Signed languages, interpreting, and the Deaf Community in Ghana and West Africa

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YAW OFFEI AND ELISA MARONEY

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1. Introduction: Signed languages, interpreting, and the Deaf Community in Ghana

YAW OFFEI AND ELISA MARONEY

Introduction

Ghana is a country in West Africa and home to about 30 million people. In Ghana the goal of inclusive and quality education for all is very high on the Government's reform agenda and a recognized area of need (Swanwick et al., 2021). There is a developing infrastructure for coordinated education and health services for deaf and other people with disabilities. Indeed, Ghana has a developing sign language, Ghanaian Sign Language (GhSL) and, at least two indigenous signed languages, Adamorobe Sign Language and Nanabin Sign Language (Hadjah, 2016; Nyst, 2010). There is an active association of the deaf, Ghana National Association of the Deaf (GNAD), that campaigns to reduce the social isolation and marginalization of deaf people. However, the early support of young deaf children and their caregivers is an unmet need. Again, in Ghana diagnosis of childhood deafness is typically late since statistics suggest that about 20% of children living with significant auditory problems are not identified until after their fifth birthday (Swanwick et al., 2021). Though there are laws in place in Ghana, such as the Constitution of the Republic of Ghana, Act 527, 1992, and the Persons with Disability Act, Act 715, 2006, indicating that all individuals should have access to all public and social amenities, access to public information to individuals who are D/deaf has been minimal due to the lack of adequate services, such as professional interpreters and note-takers.

With approximately 20 schools for the deaf (both public and private), there is an enormous potential for graduates of these schools to attend university and, subsequently, serve the nation in immeasurable capacities. Most of these students have reduced prospects of ever having the opportunity to get a professional career. However, those who are able to attend university with professional interpreters facilitating communication, may return to the schools for the deaf to teach, counsel, and mentor children as those children progress through school and transition into adulthood.

Additionally, these individuals have the potential to pursue any of the careers or jobs that are available to anyone from medicine to law to creative arts. The potential to affect access for Deaf people throughout West Africa is therefore profound. Providing interpretation services ensures that Deaf people can access their human rights per the United Nations Convention on the Rights of Persons with Disabilities.

The objectives for this volume are to:

- Describe the Ghanaian Deaf Community
- Illustrate the need for services for Ghanaians who are d/Deaf or hard-of-hearing
- Begin documentation of linguistic information about Ghanaian signed languages
- Explain services already being provided

The academic contributions in this volume address the following topics:

- The Deaf Community in Ghana as Technology Adopters
- Linguistics of signed languages used in Ghana and other parts of West Africa
- Deaf education in Ghana
- Interpreting in Ghana
- The Deaf Community in Ghana
- Ghana National Association of the Deaf (GNAD)

In the chapter written by Adeoye, the relationship between technology and members of the Deaf community as early adopters is explored. Adeoye also provides technological tools that may be helpful for individuals who are d/Deaf and

hard of hearing. Additionally, Adoeye has discussed extensively, how integrating technology that supports mediated visual learning tools could help d/Deaf and hard of hearing learners develop social skills and achieve higher education.

In the chapter by Asonye and Edward, the authors compare and contrast Rev. Dr. Andrew Foster's influence on education in Ghana and Nigeria. They advocate for the use, maintenance, and preservation of indigenous signed languages in the respective countries. The authors also argue for the creation of an enabling environment for Deaf education and signed language use and the introduction of national policies that support signed language use in Ghana and Nigeria. They recommend setting up additional inclusive schools to augment the efforts of current schools for the deaf which are not adequate in terms of meeting the educational needs of deaf and hard of hearing people in Ghana and Nigeria.

In the chapter by Edward and Akanlig-Pare, the authors provide a case study of Deaf people in Ghana who use Adamorobe Sign Language (AdaSL). This case study includes a description of the "Adamorobean" context and the influence Ghanaian Sign Language (GSL) and GSL users are having on AdaSL and its users. The authors report on findings from a study in which eleven Deaf "Adamorobeans" participated in semi-structured interviews.

In the chapter by Fobi and Doku, the Ghana National Association of the Deaf is described. The authors include both practical and historical information. This chapter is descriptive.

In the chapter by Fobi, Fobi, Appau, and Oppong, the authors describe the state of interpreting in Ghana. They discuss the preparation interpreters may have undertaken, the settings where they work, and remuneration for services. They mention the development of signed languages in Ghana, as well as how deaf and hard of hearing children are educated. Though there has been little to no research on what paradigm Ghanaian interpreters use to approach their work, these authors also describe the paradigms an interpreter may use to approach their work; these include the "Helper," "Conduit," "Communication Facilitator," and "Bi-cultural/Bilingual."

The editors and authors of this volume have approached the topic from a cultural and linguistic perspective rather than a pathological/medical perspective. Words such as "deaf," "Deaf," "D/deaf," "hard of hearing" are used rather than "hearing impairment." We also attempt to use "people first" language. Rather than "the Deaf," we will use phrases, such as "members of the Deaf community" or "people who are D/deaf and hard of hearing." When discussing children, the use of "deaf and hard of hearing" will be used, because most children do not yet identify as members of the Deaf community. "People first" also applies to other labels, such as "people with disabilities" rather than "the disabled." When referring to Deaf people, rather than "the Deaf," the terms used include "Deaf people," "Deaf individuals," "Deaf Community," and "members of the Deaf community."

When referring to signed language, in general, the term "signed language" is used rather than "sign language." The term "signed language" parallels the similar structure for "spoken language." When referring to a specific signed language, such as "Ghanaian Sign Language," the name as it appears conventionally is used.

Throughout this volume, the terms "Deaf," "deaf," "D/deaf," and "hearing" are used.

- The term "Deaf" is used to refer to the sociological and cultural aspects of living in a world that is primarily composed of people who can hear. The term "Deaf" is used to include those individuals who do identify as sociologically and culturally Deaf.
- The term "deaf" is used to refer to the physical aspects of the ear and its mechanisms.
- The term "deaf" is also applied to those individuals who consider themselves to be audiologically deaf and identify more with the hearing world.
- The term "hearing" is used to refer to members of the dominant community who function in a world that relies upon auditory input and spoken languages.
- "D/deaf and hard of hearing" is used as an inclusive term.

To any reader who feels excluded by the use of these terms, we offer our sincere apology and welcome their input on ways to be more inclusive.

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2. The Deaf Community in Ghana as Technology Adopters

BLESSING F. ADEOYE

Abstract

In a world that is predominantly hearing, deaf is considered a severe disability that can impose a substantial social and economic burden on individuals, families, communities and countries. There are a growing number of technological tools that are developed primarily for the needs of deaf people. These tools include technology that is geared toward education, recreation, communication, safety, and improving quality of life. In this chapter, the focus is on a review of the literature for which the primary library databases used for the search of materials were Google Scholar and ProQuest. The literature on the Deaf community in Ghana was in general scarce and access to full articles was limited. This chapter covers factors affecting the use of technology as communication tools, challenges faced by members of the Deaf community in utilizing technology and concludes with some technology tools for communicating with and learning by Deaf people in West Africa and most importantly in Ghana.

Introduction

About 10% of Ghana's population is comprised of Persons with Disabilities of whom more than 260,000 are Deaf or hard-of-hearing (DHH) (Joshua Project, 2018). In a world that is predominantly comprised of hearing individuals, hearing loss is considered a severe disability that can impose a substantial social and economic burden on individuals, families, communities and countries. There are a growing number of technological tools that are developed primarily for the needs of deaf people. These tools include technologies that are geared toward education, recreation, communication, safety, and improving quality of life. In schools, there are systems that convert spoken words into real-time text that displayed to students to read on their computers or on a screen presented to the class. Also, these systems provide a printout or text file of the lecture. In this chapter, the focus is on a review of the literature. The primary library databases used for the search of materials were Google Scholar and ProQuest. The literature on the Deaf community in Ghana was in general scarce and access to some full articles was limited. This chapter covers factors affecting the use of technology as communication tools, challenges faced by members of the Deaf Community in utilizing technology and concludes with technology tools for communicating with and learning by Deaf people in West Africa; most importantly in Ghana.

Factors Affecting the Use of Technology as Communication Tools by Deaf People

Previous research has resulted in a long, almost exhaustive, list of issues concerning the uses of technology by members of the Deaf Community in the Western world (Keating, & Mirus, 2003; Singleton, Remillard, Mitzner, & Rogers, 2018). However, these issues are often examined in isolation of each other or relevancy to all Deaf people. Rarely are they studied together under a framework to sort out the relevant importance of these factors to Deaf people globally. Moreover, there seems to be no framework in the existing literature that captures the dynamic nature of the technology adoption process for members of the Deaf Community. In the quest to look for factors that affect technology uses, general factors such as accessibility, communication, education, and learning are considered in this review. It is essential to understand how the factors dynamically interact with each other and the use of technology.

Accessibility

People who are living with disability face various technology accessibility challenges. According to Maiorana-Basas and Pagliaro (2014), as society becomes more reliant upon technology, information about, preference for, and accessibility of frequently used devices and services among individuals who are Deaf and hard of hearing is critical. Developing functional and appropriate access to technologies allows people who are Deaf and hard of hearing to fully participate in society, education, and business, and provides opportunities for advancement. The authors add that

although a few international studies have addressed the technology use of individuals who are Deaf and hard of hearing, none focus on the needs, preferences, and accessibility of current Internet- and mobile-based technologies. Maiorana-Basas and Pagliaro conducted a national survey was in the United States to determine the preference, frequency of use, and accessibility of various technologies (hardware, software, Web sites) by adults who are Deaf and hard of hearing and living in the United States. Findings indicate frequent use of smartphones and personal computers, specifically for text-based communication and web surfing, and little use of teletypewriter/telecommunications device for the Deaf. Web site feature preferences include pictures and text, and captions over signed translations.

In developing countries such as Ghana, many of the emerging technology tools are not available; those that are available are not affordable by most of the Deaf individuals. According to the National Commission on Tertiary Education (2006), there is a general problem of access to public tertiary education in Ghana. Available statistics from 1996-2001 shows that only 32% of the qualified applicants were admitted into the universities, and 54% of qualified applicants were admitted to the polytechnics. In the 2005/2006 academic year, 55% of qualified applicants were admitted into all the public universities while in the polytechnics it was 78%. Although data is not available for the applicants who are deaf, it can be suggested based on this data that deaf applicants also experienced lack of access to tertiary education (National Commission on Tertiary Education, 2006).

Communication

Communication may be defined as a process where information is transferred from one source to another. This definition is applicable to transferring information between Deaf and hearing individuals. Effective communication requires time, energy, focus, and commitment. In this digital age, technology has enhanced effective communication and it has transformed all aspects of life and made a significant impact on the lives of Deaf and hard of hearing individuals, as well. The most significant challenge for members of the Deaf Community is communication, which affects how well they can interact with their hearing counterparts in society.

