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BEGINNING WITH LANGUAGE

Inclusive education strategies with sign languages in Rwanda, Singapore, United States, and Việt Nam

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Introduction

Global recognition of the educational exclusion of children with disabilities has made a case for worldwide reform to design education programming for diverse learners. Positive gains in access to education have reaped successes and created space to examine the practical elements that make education inclusive, and also the extent to which these are accessible and equitable. Evidence from educational, linguistic, and neurocognitive research underscores that education programming for deaf and hard of hearing (DHH)[1,2] learners is most effective when instructional languages are whole languages that are easily accessible, and curricula that reflect learners' diverse languages, cultures, and other intersectional backgrounds. The earliest international guidance on *Education For All* affirmed the importance of signed languages and underscored that access to education in national signed languages should be ensured for all deaf persons (UNESCO 1994 Salamanca Statement, Section A, Item 21). These principles have been reaffirmed in the Convention on the Rights of Persons with Disabilities (CRPD), and numerous human rights instruments. Holding consultative status with the United Nations, the World Federation of the Deaf further upholds that, "…inclusive education for children who are deaf is achieved through quality bilingual sign language schools and other educational settings teaching the national sign language(s) and national written language(s) (International Disability Alliance, 2020, p. 9). Despite these efforts, researchers note that DHH learners commonly lack access to language and culturally responsive environments in school settings (Komesaroff & McLean, 2006; Mathews, 2017; Snoddon & Murray, 2019). These circumstances have given rise to synergistic family, community, organizational, and school-based innovation to infuse sign language learning into everyday activities and educational practices.

In this chapter we start from the basis that there is a proliferation of inclusive education initiatives under way, yet presently little empirical evidence about how such

DOI: 10.4324/9781003091950-4

approaches ensure quality and equitable language settings for DHH learners. These circumstances enable us to explore seemingly disparate cases (e.g., settings with varying GDP, existing educational policies and programs, DHH community involvement) to examine the ways that local actors are innovating and promoting inclusive education access. The four cases presented in this chapter demonstrate how local actors advance ad hoc and/or longer-standing innovations to engage DHH learners in the most immediate and feasible ways. While seemingly limited in scope, we contend that they are powerful examples of community-led efforts to promote and preserve sign languages in education. Setting the context for these case examples, we open the chapter with discussion of sign language-centered inclusion in the context of insights on language development, the CRPD, and intersectional considerations. Ultimately, we show that effective forms of inclusive education programming for DHH learners is contingent upon coherent language policy and pedagogy founded on explicit recognition for all of the cultures and languages of instruction, teacher instructional proficiency in those languages, and deaf community engagement in providing DHH cultural and linguistic resources. We then close the chapter with a set of recommendations.

Insights from language development research

To promote language acquisition and overall human development, all children need early and ongoing access to the most easily accessible language input. Chen Pichler (2017) emphasizes that language acquisition is dependent on "quality input" from which children need to be exposed to early, via natural languages, and "optimized" for joint attention between child and adult, and child-directed signing. Quality input is, in turn, dependent on adult sign language proficiency which includes the ability to establish an object of mutual attention, turn-taking, and other natural features of interactions. Assistive listening devices may offer some DHH children additional resources for acquiring spoken languages; however, Dye & Emmorey argue that sign languages are the most "completely accessible natural languages [for DHH]" and do not require batteries, auditory processes, or therapists to provide input for meaningful communication to take place" (2017, p. 402).

For DHH children, a growing body of literature on language deprivation shows significant neurocognitive and social-psychological delays associated with lack of whole language input during the critical language development period of 0–5 years (Brown University, 2014; Hall, 2017; Glickman & Hall, 2019), with effects observed especially in the area of literacy (Humphries, et al., 2016). DHH children are also at risk for "chronic child cognitive fatigue" when they are expected to rely on auditory perception alone (Spellun & Kushalnagar, 2018, p. 1). Accordingly, quality and equitable education demands language policy and programming that reflect an "enrichment" approach to bilingual education that broadens "cultural pluralism and linguistic diversity" (Baker & Wright 2017, p. 198). Given that there are only an estimated 200 signed languages that have been documented thus far, and mostly for North Atlantic countries (Brentari, 2010), language research and policies regarding bilingual education with sign languages are desperately needed.

The CRPD & language-centered guidance

The CRPD contains multiple references to sign language access, most relevantly in Article 24 - Education. In the post-CRPD adoption era, guidance on language policy and planning has been a significant source of theoretical and practical innovation. Much of this work considers inclusive settings (e.g., schools, vocational training) and language modalities (signed, spoken, written, print, tactile), but does not fully address the juncture of language, culture, and sensory considerations for educational settings. To address this gap, Murray, De Meulder, & le Maire (2018, p. 39) argue that deaf people possess a "dual category" status with respect to sensory and language backgrounds that must be taken into consideration.

