for deaf learners.

Concluding Takeaway

Educators and parents may think deaf and hard-of-hearing children lack the capacity to learn. In reality, these children learn best when they are provided a sign language-rich environment with fluent signers in their home and school to ensure their achievement of full language acquisition, and subsequently, their successful development of academic, emotional, and social skills.

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