Summet (2010) investigated the role that communication technologies played in the lives of many deaf individuals and examined how technology devices have affected their communication patterns and social circles. Specifically, the teens in the study identified problems communicating with hearing individuals such as close friends and family in face-to-face situations. Having identified sign language use at home as one of the earliest interventions for Deaf children, Summet (2010) investigated the use of mobile phones for learning survival-level through American Sign Language (ASL). A prototype software application, which presented short ASL lessons via either a mobile phone or desktop web-browser, was created. The software presented the lessons via one of two different scheduling methods designed to take advantage of the spacing effect during learning. Summet designed and conducted a study of forty individuals with no prior ASL knowledge, which compared the effects of both scheduling algorithm and platform. The results show that individuals who used a mobile phone platform and received a group of lessons at one time performed better on post-test receptive and generative ASL metrics than did participants in the three other conditions.

According to Fredua (2007), when a Deaf or hard of hearing person walks into a bank or other service providers in Ghana, he/she often finds it difficult accessing most of their services. They are also left helpless when they visit the hospitals, police stations, and courts of law (Fredua, 2007). They are also helpless in other places such schools, marketplace and even at church. Communicating within a hearing world is one of the most difficult challenges Deaf and hard of hearing Ghanaians face. For instance, a signed language is an effective means of communication when another person is present, but communicating over the phone from home has been difficult; besides, many people could not afford to buy telephones (A. Torgah, personal communication, June 19, 2018). Some deaf people use teletypewriters (TTYs) to speak with other people over the phone. The use of a telephone allows them to type a message to someone else who had a TTY device. However, it is still limited to communicate with those who did not have the devices.

In communication, a lot of modern technology is ideally suited for the deaf community. Texting and instant messaging are examples of technologies that provide the opportunity to communicate whether people are Deaf, hard or hearing, or hearing, and these technologies do not require the use of signed language. They do, however, require some ability to read and write.

Education

Hearing loss may significantly impact learning in a society that relies on auditory input rather than visual input, which makes deaf education an area that greatly benefits from the use of technology, which offers visual access. Most teachers of Ghana's deaf and hard of hearing children are hearing, so they do not know nor understand signed language (A. Torgah, personal communication, June 19, 2018). Like hearing parents, these educators cannot transmit cultural values and beliefs to deaf and hard of hearing children. On average, deaf and hard of hearing children who have hearing parents enter school with only a 30 to 100-word vocabulary and have never understood the nuances of communication (A. Torgah, personal communication, June 19, 2018). Consequently, he/she has an extremely difficult time learning to read and write (A. Torgah, personal communication, June 19, 2018).

Technology seems to be a solution for communicating with deaf and hard of hearing children and members of the Deaf community. There is a growing number of technological tools that are made especially for accommodating the needs of D/deaf and hard of hearing children and adults. These tools include technology that is geared toward education, communication, and improving the quality of life. One way to support D/deaf and hard of hearing individuals is to provide assistive technology tools.

<div align="center">

Learning

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Learning with technology, whether using a math app, language, a video how-to, or a wiki, opens a new world of discovery for learners. Emerging technology tools have opened doors for learning through games. There are a lot of gaming media that bring fun and relaxation to the deaf community. (See gaming media for the Deaf in Table 1.)

Table 1

Web Sites for Gamers (Educational Games) who are Deaf or Hard of Hearing

Site	Comments
GameCritics	A place to go for reviews of deaf accessible mainstream and indie games.
The Game Accessibility Project	The Game Accessibility project was established to inform gamers with disabilities about the availability of games that are accessible and to provide resources for developers, publishers and researchers to stimulate accessibility in games.
D.A.G.E.R.S	The leading game journalism site for gamers with disabilities, featuring game reviews and perspectives on video game accessibility.
Her Interactive	This site offers "high quality, fun and inspiring games for girls of all ages."
One Odd Gamer Girl	Reviews are provided with a focus on deaf and hard of hearing accessibility. The author of this site is deaf.
7-128 Software	The games entertain with stories, puzzles, and word challenges that are fun for and accessible to every casual gamer. The site has games for adults and children, even very young children.
AbleGamers **Unstoppable Gamer Includification**	These sites offer resources for accessible gaming. They are excellent sources of information about games that are accessible to gamers who are deaf. There are sections that focus on accessibility related to the ability to hear. The aim is to "improve the overall quality of life for those with disabilities through the power of video games."
Game Accessibility Guidelines	This site is an information resource for developers and gamers. A collaborative effort between a group of studios, specialists and academics, to produce a straightforward developer friendly reference for ways to avoid unnecessarily excluding players and ensure that games are just as fun for as wide a range of people as possible.
Valve	This developer has produced twelve Commercial, subtitled games that are accessible to D/deaf and hard of hearing gamers.
AbilityPowered	Provides a lot of educational games.
The Geeky Gimp	This computer game specifically addresses accessibility related to audio issues. The author of this site is a person with motion disability.

Ergohacks	Provides product with an emphasis on usability, including accessible computer games.
igda-gasig	
Game accessibility blogspot	Provides educational game software
Language Rocks	Commercial children's educational games. The games are all deaf-accessible (non-auditory).
Universal Access Games	Commercial deaf accessible (CC) educational game for children.
Ouch!	Commercial deaf accessible (CC) educational game for children.
GameBase **SpecialEffect**	These sites have a focus on disabilities related to motion. GameBase also includes a collection of 100 games designed to provide access for D/deaf and hard of hearing users.

This table from, Simply Entertainment, is included on the basis of fair use.

Challenges faced by the Deaf in utilizing technology

D/deaf people face numerous challenges when it comes to the use of technology. Some of the challenges include parents' attitudes, poverty, educational level, and attitudes towards technology acceptance.

Parents Attitudes

Hearing loss is considered a serious disability that can impose a substantial social and economic burden on individuals, families, communities, and countries. According to the Joshua Project (2018), hearing parents in Ghana may consider their deaf child to be a curse because of sin. The attitudes of some parents cause them to devalue their deaf child. Deaf children often learn values, morals, and social behaviors from other deaf children, television, or movies. Deaf children may experience delays in speech development, language, and cognitive skills. They may experience frustration with hearing people, including parents, siblings, teachers, classmates, and pastors. This frustration may be indicated by sentiments like the following, "If you really valued (loved) me, you could learn to Sign, but I cannot learn to hear!" (Joshua Project, 2018). Similar attitudes are found in other parts of the word. For example, according to Guimarães, Antunes, García, Peres, and Fernandes (2012), in Brazil, approximately 90% of deaf and hard of hearing children are born into hearing families. These children experience prejudice in social situations and in their own families. They have little opportunity of being exposed to signed language, the natural language of D/deaf and hard of hearing people, which may deprive them of adequate language acquisition and intellectual development. Libras, Brazilian Sign Language, is the linguistic system used by D/deaf and hard of hearing Brazilians for communication, education, social inclusion, citizenship exercise, among others. Guimarães et al. (2012) presented a Human-Computer Interaction

(HCI) conceptual meta-environment framework to construct Intellectual computational artifacts in signed language to promote bilingualism (Libras/Portuguese) via Intellectual Interactions (i.e., computer-mediated systems based on cognitive theories for mind development). A storytelling environment illustrates its use to increase family bonding activities and effective bilingualism for Deaf children and non-Deaf parents.

Poverty

In adulthood, hearing loss can make obtaining, performing, and keeping employment difficult. Eighty percent of deaf and hard of hearing people live in low- to middle-income communities. Many either depend on their family for support or may choose less reputable activities for survival (Joshua Project, 2014).

Adoption and Acceptance of Technology

Technology has potential for supporting deaf individuals; however, they experience some challenges in using technology. The deaf community in Ghana as technology adopters was examined through consideration of Technology Acceptance Model (TAM). Researchers have argued that the inclusion of technologies in teaching and learning should be preceded by users' acceptance of technology. Without this acceptance, these technologies will be abandoned or underutilized when provide to the school system (Mugo, Njagi, Chemwei, Motanya, 2017).

Mugo et al. (2017) investigated how TAM was used in predicting acceptance and utilization of various types of technology in teaching and learning. They argued that TAM could be adopted in the development and utilization of mobile technologies for teaching and learning. In their study, documents stored electronically were analyzed for access through the Internet, textbooks, archival repositories, and an encyclopedia. Their study revealed that even with attitudinal and technical challenges, mobile technologies are acceptable as resources for pedagogical practices.

The acceptance and adopter of technology in all aspects of life have been widely interrogated in the literature (Saga & Zmud (1993) in Kurnia et al. 2005). There are several frameworks that are relevant to the theme of this chapter such as the Diffusion of Innovation Model by Rogers, Technology Acceptance Model (TAM) (Davis, 1989) and the Theory of Reasoned Action (TRA) (Aizen & Eishbein, 1980). The most relevant model used as a guide in this review is the Technology Acceptance Model (TAM) by Davis. TAM suggests that users presented with new technology consider several factors when making decisions about how and when they will use it.

Technology acceptance model aims at studying how individual perceptions affect the intentions to use information technology as well as the actual usage. Saga and Zmud (1993) in Kurnia et al. (2005) indicated that amongst other models, TAM has been influential and widely adopted for predicting acceptance and use of learning technologies, because the model has a theoretical basis and empirical support. It was designed to show how users accept and use technology. According to Saga and Zmud (1993) in Kurnia et al. (2005), when users are presented with a new technology, they consider three factors when making their decision about how and when they will use it. Those factors are perceived usefulness (PU), perceived ease of use (PEOU), and the attitude towards usage (ATU). These three factors influence user's decision on how and when they will use technology: Perceived usefulness (PU), Perceived ease of use (PEOU) and User attitude towards usage (ATU).

Perceived usefulness (PU)

According to Davis (1989) perceived usefulness (PU) is the degree to which users believe the use of a system will enhance their job performance. In the deaf community in Ghana, members believe that they can benefit from the use of technology. However, the efforts to utilize advanced technologies in Ghana are often prevented by a much older infrastructure including technologies such as the phone system and the electric grid (Zachary, 2002).

Pioneers of the personal computer in the 1990's saw mobile phones and the Internet as an opportunity to for people in Africa to circumvent what could normally take decades of conventional development (Zachary, 2002). The large vibrant signing Deaf communities in Kumasi and Accra, as well as the smaller communities of GSL users throughout Ghana, are seeking alternative technologies for communication (A. Torgah, personal communication, June 19, 2018).

Perceived ease of use (PEOU)

According to Davis (1989), perceived ease-of-use (PEOU) is the degree to which users believe the use of technology would be effortless. In other words, it is the degree to which consumers perceive technology as better than its substitutes. Chen et al. (2011) indicated that the argument that perceived usefulness (PU) and perceived ease of use (PEOU) positively affects the attitudes toward usage (ATU) of a technology. Most Ghanaian deaf read at a 3rd-grade level or below; many do not read at all (People and Language Profile, 2013) and the literacy level has contributed to their inability to embrace technology.