Examining the definition and interpretation of inclusion in CRPD Article 24, Murray, Snoddon, De Meulder, & Underwood (2018/2020) further argue that inclusion must "…take into account issues of linguistic rights and cultural identity" (Ibid.). Addressing such issues in post-ratification interpretations of the CRPD, General Comment No. 4, (adopted in 2016) states, "Students who are blind, deaf or deafblind must be provided with education delivered in the most appropriate languages and modes and means of communication…" (Section 34, item c). General Comment No. 6 (adopted in 2018) further states that DHH children must be provided access to deaf peers and deaf adult role models in sign language learning environments. When teachers possess proficiency in sign language, this contributes to the accessibility of the school environment, promoting inclusion and educational achievement. (section K, Article 24, item 65). In addition to language and sensory considerations, quality and equitable education takes into account the multiple intersecting identities and experiences of DHH learners–which are important factors in operationalizing education and promoting the rights of DHH people in broader society (Izsák-Ndiaye, 2017; UNDESA, 2019).

Operationalizing intersectionality

Current efforts to design education settings that affirm linguistic and sensory backgrounds build upon intersectional theorizing, first introduced in 1989 in the legal studies context by Kimberlé Crenshaw. Crenshaw recently described this as: "…a lens through which you can see where power comes and collides, where it interlocks and intersects.." (Crenshaw, n.d.). Intersectionality theory addresses linkages and interlocking inequities taking place at the juncture of cultural background, class, race and ethnicity, gender, socioeconomic and political status and representation, among other socially meaningful categories. As Walqui observes, "Education never takes place in a vacuum but is deeply embedded in a sociocultural milieu" (2006, p. 159). Policy, curricular, and pedagogical design that affirms DHH students' intersectional linguistic and sensory experiences, and the diversity of the broader sociocultural context, recognizes difference in an affirmative way.

Intersectionality theory also demonstrates the importance of macro-level analysis, given, as Collins (1990, p. 227) observes, "…the matrix of domination is

structured on several levels; personal biography, group/community level of cultural context, and systemic level of social institutions". Intersectional analysis promotes education planning that recognizes the levels of systemic oppression, domination, and liberation that Collins describes. To transform conditions of dominance within education, investment and talent recruitment would benefit from engaging DHH people in professional training programs and hiring into core personnel positions and administration.

Introduction to country case examples

This section introduces four case examples exploring locally emergent education innovations that are responsive to DHH learners and to local resource availability. We arrived at this focus through conversations shared as International Development practitioners working in education and disability inclusion sectors, and via our mutual association with Gallaudet University's Master of Arts Program in International Development. The conversations that unfolded between us illuminated the prevailing misconceptions (including our own) about the types and availability of education resources for DHH learners for DHH learners, and prompted our attention to the ways that education settings reflected learners' intersectional backgrounds across the contexts in which we worked and conducted research. The resulting analysis identified creativity demonstrated in family, community, and education settings that promote and preserve signed languages in education.

The writing team comprises diverse personal and professional backgrounds. All four researchers share ASL and English as common languages. Two researchers identify as deaf (Shanks and Tay) and two as hearing (Cooper and Holzman). Four methodologies are used: Cooper (anthropological ethnography); Holzman (field-based autoethnography), Shanks (autoethnography), and Tay (sociolinguistic and autoethnographic). Each country case begins with a description of the broader education context in the respective country followed by discussion of educational innovation by local actors that affirm both the sensory and language backgrounds of DHH learners.

Case 1: Rwanda

Background on language in DHH education & inclusive education in Rwanda

Universal access to education and social unity are longstanding priorities for Rwanda's national development. These goals are reflected in the 98% primary school enrollment rates as of 2019 (UNICEF). The Rwandan government, international organizations, and local stakeholders have committed to inclusive education through legislation, public statements, and as early signatories to the CRPD. However, noted gaps remain in practice (Karangwa, Miles, Lewis, 2010). Children with disabilities face a range of barriers to education and are enrolled at a lower rate (70% compared to the national average). With limited disaggregated data, the rates of DHH children accessing school were as low as 3% in 2007 (Miles, Wapling,

Beart, 2011). The Special Needs and Inclusive Education Policy was revised in 2018 through a consultative process with a range of stakeholders, including the Rwanda National Union of the Deaf (RNUD) (Republic of Rwanda, 2018, 1). Faith based organizations and charitable causes have historically been the primary source of educational opportunities for DHH children and children with disabilities broadly. In more recent years, the Government has taken the initiative to look at education through an inclusion lens (Njelesani, Siegel, and Ullrich, 2018).

In 2014, the University of Rwanda College of Education established the School of Special Needs and Inclusive Education. Yet, at the time of this writing, there remains no specialization for teaching DHH learners and minimal exposure to Rwandan Sign Language (RSL). The Special Needs and Inclusive Education Policy was revised in 2018 through a consultative process with a range of stakeholders, including RNUD (Republic of Rwanda, 2018, 1). The revised policy now specifically references the promotion of "Deaf Culture", and critical assessment of education planning for DHH students that includes nationwide data collection to understand the linguistic diversity of deaf communities in Rwanda (Ministry of Education, 2018, 23). This policy additionally points to the need for research and training regarding signed languages in Rwanda, "…because Sign language as a Language of instruction for schools, is neither fully recognized by the Ministry of Education, nor integrated in teacher training programs." (Ministry of Education, 2018).

There are a total of 14 schools and centers providing education to DHH learners in Rwanda, with 5 schools for the deaf, and 9 schools that enroll smaller numbers of DHH students (Personal communication, 2020). Ntigulirwa states that as of 2019, deaf schools and centers for children with disabilities have been converted to enroll non-DHH students. This restructuring has not properly established sign language preservation plans and pedagogical approaches to teach in a bilingual setting (RSL and national languages) with learners newly exposed to RSL (Ntigulirwa, 2019). The need for language planning gained attention in 2008 when rapid policy change – altering the use of French, English, and Kinyarwanda in education – challenged schools to teach and learn in languages with limited proficiency (Williams, 2017). Within this context, RSL remains insufficiently researched and recognized in education and therefore poses challenges to actualizing inclusive education goals for DHH children.

Classroom settings and practical innovations in Rwanda

The following analysis is based on Holzman's volunteer work and autoethnographic research in Rwanda (January - June 2016) at the Ubumwe Community Center (UCC). UCC is a privately funded inclusive primary school and community center in Gisenyi, Rwanda. Holzman is from the US and began work with DHH communities in East Africa in 2013 as part of an education-based international development initiative. In 2016, UCC school served over 400 children with and without disabilities, including approximately 25 DHH students. The DHH students arrived at school with foundations of diverse language and education experiences. Some

transferred from neighboring districts where a variant of RSL was used, others from families with DHH relatives, with the majority raised in homes with hearing families that did not know or use RSL.

Amidst limited resources and undefined standards of equitable access for the DHH students, innovative approaches were observed through the relationship between the school site and local deaf community members. The DHH students benefited immensely from the involvement of deaf adults and peers in both academic and social activities that occurred at UCC. Deaf adults served in a number of staff and volunteer roles, including grounds maintenance, a pre-primary teacher and two volunteers who provided direct support to DHH students. All students took an ongoing RSL class and the teachers participated in a range of RSL workshops over the years. RSL proficiency varied greatly, but a noticeable few students took a keen interest in RSL and developed language skills and close relationships with the cohorts of DHH students. The deaf teachers, fellow students and dedicated staff made each child feel welcome and supported, but the unmet aim of providing a sign language rich education was a stress shared by all.

One initiative was to invite DHH secondary school graduates to begin their teaching careers as volunteer interpreters and teaching assistants. Despite not possessing formal training, these volunteers had the language skills, secondary schooling, and shared DHH identity that created meaningful learning opportunities for many of the DHH students. The maintenance staff were also welcomed into the classrooms to clarify and discuss course content and took part in regular staff meetings and campus planning events. Beyond academics, a monthly "sign language day" was instituted by school administrators to promote RSL fluency across campus. This intentional shift in language use prompted teachers and students to communicate in RSL not as a means of accommodating their DHH classmates, but as a primary language on campus. The DHH students took pride in educating their peers and teachers and supporting others to navigate the visual environment of full RSL use. The ban on verbal communication was not applied to communication during academic courses due to a lack of teacher fluency to conduct courses fully in RSL. This heightened awareness of the need for more intensive and ongoing RSL training.

As a school and community center, UCC's inclusive practices did not stop at the end of the school day. Weekly deaf church services were hosted in classrooms and dance and theater programs encouraged full participation of DHH students and community members. This community level commitment supported the linguistic and identity development of DHH students and empowered them to continue their studies even when faced with barriers in the classroom. These approaches are innovative in that the school administration created mechanisms to engage with the broader deaf community in academic and social activities in the school-based setting. This case highlights the vital role of DHH adults' leadership in education and the need for training pathways for DHH teachers and community members to continue to advance inclusion in partnership with school administrators and staff. The mission of inclusive education at UCC expanded the campus walls and heightened awareness of disability rights, sign language and deaf culture within the surrounding community.