User attitude towards usage (ATU)

Singleton, Remillard, Mitzner, and Rogers (2018) explored technology use among 109 older Deaf adults. They investigated attitudes, adoption style, and frequency of use for assistive technologies for persons with hearing loss and other general technologies. They found that older Deaf adults were technology adopters and regularly use and feel comfortable with a variety of devices. However, they also identified several technologies that are not being used, including assistive technologies that have obsolete sound-based alert technology.

Not everyone in the Deaf community is accepting or open to technology to bridge the gap between individuals who are hearing and those who are Deaf or hard of hearing. There are at least two groups within the community with differing opinions. Some people refer to themselves as deaf with a lower case "d," and others refer to themselves as Deaf with a capital "D" (Deaf website.com, 2005-2013). For deaf individuals, technology is perceived positively, while Deaf individuals may take pride in traditional forms of communication amongst deaf people (i.e., signed language) and may limit their use of technology as a way of communicating.

Assistive Technology

There are many resources that individuals that are challenged with hearing disabilities could tap into. Because being Deaf or hard of hearing prevents people from being aware of many of the auditory aspects that hearing people take for granted, much of the technology that is available is of an assistive nature. Some of the assistive technology commonly used by members of the Deaf Community is presented in Table 1. Assistive technology can help D/deaf and hard of hearing students learn more effectively. Technologies range in sophistication from "low" (e.g., a graphic organizer worksheet) to "high" (e.g., cutting-edge software and smartphone apps). Assistive technologies are growing and dynamic tools.

Many of the assistive technology commonly used by D/deaf and hard of hearing people are presented below:

Assistive Technologies for the Deaf

FM Systems – According to the American Speech-Language-Hearing Association (ASHA), FM systems may be the best choice for some children who experience sensorineural hearing loss, which is the most common type of hearing loss experienced by people of all ages. Sensorineural hearing loss occurs when the inner ear or nerve pathways from the inner ear to the brain are damaged. Radio broadcast technology is used to make FM systems function. Using transmitter microphones and receivers, teachers and students are able to maintain consistent sound levels regardless of distance and background noise. ASHA also notes that hearing aid microphones may be turned off to allow students to concentrate on the teacher alone (Neese, 2015).

Assistive Learning System – Assistive technology can help students who are deaf or hard of hearing and those with other auditory and learning problems. Neese (2015) writes that according to the National Association for the Deaf, assistive listening systems can improve the reach and effectiveness of hearing aids and cochlear implants. Such systems use microphones and transmission technology for capturing and bringing sound to the ear. The specific technology used in a system is typically differentiates one type of assistive listening technology from another.

Technology as Tools for Communication

Advances in technology can improve quality of life for individuals who are D/deaf or hard of hearing. The following are technologies that would enhance hearing for the Deaf individuals (Szczerba, 2015).

MotionSavvy UNI – This technology was found by a team of students from Rochester Institute of Technology's National Technical Institute for the Deaf. This two-way communication software translates American Sign Language (ASL) into speech, and speech into text utilizing a special camera that tracks the location of the hands and fingers.

Live feedback is provided through graphic representations of the hands ensuring gestures are captured accurately. The software's dictionary is customizable signs and an option is available to upload additional signs to the Internet to share with others. The more an individual uses the system, the more accurate and tailored it becomes. The package also includes voice recognition software called Dragon Nuance Pro (Szczerba, 2015).

ISEEWHATYOUSAY – ISEEWHATYOUSAY This smartphone app captures spoken language, converts it to text, and is then able to send the text through Bluetooth to the device of a remote user. It offers a specialized receiving device about the size of a flash stick, and apps to receive the text on smartphones and wearables.

Hayleigh's Cherished Charms: Sometimes a low-tech innovation can have as big an impact as their high-tech counterparts. A ten year old girl named Hayleigh noticed that many of her deaf and hard of hearing classmates hid their hearing aids behind their hair. She said that she wanted to make her hearing aids shine and be fancy, so that she could take pride in wearing them. She started designing jewelry that can best be described as "hearing aid bling."

This image from http://www.hayleighscherishedcharms.com is included on the basis of fair use.

Technological Advances and their Effect on Deaf Culture

Technological advances, such as telephones, TTYs, hearing aids, FM systems, and Cochlear implants impact opportunities and sometimes challenge the culture of Deaf and hard of hearing people. To understand the impact technology has had on D/deaf and hard of hearing users, an in-depth review of some of the most significant technological inventions is needed. One of the first notable inventions affecting users who are D/deaf and hard of hearing was the telephone, which was patented by Alexander Graham Bell in 1876 (Lee, 2012). Over the next 100 years, individuals who are D/deaf or hard of hearing experienced many challenges. For example, at work, communications began to occur primarily through telephone operations, resulting in fewer positions for D/deaf employees because they were unable to perform tasks associated with the telephone. In 1964, the teletypewriter, or TTY, offered both mobility and accessibility to individuals who were Deaf or hard of hearing (Bacon, 2005). The development of the TTY by Weitbrecht, Masters, and Saks radically improved the quality of life for members of the Deaf Community by improving access for both Deaf and hearing communities in areas of socializing, emergency situations, and employment (Bowe, 2002). Bowe also indicated that while the TTY was able to improve communication in its time, more recent advances in cellular phones with texting capabilities, have made devices like the TTY obsolete (Bowe, 2002).

The development of the Internet and video streaming has allowed D/deaf, hard of hearing, and hearings users of signed languages to communicate across space and time zones. Exploration of the development and manipulation of computer-mediated images, new participation frameworks, and specifics of language change in digital communicative spaces are underway (Keating & Mirus, 2003).

Methods and Technologies Geared Towards Deaf Communication

Information on the methods and technologies geared towards Deaf communication are found in many places on the Internet; especially at Deaf website.com. "Assistech," a company based in Farmingdale, New York, provides assistive technologies for people with many differing abilities. Individuals who might benefit from Assistech include people who are d/Deaf, hard of hearing, or blind, as well as those who experience mobility/dexterity issues, memory loss, and cognitive disorders. TeachThought Staff (2019) also presented assistive technology tools geared towards D/deaf communication. Some of the technologies are presented below.

Telecommunications Device for the Deaf (TDD) – The TDD is an electronic device for text communication through a telephone line. The TDD is a device that is about the size of a small laptop computer. This device has a standard keyboard and a small screen where text is displayed electronically. TDDs may have a small spool of paper on which text is printed. The text is transmitted in real time over a telephone line to a compatible device. In some countries where there are Telecommunications Relay Services, D/deaf people can communicate with a hearing person who is using a voice telephone through a human relay operator. "Carry-over" services enable people who can hear but not speak ("hearing carry-over") or people who are unable to hear but are able to speak ("voice carry-over") to use the telephone with assistance from a relay operator (Deaf website.com, 2005-2013).

Captioned Telephones – A captioned telephone is a telephone that displays real-time captions of a conversation so that an oral deaf person or a person who become deaf later in life is able to make phone calls. Captions are displayed on a screen embedded in the base of the telephone. Some captioned telephones can function like voice carry-over (VCO) by switching the device to VCO mode. This allows for communication with an hearing carry-over users or hearing users directly and without relay (Deaf website.com, 2005-2013).

Video Conferencing – Anyone who prefers to make telephone calls using sign language and the Internet can use IP Video Relay Service (IP-VRS). Using a Video Interpreter and web camera one can communicate with voice telephone users in a preferred language, which is most natural to use. Video Interpreters may have professional training and/or certification.

IP Relay Quick Connect – This is the fastest and easiest way to place calls from a cell phone or over the Internet. One can connect instantly from a computer, make multiple calls, choose between split and single screen view, and print and save conversations. Calls are free in some countries. Calls may be placed with IP Relay through instant messaging.

T-Mobile Sidekick – The Sidekick is a text-based communications mobile device. Sidekicks also access email and have a full QWERTY keyboard. This device provided a telecommunications tool for use both inside and outside the home for members of the deaf community. The Sidekick and similar devices have often replaced the use of the TTY/TDD machines.

Other Communication Methods that may be Used by Individuals who are Deaf and Hard of Hearing as listed at Assistech (2019)

Real-Time Captioning – "Real-time captioning" provides communication between people who are hearing and those who are Deaf or hard of hearing. A transcriber types the speaker's words typically using a laptop computer. Once typed, the words appear in text on a screen, so the Deaf or hard of hearing person can follow what the speaker is saying in written form. This service is useful for people who can read and understand a written language (Assistech, 2019).

Pen and Paper – When other methods are not readily available, note-taking (or similar variants) have been the most popular option for communicating with individuals who are Deaf or hard of hearing. Most businesses can successfully communicate short and simple conversations with customers who are Deaf or hard of hearing by using gestures and notes (Assistech, 2019).

Conclusion

Integrating technology that supports mediated visual learning tools will help Deaf and hard of hearing learners to develop social skills and achieve the higher education that will give them the tools they need to enhance and enrich their lives. The use of technology for visual learning helps break through the barriers of isolation that affect both hearing and Deaf and hard of hearing students and brings education closer to achieving a Universal Design for Learning that reaches

a broad range of students. School leaders, teachers and most importantly, pre-service teachers should be groomed to appreciate the adoption of technology for the better and positive advancement of education in Ghana.

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3. Deaf Education and signed language situation in Ghana and Nigeria

Six Decades after Andrew Foster

EMMA ASONYE AND MARY EDWARD

Abstract

Education for Deaf people in Ghana and Nigeria were pioneered by the late Dr Andrew Foster, an African-American Deaf graduate of Gallaudet University in the late 1950's. Beginning in 1957 in Ghana, and its subsequent expansion to other African countries including Nigeria, Foster led the establishment of 31 schools for Deaf people in 13 African countries (Kiyaga & Moores, 2003). In this chapter, we discuss the current state of education for Deaf people in Ghana and Nigeria, signed language use, the documentation of indigenous signed language, and Deaf livelihoods. We argue that creating an enabling environment for Deaf education, introducing national policies and laws that support Deaf education and signed language use will improve the standards for Deaf education in Ghana and Nigeria. Further, we suggest that signed language documentation and early detection of hearing loss will influence positive advancement of Deaf education and signed language in the countries.

Introduction

Deaf education in most African nations falls below the standard achieved in many developing countries (The Borgen Project, n.d.). Most Deaf students lag behind on the academic ladder as compared to their hearing counterparts. There are fewer provisions made by nations to recognize and improve education for Deaf people as compared to mainstream education. In Ghana for instance majority of Deaf students attend state boarding institutions from primary to senior high schools and therefore have few opportunities to interact and study in the same environment with their hearing counterparts. Research has reported that low performance of Deaf students and their inability to access higher education are caused by certain factors hinders the progress of Deaf education (Asonye, Emma-Asonye, & Edward, 2018; Magongwa, 2010; Ajavon, 2006). The failure of government and institutions to monitor and improve education for Deaf people begins from the initial rejection of signed language as a full-fledged human language.