Case 2: Singapore

Background on language in DHH education & inclusive education in Singapore

Singapore's colonial history has influenced language ideologies which in turn has shaped language and education policies applied in the local education system and in deaf education (Kirkpatrick, 2016; Kadakara, 2015; Tay, 2018). In 1966, Singapore implemented an English-mother tongue bilingual policy requiring English to be adopted as the first language of instruction in schools, with other official languages – Mandarin, Malay, and Tamil – classed as second languages (Kirkpatrick, 2016). This led to the demotion of Chinese and Indian varieties in language policies (Leimgruber, 2013) and the exclusion of Singapore Sign Language (SgSL). There are currently three primary schools (2 special schools and 1 mainstream school) which enroll deaf children (Ministry of Education, 2020).

The Singapore Chinese Sign School was established in the early 1950s by Mr Peng Tsu Ying, a deaf man who moved to Singapore from Shanghai after World War II (Tay, 2018). Around the same period, Goulden, a British expatriate, started an oral class that had nine deaf children. This led to the establishment of the Singapore Oral School for the Deaf where English was adopted as the medium of instruction (Argila, 1976). The Singapore Chinese Sign School for the Deaf later merged with the Singapore Oral School for the Deaf in 1963 to become the Singapore School for the Deaf. The school closed in 2017 due to falling enrollment numbers and Mayflower Primary School was selected as the designated mainstream school to take in deaf students and provide access to SgSL from 2018 (Teng, 2017).

Although Signing Exact English (SEE), was used in the now defunct Singapore School for the Deaf –brought by Lim Chin Heng, a Singaporean graduate from Gallaudet College and Frances Parsons from the US in the 1970s––, its usage has caused division in the community; some believe in its effectiveness for teaching English while others perceive it as an improper language and advocate for SgSL as a legitimate language (Teng, 2017; Tay, 2018). Akbar (2020) found that although the use of SEE is supported by both deaf and hearing parents in their homes, "contradicting language practices" were observed; the deaf children are the "actual language managers of the family" instead of the parents having authority over the home language practices (p. 7). Deaf education has seen a shift from SEE to SgSL as DHH children appear to prefer using SgSL (Akbar, 2020). Despite positive attitudes toward SgSL, there are inaccurate understandings of the language and conflicting feelings using it due to limited support from the school and the government (Ibid.). These circumstances are a fertile soil for innovation because it illuminates the gaps, issues and lack of resources and knowledge in deaf education and linguistics.

Classroom settings & practical innovation in Singapore

Educational innovation in Singapore is visible in a few areas: from family and peer interactions, school instruction, upskilling for new and current educators of the deaf

to groundbreaking research being done in the fields of deaf education and linguistics. The following analysis is based on a summer internship that Tay conducted in 2016 at the Singapore Association for the Deaf. Tay was assigned a research project on language and identity in the Singapore Deaf Community. She has been in and out of Singapore at regular intervals as Singapore is her home country. She has engaged with deaf and hearing individuals in the SgSL community. Tay's background in deaf education in Australia, along with her training in international development and linguistics positioned her to further develop her research skills and identify gaps in the local context. She conducted ethnographic research through interviews and participant observation of deaf individuals in various settings.

Between 2003 to 2006, there were 7 deaf teachers in Singapore (Yap & Lim, personal communication 2020). Currently (2020), there are 4 deaf teachers in Singapore. Despite observations of the differential treatment of deaf teachers compared to hearing teachers of the deaf, it has been found that the presence of deaf educators as role models in the classroom in inclusive education settings and classrooms in DHH settings still reaps benefits (Mei, personal communication, 2020). The deaf learners claimed they understood the deaf teacher's signing more easily than that of the hearing teacher. Chee (2020) found that although teachers in an oral school for the deaf were aware about advances in sign language research, they still believed that an oral program and learning to assimilate into the hearing world were more effective for the deaf children's success. Even those educators that seemed more positive toward sign language revealed ambivalent sentiments toward SgSL. However, none of the educators were overtly antagonistic toward sign language, indicating a slight positive shift in teachers' attitudes Chee (2020).

Teachers of DHH learners are required to possess a special education diploma; however, pedagogic courses focus on disabilities in general. In 2019, the Certificate in Teaching Students with Hearing Loss program was introduced to upskill current teachers of the deaf (Lee, personal communication, 2020). This is the first training program that offers specialized courses in deaf education. From 2021, there will also be the establishment of a mainstream kindergarten program at Mayflower Primary School. It will start offering access to SgSL as a language from 2022 to both the deaf and hearing students for the very first time in Singapore's history (Teng, 2020). In addition, access to external speech and language therapists and audiologists in school will be provided. This is a significant innovation and milestone in deaf education in Singapore on top of the introduction of the specialized training program in deaf education, because the best of both the deaf and hearing cultures are provided in this setting.

Case 3: United States

Background on language in DHH education & inclusive education in the US

The US initiated formal deaf education in 1817 and fostered a national network of deaf residential schools –now more than 78, though a number are at risk for

closure (NAD, 2011). With the 1864 establishment of Gallaudet College (now University), the first higher education institution for DHH people, deaf education generated a pool of deaf professionals in various disciplines including education. While for nearly 100 years, Gallaudet resembled education in the general society in being racially segregated (until 1952), Gallaudet University modeled what accessible sign language-centered education meant for DHH learners. Recognizing that the university was also the site of controversies over the legitimacy of signs used by deaf people versus other approaches, e.g., oralism, fingerspelling without signs (Rochester Method), and invented communication systems such as Signed Exact English, Gallaudet University paved the way for DHH teachers to hone skills needed to expand educational opportunities to DHH learners.

Between 1960–1979, what came to be called American Sign Language (ASL) was analyzed to be a linguistic system; it created a space for ASL to be formally recognized as language and challenged the use of artificial sign communication systems in schools (Stokoe, 2005; Klima & Bellugi, 1979). Educators nevertheless believed that signing should follow English word order, promoting artificial sign communication systems in US schools and impacting education in other countries. The advent of formal special education teacher training prompted programs for DHH learners, which provided DHH learners with more opportunities to access formal education but yet neglected deaf cultures and sign languages. In the 1970s, key legislation ensured communication access for DHH people for the first time (Rehabilitation Act of 1973 (Section 504), followed by other key legislations such as Individuals with Disabilities Education Act of 1975. The Americans with Disabilities Act (ADA) is touted as the "strongest disability rights law in the world as it further protects the rights of people with disabilities to access public goods, yet it does not specify language or cultural protection for the Deaf community" (Holmes, 2019, p. 264). Legislation also overlooks Black ASL, which emerged in segregated schools for black DHH learners (McCaskill, et al., 2011), and first nations sign languages (Davis & McKay-Cody, 2010). However, the US currently has 50+ postsecondary Deaf Education Teacher Preparation Programs that also includes training of itinerant teachers, representing distinct DHH education philosophies and instructional languages. The availability and diversity of multiple programs expanded the opportunities for DHH learners to have qualified instructors providing more equitable access to education. The implications of not explicitly recognizing ASL as an instructional language for DHH learners contributes to marginalization of deaf teachers, as well as extensive use of interpreters in the classroom. Nevertheless, the aforementioned circumstances surrounding deaf education created a space for innovation to emerge (Maroney & Smith, 2010; Marchut, et al., 2019).

Classroom settings and practical innovations in the US

In conducting literature review on DHH education in the US, itinerant teaching emerged as an innovation that has received little critical attention despite its significance in bridging educational gaps for DHH learners, particularly in rural

areas. The following analysis is based on this literature review, as well as retrospective ethnographic reflection on Shanks's own participation in itinerant teaching services from 1994 to 2007. Itinerant teachers are a significant resource for DHH learners as they provide direct one-on-one social interaction with DHH learners that may not be occurring in the mainstream classroom environment while simultaneously supporting their academic goals established by Individual Education Plans (IEPs). Such support for academic goals can include ensuring that DHH learners understand instructions provided by teachers on any subjects identified on the IEPs.

While itinerant teachers are a significant resource for DHH learners, they are working with limited language resources as itinerant teaching is not integrated into inclusive education classroom design and instruction as with bilingual education programs (one-on-one instruction rather than full immersion and interaction in a classroom setting). Shanks's experience in the mainstream education environment as a deaf black child involved leaving mainstream classrooms for about an hour twice a week to meet the itinerant teacher individually--which Shanks attributes to making a difference between getting lost and succeeding in the education system. The weekly meetings with itinerant teachers allowed Shanks to fully express herself using ASL and English to either review any confusion regarding assignments, to seek advice on how to advocate for self in the classroom, and to vent about being a deaf student in a mainstream classroom. Itinerant teaching emerged in response to massive shifts in DHH students' placements from deaf education to mainstream settings (as inclusive education is generally referred to in the US), accounting for more than 85% of DHH students (US GAO, 2011).

Itinerant teachers incorporate specialized training for working with DHH learners that travel to various schools in the assigned school district and provide "instruction and consultation for students" typically in a one-on-one format (Luckner & Ayantoye 2013, p. 409–410). However, this did not make up for miscommunications in the classrooms, condescending attitudes from students and teachers, and other difficult conditions within the classroom; moreover, all of Shanks's itinerant teachers were also hearing and white, except for one Latinx-identified teacher. If adapted to sign language-rich environments and students' intersectional backgrounds, itinerant teaching could be a sustainable innovation.