The histories of most Deaf Communities in Africa were not recorded prior to the arrival of the colonial masters and the missionaries. There are myths and stories of Deaf people located in different communities that were accepted on varied levels; some were accepted and incorporated as members of the communities in which they dwelt, and others were just seen as slaves working for royalty and still others were just entertainers (Miles, 2004). In most recorded world histories about Deaf people and persons with physical and mental disabilities, there was the prevalence of regarding them as less human and as such not being able to contribute meaningfully to the growth and development of societies and nations (Lang, 2010; Plann, 1997).

The story of rejection and discrimination has been part of the lives of people with disabilities. Across the African continent, disability is marked with inability and people who suffer different forms of disabilities are rejected, scorned or seen as lesser human beings. Worldwide, hard of hearing is believed to affect several millions of the total world population (Stevens et al., 2011; Mathers, Smith & Concha, 2000). Across the globe, there is a very large number of people who experience from mild to severe hearing loss. The language of members of Deaf communities is signed language and the acceptability of signed language as full-fledged human language met opposition as educationists and policy makers met in Milan in 1880 to discuss the fate of education for Deaf individuals and signed language (Lane, 1984). After the Milan Conference, signed language use was banned, and most European Deaf institutions used speech to teach Deaf people (Vermeerbergen, 2006).

Whereas signed language use was halted in many European countries after the Milan Conference, Miles records that

Deaf people in several African nations occupied substantial positions and used signed languages for communication (Miles, 2004). For instance, Deaf people in Adamorobe in Ghana used signed language for communication as early as the 18th century (Okyere & Addo, 1994). In America, the education for Deaf individuals was done through signed language and the first school for Deaf people begun in the 19th century by Thomas Gallaudet and Laurent Clerc (Baynton, 1996). In the late 19th century, a group of reformers introduced oralism (or lip-reading) in American Deaf schools and this was carried through the 20th century (Baynton, 1996). In the late 1950s, Andrew Foster arrived in Ghana and this caused a change in educating Deaf peoples in many African nations through his efforts in establishing schools for Deaf people across several nations of Africa. Currently, signed languages are used in many nations of the world as the preferred language of instruction for Deaf students.

According to Kiyaga and Moores (2003), some Deaf people in Africa were hidden and seen as social misfits and cursed. In many societies, Deaf people have come together in organized groups and developed their own manual forms of communication (signed languages) and these manual forms were shared with other hearing members of the communities. These manual forms of communication were not documented and some of them have become extinct because the people that used such sign languages moved to different communities or have died. An example is the Martha's Vineyard signed language that was used in Massachusetts in America that is now extinct (Groce, 1989). There were also varied gestural resources that were used in Northern and Western Africa as documented by Miles (2004). One community-based signed language is the Adamorobe Sign Language (AdaSL) which is believed to have been the first recorded gestural communication in Sub-Saharan Africa (Miles, 2004; Okyere & Addo, 1994). This signed language is given a precise date of 1733 as the time it emerged, however, Okyere and Addo did not back their claim with substantial evidence. There is no document that also cites the official beginning of this signed language in Adamorobe, Ghana.

Education for Deaf persons was not prioritized, and most African governments did not have educational plans for people with disabilities prior to the 1950s Deaf education in sub-Saharan Africa began as "part of the European missionary movement of the 19th century" (Kiyaga & Moores, 2003, p. 19) and as such most Deaf people above 60 years in sub-Saharan Africa were not educated as in the case of Deaf adults in Adamorobe described in this volume (see Edward & Akanlig-Pare). Educating deaf and hard of hearing children in most parts of the world was tied to evangelizing. In colonial times, institutions were established to cater for Deaf education but were only accessible to the children of the rich and the powerful which was just a minute representation of Deaf people. Kiyaga and Moores (2003) were of the view that only few affluent African families in urban locations could afford to send their deaf and hard of hearing children to such schools and the majority of Africans lived in poor rural areas.

From all indications, after independence from colonial powers, most leaders of African nations did not prioritize education for Deaf people. Educating hearing people was considered proper and fit since they were perceived to be the ones who would contribute to the growth and development of the communities. This rejection was not just assigned to deaf or hard of hearing persons, people with disabilities were denied education and the few who could access education could not climb to higher educational levels. Deaf education in Africa has been contextualized in eradicating hearing loss, poverty reduction, prevention of rejection and stigmatization of deaf people, and the acceptance and integration of deaf people in societies (Asonye, et al. 2018; Edward, 2018a).

In Africa, the onset of Deaf education is mostly attributed to the missionary work of Rev. Dr. Andrew Foster, a Deaf African American (Kiyaga & Moores, 2003). Dr. Foster's missionary drive led him to explore many nations in Africa, teaching Deaf people the message of the gospel. He also established schools to teach signed language to the "languageless" Deaf people with whom he came into contact. The goal was to evangelize to Deaf people in a language they understand. However, this goal led him to the establishment of many Deaf schools across Africa. He introduced the concept of "total communication" in signed language "which embraced both American and indigenous signs" (Kiyaga & Moores, 2003, p. 18). As the first black graduate of the Gallaudet University, he desired to impact the continent of Africa with the knowledge he had acquired after he found out that Deaf education on the continent was below average (Gallaudet University, 2014). Dr. Foster's impact on education for Deaf Africans is seen in the legacy he left; 31 schools for Deaf people across Africa (Kiyaga & Moores, 2003). The first destination of Dr. Foster was Ghana, in West Africa where he established his first school in Osu (Accra) which was later moved to Mampong (Eastern Region). There are varied

opinions about the impact of Dr. Foster in Africa; yet, his impact has been positive because it was through his efforts that Deaf education became a priority to some African government.

The problems facing Deaf education in Africa are varied and include lack of trained teachers/personnel, lack of facilities, abandonment of students by some parents and guardians, and inadequate resources to fund institutions for Deaf people (see Ajavon, 2006). Though, signed languages across Africa have remained the languages of people who are deaf, these languages are hardly recognized in Africa as national languages. Currently, only four African countries have given legal recognition to their signed language as national languages (World Federation of the Deaf, 2016a).

Signed languages are however used at some official gatherings as the language for interpreting and for Deaf education. Language policy makers have ignored the need to include signed languages as part of the official languages of many nations of Africa. Deaf education in many African nations has not reached the level that allows deaf and hearing persons to compete for the same job opportunities.

In this chapter, we present information on Deaf education and signed language situation in Ghana and Nigeria focusing on the progress and the failures of Deaf education and signed language situation in Ghana and Nigeria after the initial work of Dr. Andrew Forster. Further, we argue for developmental changes that will improve Deaf education and signed languages used in these two nations. The rationale for documenting Deaf education and signed languages situation in both countries is to generate literature to compare the uniqueness and commonalities of progress and challenges both countries face for shared knowledge of experiences and to foster potential future cooperation of programs relating to Deaf education and signed languages situation among both countries. We adopted a qualitative and quantitative mixed method analysis of past and present published articles, books, video interviews and the authors own knowledge and experiences with Deaf education and signed language situations in Ghana and Nigeria.

Deaf Education in Ghana and Nigeria

Prior to the 1950's, there were no government recognized mode of Deaf education for Deaf people in Ghana and Nigeria. Indigenous African sign languages were hardly recognized and considered as natural languages. Foster started Deaf education by introducing a form of manual signed language and signed English originating from America which later became known as American Sign Language[1]. His approach embraced indigenous African and American signs (Kiyaga & Moores, 2003). Through the influence of Foster, Deaf education has been given recognition in Ghana and Nigeria and governments of both nations have taken over the schools he established. Most research on Deaf education (or special education) in Ghana and Nigeria focused on the history of Deaf education and the challenges faced by the students and the challenges of the educational system (Ajavon, 2006; Ametepee & Anastasiou, 2015; Avoke, 2001; Eleweke, 2002; Ajavon, 2003; Eleweke, Agboola & Guteng, 2015).

Presently Ghana has about 20 institutions (both private and public) that offer either deaf only or inclusive education and Nigeria has over 100 public and private schools that offer both deaf only and inclusive education (43 of which are in Lagos alone). The total population of Ghana is about 30 million[2] and an estimated 110,625 Deaf people in Ghana representing 0.4% of population. It is not yet clear the population of Deaf people in Nigeria because of lack of thorough documentation, but it has been suggested that Deaf people make up about 23. 75% of the country's population (Treat, 2016).

Despite the increased number of public and private schools, Deaf education in both countries remain one of the least developed on the African continent with minimal inclusive education for Deaf students at the basic level in Ghana and Nigeria. The emphasis for inclusive education in Ghana begun in 1994 (Ametepee & Anastasiou, 2015) but its implementation is still minimal. Additionally, in both countries, signed language is yet to receive legal recognition.

Andrew Foster arrived in Africa in 1957 during a time when Deaf education was unheard of in most of Sub-Saharan Africa. There were however 12 Deaf schools in North Africa and South Africa. The passion to establish Deaf education in Africa led Andrew Forster to start work as soon as he arrived. In 1957, he established the first Deaf school in Ghana in Osu, Accra. This school which was originally named Ghana Mission School for the Deaf started in one classroom that was borrowed from the Presbyterian Church. The Ghana Mission School for the Deaf was later moved to Mampong-Akuapem in the Eastern Region. In 1960, Andrew Forster arrived in Nigeria to teach deaf and hard of hearing children using signed language. Prior to his arrival in Nigeria, Deaf education was starting to gain strength by the efforts of some

indigenous special education trained individuals (Adelogbe, 1974; Eleweke, Agboola & Guteng, 2015), but the teaching method was oralism, as it was the case earlier in the Americas and Europe. Unlike Ghana which had no history of Deaf education prior to the arrival of Andrew Forster, indigenous Nigerians were already teaching Deaf students with speech.

Deaf education in Ghana

Dr. Andrew Foster established a total of 9 Deaf schools in Ghana (Kiyaga & Moores, 2003). Currently there are about 20 institutions that offer either Deaf only or inclusive education in Ghana. This number is made up of 17 public/private schools for the Deaf and two private inclusive Schools[3]. The language of Deaf education in all the institutions is GSL. Although there are at least one public basic institution for Deaf people in 16 [4] regions in Ghana, Deaf education has still not reached the desired target as many deaf and hard of hearing children in many rural locations in Ghana are either not educated or do not have access to Deaf institutions. We are of the view that there are not enough schools to serve all the cities and villages in Ghana. Those who are privileged to access education have difficulties competing with their hearing counterparts in the national examinations. The number of institutions serving the estimated 110,625 Deaf people in Ghana is small (GNAD, 2019).