Itinerant teachers support DHH learners in mainstream environments, particularly those with multiple disabilities, and those living in areas with inadequate teaching resources (National Deaf Center on PostSecondary Outcomes 2019). Itinerant teaching assignments reflect goals in Individual Educational Plans determined by the school and the family. However, without deaf community involvement and in-class communication, students may not receive the language access that bilingual education programs (including deaf schools) with sign languages provide. Research on itinerant teaching finds that classroom teachers often may not have the qualifications or apply feedback to their classroom instruction, exacerbating learning and language barriers (Antia & Rivera, 2016; National Deaf Center on PostSecondary Outcomes, 2019).

Case 4: Việt Nam

Background on language in DHH education & inclusive education in Việt Nam

Việt Nam's sovereign nation is founded on the liberatory pursuit of literacy in the Vietnamese language, and achieved universal primary education in 2000 (EFA, 2015). Education is among Việt Nam's highest priority development sectors. Việt Nam was an early adopter of Education for All, and education planning and enrollment of learners with disabilities has increased substantially since the early 2000s; however, educational attainment for learners with disabilities is limited by a shortage of trained personnel and education resources, and also impacted by stigma among educators and the general public (CRPD Initial Report, 2018; Tran, 2014; Tran, et al., 2017). Moreover, only a fraction of DHH learners attend or complete school at any level (GSO, 2016). These circumstances have catalyzed significant innovation for DHH education and community action.

Việt Nam had one of the world's first schools for deaf students with instruction in sign language (Lái Thiêu School for the Mute-Deaf, est. 1886). After national reunification in 1975, the government instituted speech-based schooling in special school settings and discouraged use of sign language. By the late 1990s, DHH special schools were located throughout the country, and the government also promoted enrollment of DHH students in 'regular' schools (Nguyễn, et al., 2019). During this period, the government established bachelor's programs in special education, followed by masters and doctoral degree programs in "inclusive special education," established in 2011 and 2018 respectively (Ibid., p. 262).

Observing DHH learners' limited school enrollment and communication barriers between teachers and students, in 2000, Woodward (an American linguist) and Nguyễn (a former special-school teacher and administrator) established the *Center for Research and Promotion of Deaf Culture* (Trung tâm Nghiên cứu & Thúc đẩy Văn hoá Điếc), commonly referred to as the "Đồng Nai Deaf Education Project," to train deaf adults in the national curriculum and Hồ Chí Minh Sign Language analysis, teaching, and interpretation (Woodward & Nguyễn, 2012). Woodward and Nguyễn also established both a four-year and a university degree track in early deaf education. Still the only sign language bilingual education program in Việt Nam that trains students in the full national curriculum, 200+/- students have graduated with middle and upper secondary diplomas, and 20+/- students have earned university diplomas in Deaf Teacher Training.

DHH students in inclusive settings have fared less well. Researchers found that in six provinces studied, 29,382 DHH students were "in classrooms where spoken Vietnamese was the medium of instruction" and only "one child shared an effective communication channel with another person ["her devoted teacher"]" (Reilly & Nguyễn, 2004, p. 25). Conducting ethnographic research in southern special schools, Cooper (2017) found that teachers learned signs from students and felt the need to hide signing from school administrators. With the 2010 Law on Disability, use of Vietnamese sign languages is permitted and some teacher training programs offer sign language courses; however, such courses are not compulsory.

To meet the country's significant inclusive education needs, the government has supported numerous incubator and pilot projects, including those involving sign languages. Reflecting diverse education philosophies and approaches, these projects give constituencies an opportunity to test the various approaches. Although project outcomes are not observable for years, sometimes after the critical period for language development has passed (0–5 years of age), diverse projects enable educators, DHH community members, and families to interact, share ideas, support the initiatives they deem effective, and supplement available programming.

Classroom settings and practical innovations in Việt Nam

Educational innovation in Việt Nam is observable nearly everywhere and at multiple scales—from family, peer, and community instruction to large-scale national education projects—with education and training for learners with disabilities comprising increasing government attention. Whereas government training for key human resources professions has not been implemented yet (e.g., deaf teacher training; signed-spoken language interpretation; sign language instruction), deaf community members have led efforts to implement sign language training within schools and community settings. This section discusses three examples: two are drawn from ethnographic fieldwork that Cooper conducted in special schools and deaf community organizations in 2007–2009 and related training activities in 2012–2014, and the third spotlights deaf community training provided by the only deaf-founded and -led organization with official government recognition.