Table 1

Deaf Schools in Ghana

Schools	Location	Deaf/Inclusive
1. Secondary Technical for the Deaf	Mampong, Akuapem	Deaf
2. Demonstration School for the Deaf	Mampong, Akuapem	Deaf
3. Tetteh-Ocloo State School for the Deaf	Accra, Adjei Kojo	Deaf
4. Ashanti School for The Deaf	Jamasi, Kumasi	Deaf
5. Savelugu School for the Deaf	Savelugu	Deaf
6. Koforidua School for the Deaf	Koforidua	Deaf
7. Bechem School for Deaf	Bechem	Deaf
8. Gbeogo School for the Deaf	Tongo	Deaf
9. Cape Coast School for the Deaf	Cape Coast	Deaf
10. Sekondi School for The Deaf	Inchaban	Deaf
11. Wa School for the Deaf	Wa	Deaf
12. Obuasi School for the Deaf	Koforidua	Deaf
13. Volta Region School for the Deaf	Hohoe	Deaf
14. Kibi school for the Deaf	Kibi	Deaf
15. House of Grace School for Deaf	Krokrobite, Accra	Deaf
16. Akatsi Demonstration School, Deaf Unit	Akatsi	Deaf
17. Salvation Army School for The Deaf	Agona Swedru	Deaf
18. Multikids Inclusive Academy	Accra	Inclusive
19. St. John's Integrated Senior High School	Navarongo	Inclusive

From our encounter with Deaf students across Ghana, one thing that stood out was the fact that most Deaf students could not access higher education. This was mainly attributed to the low performance of students and lack of interest in education. Some of the students had knowledge of the educational options available to them and others did not. We were also privileged to encounter very intelligent Deaf students with excellent track records from the basic school even to the University. Conversations with some of these students reveal that language is very critical to education. A Deaf graduate of a University in Ghana revealed that early access to language is very important to academic development among students. Signed language use in institutions that serve Deaf students is critical to their academic development.

Currently, Ghana does not have a recognized official signed language policy. In June 2006, Ghana passed the Persons with Disability Act, 2006 (Act 715) with the "hope that it will improve the life of persons with disability (PWDs) to enable them be part of mainstream society" (Asante & Sasu, 2015. p 62), but this has been a mirage as the act failed to account for the recognition of Ghanaian Sign Language as the official language for Deaf persons in Ghana. Although certain educational institutions have started teaching GSL as a subject to mainstream students (in Universities and Colleges), there is still more to be done as more Deaf students still face the challenge of joining mainstream schools without interpreters.

Again, access to education and inadequate facilities are some of the factors that have been reported to hinder Deaf education in Ghana. From our research, facilities at the Deaf institutions are inadequate to serve the numbers of students. There are usually over 30 students in one classroom and this makes it difficult for teacher-student relationships to thrive. In the age of technological advancement, most Deaf institutions in Ghana do not have computers and other basic items needed for teaching and learning. For instance, the Mampong Demonstration School for the Deaf (DEMODEAF) was reported by Citi News to be thriving on "benevolence of individuals and corporate institutions" (Citifmonline, 2016). From basic amenities to feeding grants, to uncompleted projects, DEMODEAF just like many other government institutions for Deaf students in Ghana have been neglected by government. Therefore, comparing the number of schools established by Andrew Forster alone (9) and the total numbers of institutions serving deaf and hard of hearing students (19) in Ghana, we are of the view that education for Deaf people has seen little improvement in over 50 years. We recommend more inclusive institutions to complement the numbers and also the training of more signed language interpreters to work in the inclusive education units in Ghana.

Deaf education in Nigeria

In this sub-section, we want to highlight some of the observations made in the course of our visits to Schools for the Deaf in Nigeria since 2014. After the era of Dr. Andrew Foster, the need for more Deaf schools in Nigeria continued to rise and the Federal Government continued to establish more schools across the country. To date, 119 Deaf schools have been documented by Save the Deaf and Endangered Languages Initiative (S-DELI) in an online directory[5] and more are yet to be documented. The reason for this large number of schools, we believe, is partly because of the Deaf population in the country, which has continuously been on the increase (Asonye, 2017b; Asonye, et al, 2018).

In addition to looking at signed language status in the country in general, our studies have been focused on signed language status and function in the education of deaf and hard of hearing children in the country. Signed language in Deaf education and acquisition planning is a key component of a nation's language planning and policy (Hult & Compton, 2012), while the use of indigenous [signed] languages as a medium of instruction in early childhood education has been an effective means of educating and developing the [deaf] child intellectually (Kioko, 2015). Yet, a critical look at the National Policy on Special Needs Education (NPSNE) shows that it has no provision for Indigenous Nigerian Sign Language (INSL) in Deaf education at any level of education (see NPSNE, 2015). Therefore, it comes as no surprise that the gross population of teachers teaching deaf and hard of hearing children are not fluent signers. Asonye (2017a) estimates the ratio of teachers in Deaf schools in Lagos with Special Education training to those without the training to be 1:10; the ratio of teachers who can sign to those that cannot sign (but teach Deaf students) to be 1:10. This is reported in the NPSNE (2015) as follows:

> It is the general-purpose teachers that seem to be dominating the field of Special Needs Education. Graduates of Special Education in Nigeria face the challenge of relevance on graduation because the curriculum in place is not skill-relevant after school life. (p. 4)

The non-signing teachers in Deaf schools are usually helped by the signing teachers who end up doubling as signed language interpreters. Thus, giving the signing teachers double work of teaching and interpreting at the same time. This tedious task reveals that the importance of signed language to Deaf education is hardly understood. Many teachers of deaf students and the Education Sign Language Interpreters we have met in the course of our research believe that the federal government, after Foster's time, "adopted" ASL as a language of instruction in Deaf schools, but ironically, the use of signed language for Deaf education is hardly mentioned in the National Policy on Special Needs Education, rather it is mentioned as part of the Total Communication method of teaching, which includes "aural, oral, lip reading, and sign

(sic) language interpretation" (NPSNE, 2015: 15). It is worth noting that the drafting of the NPSNE document included professionals from all other disciplines except linguistics.

Many have also referred to the "adopted" ASL[6] as Nigerian Sign Language. This "adopted" ASL is made up of the structure of written English with a mixture of basic ASL vocabulary and derived local signs. This is no different from what happens in some other West African countries where Andrew Foster established Deaf schools, including Ghana. Some researchers believe that GSL is largely made up of ASL vocabulary (Kusters, 2015).

Another aspect of Deaf education worthy of discussion in this chapter concerns the classroom. From what we know of the classroom setting for Deaf students, a typical classroom is set up in a way to provide maximum visual learning ability and less distraction (Trussell, 2008; Guardino & Antia, 2012). One of the ways in which this is made possible for deaf students is by having fewer students in a class (say between 6 and 12), enough to have a horseshoe or C-shape seating arrangement to enable a direct visual access to the teacher and the teaching tools. On the contrary, a typical classroom in Nigerian Deaf schools falls between 25 and 50 students per class, with some up to 100 students per classroom in a regular classroom format (Asonye, 2018; Asonye, Emma-Asonye & Okoro forthcoming). Table 2 below shows students' population in relation to teachers' population in five Deaf schools in Lagos in 2017.

Table 2

Showing Data from 5 Schools in Lagos Nigeria

S/N	School	Type	Students Population	Teachers Population				
			Deaf	Hearing	Other Disabilities	Deaf	Interpreting	Others
1.	School A	Mainstream/ Junior Sec	34	1888	–	2	1	5
2.	School B	Mainstream/ Junior Sec	30	1290	–	1	2	4
3.	School C	Mainstream/ Inclusive/ Secondary	32	–	2	1	3	–
4.	School D	Mainstream/ Inclusive/ Junior Sec	59	–	2	2	2	17
5.	School E	Mainstream/ Primary	32	206	–	1	1	–

Asonye, Emma-Asonye & Okoro (2017)

Table 2 represents a major desideratum of a key factor in Deaf education. From our surveys and outreaches, we realized that most Deaf students appear to struggle with learning and a great number have been diagnosed with eye defects during the free medical/community services organized by S-DELI in Deaf schools across the country. These eye problems and learning difficulties could have been triggered by the distance between the students and the teacher or interpreter, as studies have suggested that deaf people have higher risks of developing ophthalmic (visual) problems than their hearing counterparts (Abou-Elhamd, ElToukhy, & Al-Wadaani, 2014; Guy, Nicholson, Pannu, Holden, 2003; Ostadimoghaddam et al, 2015). It is possible that many students strain their eyes to watch the teacher or interpreter when the class size is too large, and the arrangement makes it difficult to see the teacher or interpreter without hindrance. The interpretation of the lessons from speech to signs could also cause some information to be missed.

Furthermore, Table 2 shows the extent Deaf students are possibly marginalized in mainstream and inclusive schools. The National Policy on Special Needs Education supports inclusive education system, the type of system that leaves Deaf students highly marginalized. This is obvious in the discrepancy of deaf-hearing students' population in Schools A,

B, and E (1:56, 1:43 and 1:6 respectively). A typical Deaf mainstream or inclusive school in Lagos and the Federal Capital Territory is like a regular hearing school with a Deaf unit or classroom (sometimes with students with other disabilities). The schools have an unarguable unequal distribution of students and teachers to the obvious disadvantage of the deaf students.

We found that the students with other disabilities including autism and intellectual disabilities share classes with the Deaf students. These students do not have any Individual Education Plan or specialists to attend to them, which is the right of such students in other countries, especially in the United States (Hult & Compton, 2012). In those mainstream or inclusive schools, Deaf students and students with other disabilities are identified with a different school uniform. We also observed, in many of the schools we visited, most Deaf units/classrooms were in dilapidated state.

Lack of parental involvement in the education of their deaf students seems to be another huge predicament we observed in Nigerian Deaf schools (Asonye, 2017a). In all the Deaf schools we have visited across the country, we have attempted to have a parents' sensitization forum. We understand that this lack of interest may not be peculiar to parents of deaf and hard of hearing children in Nigeria as a similar study by Martinez, Conroy and Cerreto (2012) reveal that parents in the United States complained of not being carried along adequately in the education policy of their children and young adults with disabilities. Reasons school staff often claim to be too busy to adequately attend to the individual concerns of Deaf students and their parents include the fact that school staff often decide the times and days for parents-teachers' meetings without considering parents' schedules. Ironically, many parents of Deaf students in the schools we have visited seem to be comfortable even though they are not involved in the education of their children.

Signed Languages in Ghana and Nigeria

Ghana and Nigeria are both former colonies of Great Britain and English is one of the official languages for both nations. One of the similarities between Ghana and Nigeria is multilingualism; with Ghana having between 45-80 languages (Bodomo, Anderson, & Dzahene-Quarshie, 2009) and Nigeria has over 500 identified spoken languages and dialects (Blench, 2012). Many of these languages are yet to be documented, not including the signed language varieties that exist, which are often mentioned with little or no details by researchers who have come across them. Again, both Ghana and Nigeria are multicultural nations and Deaf people are hardly recognized as a cultural or linguistic group. As a linguistic and cultural minority, Deaf people are regarded as people with special needs rather than a linguistic or cultural group. Currently, there are a few detailed linguistic research works on indigenous signed languages in Ghana and Nigeria (Asonye, 2016; Asonye et al., 2018; Edward, 2015a; Edward 2015b; Nyst, 2007).

Ghanaian Sign Language (GSL) and Nigerian Sign Language (NSL) are used in Ghana and Nigeria for educating Deaf people. In Ghana, both deaf and hearing users of the signed language refer to the signed language as GSL. On the other hand, in Nigeria it is not uncommon to see Deaf people and many other users of NSL refer to the signed language as American Sign Language (ASL). Both GSL and NSL are products of Andrew Foster's Deaf education in Ghana and Nigeria. Foster's approach to signed language education in the nations where he established schools was embracing both American and indigenous signs (Kiyaga & Moores, 2003). Although both GSL and NSL have been influenced by ASL in their emergence, we do not accept that GSL and NSL are dialects of ASL. These two signed languages have developed over time and have attained diverse unique statuses that distinguish them from ASL. Currently both GSL and NSL have not be given recognition as national languages. Along with GSL and NSL, there are several indigenous signed languages used in Ghana and Nigeria.

The signed language variety used in Nigerian Deaf schools, which we refer to as School Sign (see Asonye et al., 2018) could best be described as sharing common vocabulary with ASL but having the structure of English. The reason for this situation has been identified as partly because the School Sign is the sustained offshoot of the signing system introduced by Andrew Foster and partly because most hearing (signing) teachers of deaf and hard of hearing students are neither native signers nor were they trained in any of the indigenous Nigerian Sign Language variety (see Asonye, 2017). In addition, many Nigerian (deaf and hearing) signers use *simultaneous communication* as a preferred method of communication, thereby signing in English word order. *Simultaneous communication* is a method of communication involving signing and speaking simultaneously. In most cases, what is signed is the signed version of what is spoken, as many people think of signed language to be the signed rendition of English language (Schembri, 2010). This method

of communication commonly seen among Deaf individuals in Nigeria often poses a great challenge for researchers in studying and documenting Deaf signers because the syntax of the simultaneous communication is different from the syntax of the signed language used outside of school.

Ghana's Adamorobe Sign Language (AdaSL) is an indigenous village signed language that is used by both deaf and hearing signers in Adamorobe (Eastern Region). This signed language has been given detailed description by Nyst (2007) and Edward (2021). Other sociolinguistic and anthropological research include works by Kusters (2012, 2014), Edward (2018a; 2018b; 2015b) and Edward and Akanlig-pare (in this issue). Linguistically, AdaSL is unique and different from GSL and the other indigenous signed languages that are used in Ghana. Believed to have existed as early as the 18th century (Okyere & Addo, 1994), AdaSL origin is also tied to the presence of genetic deaf and hard of hearing in Adamorobe. Nanabin Sign Language (NanaSL) emerged in a Deaf family in Ekumfi in the Central Region of Ghana (Nyst, 2010). NanaSL is home signed language believed to be used by four generations of Deaf signers in Ekumfi. Nyst (2010) identified some similarities in AdaSL and NanaSL which are motivated by iconicity (form-meaning mapping between the linguistic sign and the referent). A recent discovery of another indigenous signed language in Nigeria has been made by Save the Deaf and Endangered Languages Initiative (S-DELI). Magajin Gari Sign Language (MGSL) used in Kaduna North is an indigenous signed language believed to have been used by the Deaf community in Magajingari. Research on MGSL is still ongoing and at the moment, we know that there are no young signers (Asonye & Akpan, forthcoming) and all deaf and hard of hearing children are currently using NSL which is the signed language for deaf education in Nigeria.

Blench and Warren (2003) have recorded a few words and discourse of Bura Sign Language, a village signed language used by a group of Deaf people in Northeast of Nigeria. However, the most detailed work on any indigenous Nigerian signed language variety was by Schmaling's (1997; 2000; 2003) on *Magana Hannu* (Hausa Sign Language). Schmaling studied the signed language variety used in the Deaf Community of Kano State, Nigeria. One of the most important aspects of her work is her description of how the indigenous Hausa Sign Language variety used in that community was dramatically being displaced by the Signed English after the establishment of Schools for the Deaf in Kano State. Native Deaf signers, most of whom were fluent in Magana Hannu, became bilingual after going to school. The younger Deaf individuals that learned signed language in school, without prior contact with the indigenous signed language signed only in English word order, while other Deaf individuals (young and old) with little or no formal education were only fluent in the Magana Hannu (Schmaling, 2003). This resulted into a kind of chaotic linguistic environment that must have affected other aspects of Deaf life in that community.

Indigenous Ghanaian signed languages like AdaSL and MGSL face endangerment as many of the young signers are gradually shifting into the urban signed languages, which are considered prestigious because of its association with education (Asonye et al, 2020, Asonye & Akpan forthcoming; Edward, 2018a; 2018b; 2015b; Nyst, 2007). Educated Deaf Ghanaian signers from rural communities with village or home signed languages are met with pressure from teachers and other deaf or hard of hearing children at the educational settings to level their signed languages to make room for GSL. There is much leveling among Deaf students in boarding institutions as compared to Deaf people who reside in villages and cities. The situation of indigenous signed languages in Nigeria as described by Asonye, et al., (2018) and Asonye, et al., (2017) suggests a situation of linguistic threat and marginalization by the presence of foreign system(s) in the country, which has continued to impact negatively on signed language development and Deaf education in the country. The study of signed language is still an area of very little or no interest by indigenous linguists and Deaf scholars in Nigeria (Asonye & Emma-Asonye, 2013; Asonye, 2017b). As a result, the most common description of Nigerian Sign Language by foreign authors is its description as a dialect of American Sign Language.

The linguistic situation described by Schmaling in all her works about Magana Hannu and the Deaf community in Kano Nigeria may not have been different from the situation in Kaduna State. In our first documentation exercise of Indigenous Nigerian Sign Languages (INSL), we[7] observed that Magajin Gari community, Kaduna North was made up of three groups of Deaf signers – those who sign only in English word order (which they learned in school), those who sign in English word order and the indigenous Sign Language (the bilinguals), and those who sign only in the indigenous sign language (with little or no education).

Documentation of Indigenous Sign Languages in Ghana and Nigeria

All over the world, linguists engage in language documentation activities to preserve the linguistic and cultural heritage of a community. Often, these languages and cultures are threatened by other majority languages and cultures. Several factors have been identified as threatening "the ethnolinguistic vitality" of signed languages across the world, which include, minimal population of users of a language, weak and unfavorable policies, disruption on intergenerational transfer, and of course absence of documentation (Johnson, 2004; Wilcox, Krausneker & Amstrong, 2012).

Over the past 20+ years that language documentation activities have increased (Seyfeddinipur, 2016), many spoken (and signed) languages have been documented, developed and preserved. However, many more African languages seemed to be threatened the more by much of the factors mentioned above. It is our view that one of the greatest challenges facing signed languages in Africa is the gross ignorance of both hearing and deaf people about the nature and status of signed language (See Asonye et al., 2018).

Documentation of Indigenous Sign Languages in Ghana

GSL, the signed language of Deaf education, cannot be listed as an indigenous Ghanaian language since it has ASL influence through the works of Andrew Foster. In this section, we identify indigenous Ghanaian signed languages as those signed languages that emerged in local communities, villages and homes with large populations of Deaf people. Therefore, we shall classify indigenous Ghanaian sign languages as rural signed languages whereas GSL is an urban signed language. Research works on indigenous Ghanaian signed languages began in the 1980's pioneered by medical and anthropological visits to Adamorobe to determine the cause of the genetic deaf and hard of hearing. Earlier research works on indigenous Ghanaian signed languages were done by foreign linguists like Frishberg (1987), Nyst (2007; 2010; 2012) and Kusters (2012; 2014). The linguistic documentation and study of signed languages in general by local linguists is a recent enterprise that began around 2010 when the linguistics of GSL was introduced as a subject by the University of Ghana's Department of Linguistics. Prior to that several colleges taught signed languages (in general) to students' specializing in special education without teaching the linguistics of the language.

Through the efforts of Nyst, we have a detailed description of AdaSL published as a PhD thesis. Her work involved an ethnographic study and she carried out several research trips to Adamorobe where she recorded over 40 hours of signed videos. This great step has led to several other researchers gaining interest in AdaSL and other home signed languages. Kusters and Edward have been involved in linguistics and sociolinguistic description of AdaSL (see Kusters 2012, 2014; Edward, 2015a; 2015b; 2018a; 2021). The documentation of AdaSL began with individual items, kinship terms, short conversations, and story retelling (Nyst, 2007; Edward, 2021). These items have led to several descriptive works on AdaSL. Further, Nyst has also documented portions of NanaSL which is also an indigenous Ghanaian home signed system used in Ekumfi in the central region of Ghana. There is the need to document indigenous Ghanaian signed languages like AdaSL as it stands the risk of language endangerment (Edward, 2015b; 2018b; Nyst, 2007).

Comparing the research on spoken languages and signed languages in Ghana, we are quick to admit that the ration is disproportional. However, we are also of the view that this disproportion is caused by the late entry of signed language into the linguistics domain in 1960. As of now, there is still ongoing documentation works by both local and foreign linguists to document and describe some aspects of AdaSL. NanaSL on the other hand has not seen much interest in its documentation. We are of the view that aside AdaSL and NanaSL, there are probably several other indigenous signed languages used in Ghana that are yet to meet the attention of a linguist. The varied linguistics areas that have been covered in the documentation include phonology, semantics, morphology, and iconicity (Nyst, 2007; Edward, 2014; 2015a; 2021).

Documentation of Indigenous Nigerian Sign Languages (INSL)

In our efforts to document INSL, one of the steps we have taken is to answer some basic questions to clarify fundamental misconceptions we perceive people have about signed language in Nigeria, even Deaf signers and Sign Language Interpreters. These questions include: "What do we document?" "Why do we document?" "Who do we document?" (Asonye, 2018). The answers to these questions are not necessarily discussed in this work, however, the question, "What do we document?" seems to attempt to lay a distinction between what is generally used by many Nigerian Deaf and Sign Language Interpreters, which is most often a representation of the School Sign and what is

signed among indigenous Deaf people of various communities who have little or no formal education. It also attempts to answer the question often asked by many hearing people including Sign Language Interpreters, which is born out of a fundamental misunderstanding about signed languages in Nigeria; often, we are being asked, "which signed language do you [people] document, since Nigeria is said to have over 500 languages?"