Demonstrating how language-centered planning introduced innovation to special school settings and beyond, the first two examples involve training of (hearing and non-signing) content-area instructors in Hồ Chí Minh Sign Language (HCMSL). Recognizing that content area teachers did not know HCMSL, the Đồng Nai Deaf Education Project trained deaf adult students to teach HCMSL (Woodward et al., 2003). This model proved effective for teaching the national curriculum; it also advanced affirmative language attitudes toward HCMSL and gave deaf instructors formal roles within education settings. Other education settings lack this deaf adult resource base, creating a dilemma for administrators interested in introducing HCMSL to their schools. Cooper (2017) describes special school principals who contravened speech-based education norms by inviting deaf community leaders to offer HCMSL classes, and by establishing school-based Deaf Clubs for deaf adults to interact with DHH learners and their families. Largely dependent on deaf people's voluntarism, some school personnel pooled small funds to support this work.

The third example involves the historic emergence of Việt Nam's first officially recognized deaf organization that promotes sign language education, training, and research for deaf people. The *Psycho-Education and Applied Research Center for the Deaf* (PARD) is dedicated to creating an inclusive society through education and advocacy initiatives, especially in rural settings. Established by Nguyễn Trần Thủy Tiên, a 2012 graduate of the Đồng Nai Deaf Education Project and also the first deaf person in Việt Nam to earn a master's degree (2017, Gallaudet University's Master

of Arts Program in Sign Language Education), PARD's approach is extremely innovative in advancing training-of-trainers among deaf people for vital education and advocacy roles. Unlike many projects that train hearing community members with the expectation that they will train deaf people, PARD trains deaf community members in such areas as sign language development and teaching, rights awareness-raising (e.g., CRPD, national laws), and connects deaf trainers with communities and schools. PARD also engages government counterparts to offer input on inclusive education materials and programming.

In settings where the above innovations have been introduced, deaf community members and deaf students report pride in seeing their cultural and linguistic contributions reflected in education activities (Cooper 2017; Gallaudet IDMA, 2020). Both deaf and hearing community members also express a sense of interest and inspiration in having spaces to grow intercultural dialogue—which deaf community organizations lead through arranging "*giao lưu*" [cultural exchanges] (Cooper and Nguyễn, 2015; Cooper 2017). Sign language classes in the community and on TV are now increasingly vital to Việt Nam's wider education enterprise and are gaining broader support from the government, INGOs, and DPOs/OPDs.

Discussion & recommendations

The four country cases demonstrate country-specific circumstances of education, underscoring the contextually responsive nature of innovations designed for education with DHH learners. The cases also demonstrate a number of comparative commonalities, especially with respect to the significance of sign language recognition for DHH leadership, and the observed benefits to education quality when DHH adults are engaged in teaching, training, interpreting, mentoring, and support roles. In developing the four case studies, we identified prominent roles for i. advancing policy, and ii. advancing training and technical capacity building activities. Below we address each area and include a set of relevant recommendations.

Advancing policy

The case studies demonstrate that all four countries have laws or policies outlining quality and equitable education. Three of the countries also have disability specific laws (Rwanda, US, Việt Nam). None of the countries possesses national sign language bilingual education policy, such that instructional approaches and languages vary from setting to setting. Of the four countries, Rwanda is the only country to include reference to "Deaf Culture" in national policy (2018 Revised Special Needs and Inclusive Education Policy). Singapore and the United States are the only countries of the four that have Individual Educational Plans (or programs).

All of the country cases reflect government support for use of sign languages; however, all four countries also lack official sign language recognition, and have not provided specific content defining what a language is, how sign languages foster

language development, and how they should be used to structure education activities. Language policy and guidance centered on the bilingual or multilingual use of the local sign, print, and spoken languages is a critical precursor to efficacious education approaches with DHH learners. The case examples show that sociocultural participation in the context of schools, the family, and the community can be meaningful—especially if developed and supported by DHH language communities. Advancement of signed languages within education settings requires the participation of DHH people in the life of schools, in all roles, including that of interpretation and translation. One of the most urgent needs, then, is to develop policy that ensures the rights of DHH adults to access to systems of higher education and policy that supports development of critical education and training infrastructures.

Policy Recommendations for Cultural and Language-Rich Education

- Create education legislation and regulations on national/regional sign language(s) as instructional language(s) (De Meulder et al. 2019)
- Seek guidance from sign language linguists and local DHH communities on inclusive education planning and questions pertaining to policy and inclusive education initiatives (Harris, et al. 2009; Hochgesang, 2015).
- Utilize research evidence and recommendations on language development for DHH learners to ensure early language development services are a key component of inclusive education policies and plans (Adoyo, 2017; Golos et al. 2018; Murray, Meulder, Maire, 2018).
- Limit the use of sign-spoken language interpreters in the classroom and increase the use of DHH educators, teaching assistants, and support staff in the classroom (De Meulder & Haualand, 2019; de Wit, 2011; Schick et al. 2006; Shantie & Hoffmeister 2000).
- Ensure that policy includes empirical evidence on the use of hearing aids, cochlear implants, and other technologies as additive elements of communication accessibility and not substitutes for language development and use of full languages (Glickman & Hall, 2019; Spellun & Kushalnagar, 2018).