Nigeria is said to have over 500 spoken languages and dialects (Blench, 2012), although some indigenous linguists recently seem to doubt this claim. Many hearing people we have met appear to understand signed language as the signed version of spoken language, as such, if Nigeria has over 500 spoken languages, there should equally be over 500 signed languages. The question is, which one do we document? Signed language data collected from Magajin Gari, Kaduna North is evidence that every language is a communal experience, a representation of the culture and identity of its owners/users (Wilcox and Wilcox, 2002). It is evident that the Deaf Community has developed a rich signing system to express their interpersonal and cultural ideologies, distinct from the spoken language. For instance, there is name sign for almost every item found in the environment and culture; there is also many signs and gestures used by Deaf people different from the hearing people's gestures.

Deaf lives and conflicting identities

Deaf people in Nigeria are considered a major minority group due to the high prevalence[8] of hearing disabilities in both children and adults (Asonye, 2017). In both Ghana and Nigeria, Deaf people, they make up both a linguistic and a cultural group, although we believe that they are more generally regarded as a disability group than a linguistic or cultural group. There is an estimated number of 110,625 Deaf people in Ghana (accessed from GNAD 31/08/2018) and this number forms about 0.4% of population of Ghana. The population of Deaf people in Nigeria has been a great point of interest to many scholars and authors, as speculations about Deaf population or rather population of people with hearing loss abound in literature and in the news (such as Treat, 2016; Muanya, 2016; Olawale, 2016), but none has been proven to represent a comprehensive data of Deaf population in Nigeria. This presents the reason we engage in the collection of Deaf demographic data with the intention of documenting a most comprehensive population of Deaf in Nigeria.

In America, and probably some other countries, Deaf people are often classified or characterized as Deaf and Hard of Hearing (D/HoH), or 'Deaf' (with the capital D) and 'deaf' (with a small d; Padden, 1989; Padden & Humphries, 1988), Deaf Native Signers and Deaf Non-native Signers (Morford & Carlson, 2011). But Deaf in sub-Saharan Africa are hardly classified or characterized in like manner for the following perceived reasons listed below.

Absence of early detection/early intervention program for deaf and hard of hearing children

The absence of early detection and early intervention programs for deaf and hard of hearing children in both Nigeria and Ghana cannot be overemphasized. Early detection gives room for early Deaf enculturation and early access to signed language, early access or exposure to signed language and prepares a deaf and hard of hearing child for the future and positive membership of the society (World Federation of the Deaf, 2016b). Besides, early detection, which takes place through a hearing screening process helps to categorize whether a person is hard of hearing or profoundly deaf. Therefore, it is hard to categorize Deaf people according to level of hearing loss in many places in Ghana and Nigeria. Some people believe that hearing aids *cure* hearing loss and as such almost every family with a deaf and hard of hearing child in Nigeria would want a hearing aid for their child whether the child is partially or profoundly deaf. Many deaf and hard of hearing children equally grow up longing to have a hearing aid without any knowledge of depth of their hearing loss. These people perceive that being deaf is a disability that can be cured with hearing aids.

Lack of identification of Deaf culture by deaf persons

From our standpoint as researchers in the Deaf community, this is rather one of the most complicated aspects of Deaf life in Nigeria. However, our approach to the understanding of Deaf culture is from the perspective that signed language is the cultural identity of Deaf people; the human right of a deaf and hard of hearing child (World Federation of the Deaf, 2016b; Murray, 2015). Issues relating to signed language status in Nigeria as discussed earlier in the sections seem to greatly impact a negative attitude by some Deaf individuals towards signed language. For instance, many Deaf people

we have interviewed in our over four years study in Abuja, Lagos, and Imo States claimed they learnt signed language from friends and so are not fluent signers. Others, who also became deaf as adults and learnt to sign in a more organized setting, still prefer the simultaneous use of signing and speech or total use of speech even among Deaf gatherings. From our perspectives, Nigerian Deaf Community has many Deaf individuals with some kind of double identity – living their lives in-between the deaf and hearing cultures. Besides, Deaf people in Nigeria are a hardworking set of people, working very hard to overcome the set of sociocultural stigmas that seem to affect their everyday life negatively. In Ghana, some Deaf people have created the impression that hearing loss is associated with poverty and stigmatization. These people refuse to join the wider Deaf association and other sub-groups that seek the development of deaf lives. Rather, they resort to use speech and lipreading to be identified with the hearing community.

Conclusion

In this chapter, we have outlined the progress of Deaf education and signed languages in Ghana and Nigeria after the initial establishment of Andrew Foster's deaf schools. We have outlined the failure of Deaf education and the problems with signed languages of education (GSL and NSL) and the indigenous signed languages as well. Finally, we looked briefly at Deaf lives and discussed the absence of early intervention programs in Ghana and Nigeria and the identity crises faced by many Deaf people across Ghana and Nigeria. It is our opinion that Deaf education in Ghana and Nigeria have not been given the needed support for progress. Whereas policy makers have made enormous efforts to bridge the gap between deaf students and hearing students, most of these policies remain in "the drawers" yet to be passed.

First, the general composition of Deaf education and the structure is not tailored to make Deaf students competitive to their hearing counterparts. From lack of teachers, lack of educational facilities, confusion as to which language to use and the general bureaucracy in government distributions, it seems that Deaf education in Ghana and Nigeria is scheduled for massive downfall. Further, the signed languages of education and indigenous signed languages across Ghana and Nigeria have received little linguistic investigations as linguists across the two nations seem to focus more on spoken languages to the detriment of signed languages. The acceptance of indigenous signed languages will not only promote multilingualism among Deaf people, it will also aid in the documentation of these local signed languages that are moribund and those that are at the verge of endangerment. The acceptance of simultaneous communication in respect to teaching Deaf students with both speech and sign in some Nigerian classrooms as a preferred methodology of teaching is an opium of the people.

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[1] We are not aware if Andrew Foster used signed English in his teaching.

[2] This figure is from the 2010 population census held in Ghana. There is an estimated increase to 30.10 million in 2019. The next official census will be in 2020. Population of Deaf people accessed from Ghana National Association of Deaf (GNAD) on 31/08/2018.

[3] Thanks to Marco Nyarko and Seidu of Ghana National Association of the Deaf (GNAD) for confirming the names of the schools and providing additional names of other private institutions.

[4] Ghana had 10 administrative regions prior to 2018. Currently 6 new administrative regions have been created making a total of 16 administrative regions.

[5] The online school directory is designed to accommodate primary details of all Schools for the Deaf in Nigeria with a tracking record of their activities.

[6] The word is used in quotation marks to show it is quoted as it is generally said.

[7] The Documentation Team of Save the Deaf and Endangered Languages Initiative [S-DELI], an NGO documenting INSL.

[8] Our demographic data collection from several Deaf schools in Nigeria, for instance shows a continuous increase in the population of students admitted in each school over a period of 5 years. This data does not include those that are not in school. Furthermore, since little or no attention has been seriously paid to the causes of hearing loss, especially in children, we believe that occurrence is prevalent.

4. Education and Language

A case study of deaf persons in Adamorobe

MARY EDWARD AND GEORGE AKANLIG-PARE

Abstract

The problems faced by Deaf people in Ghana are increasingly disheartening. In this chapter, we investigate the effects of poor education and language stagnation (e.g., the inability to read and understand English and communicate maximally with Ghanaian Sign Language) in the lives of Deaf individuals in Adamorobe, a village with a large concentration of Adamorobe Sign Language (AdaSL) users. To do this, we interviewed a cross-section of Deaf people in Adamorobe across ages and gender. We further analysed how lack of education affects their ability to communicate in Ghanaian Sign Language and English and how it has ultimately affected their livelihoods. We further outline how the acquisition of education contributes to the language development of Deaf individuals which ultimately leads to their social and economic development. The paper concludes by outlining the way forward and the role of the family, society, and government institutions in the lives of Deaf people.

Keywords: *Education, Language, Adamorobe, Deaf persons*

Introduction

The world has presented disability as inability and throughout history, people with different disabilities are disregarded, maltreated, discriminated against, and, the worst still, killed (Livneh, 1982; Yuker, 1988; Lang, 2003). Historical records have presented evidence to demonstrate the infanticide practices that were done to eliminate children with disabilities who were perceived to be burdens in society (Mosely, 1985; Kiyaga & Moores, 2003). The acceptance of people with disabilities came gradually in diverse cultures (Miles, 2004) and rich children with different kinds of impairments were first to be accepted, groomed, and, eventually, educated (Kiyaga & Moores, 2003). Although the aversion towards people with disabilities seems to have reduced, unreported cases of discrimination and stigmatization persist in most communities in developing countries.

Hard of hearing, one of the biggest sensory deficits in the world (Kelsell, et al, 1997; Mathers, Smith, & Concha, 2000) has affected millions of people. While some conditions are mild and can be treated with hearing aids, others have total hearing loss and can only be corrected through surgical means (cochlear implantation), and some conditions cannot be treated at all. A study by Kubba, Macandie, Ritchie, and Macfarlane (2009) showed a link between socio-economic deprivation and hearing loss, thus hearing loss can as well be termed the disease of the poor. In certain parts of sub-Saharan Africa, the presence of drought, hunger, and starvation are constant (Kiyaga & Moores, 2003) and these unfavourable conditions compounded by lack of quality health care services in most rural communities increases the cycle of childhood impairments. Hearing loss is caused by several reasons including childhood diseases, genetic transfer and other accidental sicknesses (Amedofu, Ocansey, & Antwi, 2006).

The notion of being deaf is mostly perceived by others as the inability to talk, listen, and sometimes lack of reasoning (Kyle, Kyle, Woll, Pullen, & Maddix, 1988). In other words, some people believe that the only language viable for human communication is speech (e.g., President of the Milan Conference) and signed language and other gestural resources are not considered as languages (Lane, 1992). This belief led to the conclusion (at the Milan Conference in 1880) to teach Deaf people with speech and for several years this act distorted the Deaf educational system in several parts of the world because signed language was ultimately taken from Deaf students and replaced with speech (Vermeerbergen, 2006).

The history of Deaf education is filled with several instances where people tried to teach Deaf students with spoken language (oralism) as opposed to signed language (manualism). This pivotal change was agreed on at the Milan Conference that was held in 1880 to discuss the language to be used to teach Deaf students. The misrepresentation of the conference (one Deaf representative out of the 16 attendees) and the conclusion that was drawn (to use speech to

teach Deaf people) led to a disarray in Deaf education. In the words of Vermeerbergen, "European deaf schools became (strictly) oral" (Vermeerbergen, 2006, p. 171).

Deaf education within sub-Saharan Africa is believed to have originated in the 19th century through the effort of European and American missionaries (Kiyaga & Moores, 2003). Prior to Colonisation, Deaf people in Africa communicated with gestural resources and few communities had village signed languages (e.g., Adamorobe in Ghana) or home sign systems. In addition, no formal education was available for them. Céline Baduel Mathon in 1971 "made a detailed classification of gestural communication in West African countries from the documentation of the two previous centuries" (Miles, 2004). Based on this classification by Celine Baduel Mathon, it can be deduced that regulated signed languages might have been in existence in most West African communities (Edward, 2015a) and Deaf people, although not formally educated, communicated with the resources available to them (hand gestures).