Advancing training and technical capacities

Educational design and training infrastructures lag behind DHH learner enrollment in all four countries. Perhaps paradoxically, the absence of sign language(s) policy and related training infrastructures can be understood as a catalyst of innovation, particularly for people and groups that are directly engaged in the lives of DHH learners. Representing substantial leadership and creativity to implement education approaches for DHH learners, the four case studies demonstrate socioculturally-informed ways of mobilizing education innovation within resource-limited settings. For instance, in Rwanda, Singapore, and Việt Nam, DHH adults have recently been enabled to serve in voluntary or support staff roles, largely without education or training on their respective roles. Moreover, innovation by one organization in

Việt Nam (PARD) now trains DHH adults in language development and teaching offering a significant mechanism for ensuring quality language input for DHH learners in formal education settings as well as in the community.

Each of the four countries examined possess teacher training programs with varying structures and mandates related to teaching children with disabilities and/or inclusive education. These teacher training programs also tend to involve minimal exposure to the local/national sign language(s), including for the US, where some deaf education teacher credentialing programs offer specialized training in bilingual ASL-English pedagogy and others do not. Despite the limited availability of training in education services, and limited access to DHH adults, where schools engage DHH adults, they are relied upon to provide the cultural and linguistic grounding that is the foundation for effective education. To ensure teacher preparation to engage DHH learners in quality and equitable education experiences, teacher trainees require specialized language training and specialized training in bilingual pedagogy. The following recommendations highlight the actions that governments, education ministries, and DPOs/OPDs can undertake to bolster teacher preparation.

Partnership and Training Promoting Language-Rich Settings

- Promote training and hiring of DHH sign language teachers to develop curriculum and teach the local/national sign language as a school subject (McKee et al., 2014; Watkins et al., 1998).
- Partner with DHH educators to design training modules and ongoing assessments of sign language fluency for teachers studying inclusive education practices (Humphries & Allen, 2008; Rosen 2019)
- Provide training and compensation for DHH mentors to work with DHH children and their families in school-based and home settings (Cawthon et al., 2016; Golos et al., 2018)
- Invest in sign-spoken language interpreter training and provision to open up education, employment, civic leadership, and other social and human resource opportunities and opportunities for advancement (Houston, 2018).
- Seek and appoint DHH leaders and educators to serve as advisors and representatives in decision-making bodies leading education planning (Shantie & Hoffmeister, 2000).
- Encourage community based participatory research on language accessibility in education to strengthen evidence based inclusive education design and programming (Goico, 2019; De Clerck & Paul, 2016).

To devise language-rich and intersectionality-informed policy, training, and operational guidance, policy-makers and educational planners benefit from consultation with DHH community members in their local settings. With these points in mind, education designers could advance a principled stance to ensure a range of language development resources for all DHH learners delivered in accordance with bilingual education frameworks with signed languages.

Conclusion

The approaches described in this chapter entreat us to closely examine and support the local structures that contribute to language-rich education experiences for DHH learners. Language and education policy that affirms the intersectional backgrounds of DHH learners in their home communities, and training for DHH adults for technical capacities in education settings, is vital to inclusive education. Current education design and initiatives can benefit from applying the lessons learned from worldwide DHH communities, from definitions of inclusion developed from pedagogical innovations in bilingual education with sign languages, and from mobilizing human and technical resources used in local settings in new ways. In considering who is left behind, who has access to school, and what inclusion means in practical terms, leadership and innovation by local actors demonstrates that there are multiple pathways to language-rich quality education.

Acknowledgments

The authors are grateful to colleagues and communities that shared experiences and perspectives that contributed to our thinking on this chapter, including country delegates at the 2019 World Federation of the Deaf conference in Paris, France, and external reviewers Josh Josa, Kristin Snoddon, and Amanda Taylor who provided feedback at a critical juncture in our writing.

Notes

1 Throughout this paper we use lowercase 'd' as an inclusive term for all deaf people (and not "d/D"). The descriptor "d/D" was a convention developed by academics to differentiate non-culturally identified versus deaf cultural group members, which is now critiqued as promoting essentialism (Ruiz-Williams et al., 2015).
2 Several identities within deaf communities are not discussed, particularly deafblind and deafdisabled learners in education settings, who face similar challenges discussed, yet remain underrepresented in research. Further research is needed for a better understanding of deafblind and deafdisabled learners' experiences. (Kamenopoulou 2012).

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