In many nations of the world, there have been recorded accounts of failure in Deaf education. Johnson, Liddell, and Erting (1989) record that the failure of Deaf education in America was due to the lack of linguistic access to curricular content and the cycle of low expectations. They recommended the early acquisition of American Sign Language (ASL) to help develop cognitive skills and improve the child's ability to learn English. Marschark and Harris (1996) recount the troubles that deaf and hard of hearing children have in learning to read and write. Most of the failures of Deaf education in many places of the world are caused by the failure of the family, government, societies, and other institutions to provide adequate support and at all levels of education. Asonye, Asonye, and Edward (2018) are of the view that the failure of Deaf education in Nigeria is as a result of a high level of stigmatisation against Deaf students.

Perception of Deaf and hard of hearing in Ghana[1]

About 0.4% of the total population of Ghana are reported to have hearing loss and another 0.4% have speech impairment (Ghana 2010 census). Comparing hearing loss to other disabilities in Ghana, hearing loss is not a highly-ranked disability in Ghana and per the 2010 census, there are few people experiencing hearing loss as compared to other disabilities in Ghana. As an audiological disorder, certain government and private institutions have established units that care and assist people who experience hearing loss. Usually, hearing loss in Ghana is detected after the child is born and correctional treatment is given if and when possible. In Ghana, the perception of hearing loss is *medical, spiritual* or *social.*

Table 1

Population with disability in Ghana (2010 census)

Population with disability	Percentage (%)	Numbers
National disability rate	3%	737,743
Visual/Sight	1.2	295,720
Hearing	**0.4**	**110,625**
Speech	**0.4**	**101,096**
Physical	0.8	187,522
Intellectual	0.5	112,082
Emotional/Behavioural	0.6	136,898
Others	0.3	76,692

From the *medical* perspective, genetic studies of some Deaf people in Ghana have revealed that there are several mutations that cause genetic deafness and hearing loss (Hamelmann et al., 2001). The dominant mutation is the R143W listed as the recessive cause of deafness and hearing loss in Ghana, "where it was the sole GJB2 mutation found in a village with an extraordinarily high prevalence of hearing impairment" (Brobbey et al., 1989, as cited by Hamelmann et al., 2001, p. 2) in Adamorobe. Genetic hearing loss is inherited from one or both parents. A deaf parent can transfer it to an unborn baby. Another major cause of deafness and hearing loss in Ghana is childhood sicknesses including measles, meningitis, fever, presbycusis, mumps, among others (Amedofu et al., 2006).

The discovery of other audiological disorders most times, take place after the post lingual stage and any attempt to have an early treatment might not be possible except for the use of the hearing aids for those who have minimal hearing ability. We identified the majority of Deaf people in urban[2] areas as post lingual deaf and these Deaf people attributed the cause of their deafness and hearing loss to childhood sicknesses. The interviews conducted with about ten Deaf people in June 2018 revealed that about eight of them were not born deaf. They became deaf through childhood sicknesses especially *measles*. Other sicknesses that cause people to be deaf in Ghana are meningitis, fever, presbycusis, mumps, among others (Amedofu et al., 2006). The Ghanaian Deaf community is generally against cochlear implants and this expensive operation is not done in the country. The best correctional (medical) measure is the hearing aid for Deaf people with low decibels of hearing capacity.

A few other Ghanaians perceive deafness and hearing loss as a *spiritual* attack. The religious beliefs in Ghana attributed most sicknesses and ailments to a divine cause and general treatment were refused for children who were perceived to be carriers of a spiritual disease. In Adamorobe, the stories about the cause of deafness and hearing loss are packed in mythical stories of spiritual encounters with gods and witches, and breaking taboos (Nyst, 2007; Kusters, 2012a). The assertion is deeply embedded in the belief in spiritualism in Ghana (Kuwornu-Adjaottor, 2011; Sackey, 1999) and "ailments/misfortunes are believed to have spiritual causality and hence they need spiritual treatment" (Sackey, 1996, cf. Sackey, 1999, p. 66). The Ghanaian view of spiritualism is deeply embedded in African Traditional Religion and although many Ghanaians have converted to Christianity and Islamic religions, for most people in rural communities (and a few others in urban Ghana), there is the tendency to consult a Spiritualist during pregnancy and *religious concoctions* are taken to protect the baby from spiritual attacks. Sackey (1999) stated that "[t]raditionally, medicine is an integral part of African religions, but during the colonial period African medicine was suppressed by the introduction of biomedicine" (p. 66).

Currently, there is a gradual resurgence of African Medicine and these have been taken through scientific purification and branded for the market. Early childhood sicknesses are sometimes treated with these traditional medicines because some of these medicines are believed to offer spiritual protection. The belief that certain people are responsible for diseases and sicknesses is not limited to particular ailments. From migraine to convulsions, there is the tendency to ascribe the causality to evil spirits and "[t]hose responsible for antisocial acts are believed to be human beings with evil spirits, for example witches" (Sackey, 1999, p. 68). Therefore, deafness and hearing loss and many other sicknesses are given spiritual bases, and these sometimes hinder the need to seek early medical treatment for some preventable diseases.

The societal perception of deafness and hearing loss (and disability, in general) in Ghana has been from rejection to acceptance and from discrimination to acculturation. The Ghanaian society is generally perceived to be welcoming to people of all cultures and ability. However, there have been several instances of rejection and discrimination towards people with disabilities. Conversations with Deaf people have revealed the struggle they go through to compete with other hearing people with the same qualifications. In most workplaces, there are preferences for people without disabilities for employment. Equal opportunities for deaf and hearing people do not happen for Deaf people or most disabled people in Ghana. Although, the general perception towards disability *seems* to change from rejection to acceptance, there are also unreported cases of marginalization and stigmatization from the immediate family to the general community.

The perception of disability in Ghana has not changed much. To Avoke (2001), the changing philosophy towards people with disabilities in Ghana was in terms of educational provisions but the attitude of people remained the same. Thus, people who are deaf and hard of hearing and other people with several levels of disabilities were seen as societal pollutants and special institutions were established for them.

Deaf education in Ghana
Deaf education in Ghana, began in 1957 when Rev. Dr. Andrew Foster started the first school for the Deaf in Osu in the Greater Accra region that later moved to Mampong in the Eastern region (Okyere & Addo, 1994; Kigayaa & Moores, 2003). Before his demise in 1987, he (Rev. Dr. Andrew Foster) had set up 32 schools in 13 African countries. In Ghana, after he left, the government replicated his model in all 10 Regions; one in 8 of the regions, 2 in Central and 3 in

Eastern region[3]. Currently, there are approximately 13 special schools for the Deaf in Ghana. There are also 4 inclusive institutions for both people who are deaf and hearing. Prior to Foster's schools, there was no documented record of a regulated education for deaf and hard of hearing children in Ghana and many nations of sub-Saharan Africa. Deaf education was not part of the national educational plan and deaf and hard of hearing children were not educated.

Prior to 1957, the development of schools and curricula in Ghana did not include education for people who are deaf and hard of hearing and Avoke (2001) was of the view that the development of the school system for children who were deaf and hard of hearing and blind was influenced by the missionary factor. Foster was a Deaf missionary who came to Ghana to *save Deaf souls*. Education and religion have been intertwined in Deaf cultures in Africa for several years (Edward, 2015b). Lucas explicitly states that "[l]earning to read (and for some to speak) was a by-product of saving deaf souls" (Lucas, 1990, p. 264).

Although some Deaf people across the nation have advocated for the need for an inclusive education, it seems impossible especially at the basic level due to lack of trained personnel and adequate logistics to implement a national inclusive education. The concept of inclusive education for students with disabilities helps to identify and remove barriers (Morley & Croft, 2011) that such students are likely to face if they are educated in special institutions. From all indications, inclusive education is possible in Higher educational institutions as compared to Basic and Secondary schools.

Disability education in Ghana has encountered some shortfalls (Ametepee & Anastasiou 2015). Opoku, Mprah, Owusu, Badu, and Torgbenu (2016) presented the failure of Deaf education in the Ashanti and Brong Ahafo regions of Ghana. In their paper they also gave a general report about a study that was conducted by the Ministry of Education showing that 70% of children with disabilities were not attending school.

Methods

Study setting- Adamorobe

Adamorobe is located in the Eastern region of Ghana. The small community is known for its unusual rates of people who are deaf and hard of hearing (Okyere & Addo, 1994; Nyst, 2007; Kusters, 2012a; 2012b). The oral history of Adamorobe indicates that people who are deaf and hard of hearing have existed in the community for as long as anyone could remember. Further, members of the Deaf community in Adamorobe are believed to be the earliest group of people who are deaf and hard of hearing in Africa to have used a formal signed language (Miles, 2004). This signed language was used by both people who are deaf and hard of hearing, and hearing people in Adamorobe as far back as 1733 (Okyere & Addo,1994). The prevalence of people who are deaf and hard of hearing in Adamorobe led to the promulgation of the marriage law in the 1970's. This law sought to ban marriages between people who are deaf and hard of hearing at Adamorobe as a gradual step to halt the presence of genetic deafness and hearing loss in the community (Nyst, 2007; Kusters, 2012a; Edward, 2018). The marriage law in Adamorobe "has produced multiple effects including denial to have marital partners, denial to have children, stigmatization, divorces, unstable relationships, lack of economic support and loneliness" (Akanlig-Pare & Edward, 2020).

The Adamorobe community is a highly multilingual society and different languages are spoken by hearing members of the community. The major spoken language is the Akuapem Twi dialect of Akan, which is spoken by a majority of the native and non-native members of the community. Other spoken languages that are used include Ga, Ewe, and English. Aside from spoken languages, the community is also noted for their unique signed language that is used for communication by people who are deaf and hard of hearing, and hearing signers in the community. Adamorobe Sign Language (AdaSL) is the lingua franca for the Deaf community and hearing signers in Adamorobe (Edward, 2015b). The language is acquired through intra-community communication and through family members. There is no formal training to acquire AdaSL.

The educated members of the Deaf community are also introduced to Ghanaian Sign Language (GSL), which is the language used for Deaf education in Ghana (Akanlig-Pare, 2013; 2014). The existence side by side of AdaSL and GSL has resulted in the use of communicative strategies, such as code switching and code mixing by both educated and uneducated members of the Deaf community for effective communication. For purposes of in-group communication, GSL[4] signs are resorted to by members of the Deaf community since the hearing members of the community who

know AdaSL do not know GSL (Kusters, 2012a; Edward, 2015b). Edward (2015b, p. 16-17) is of the view that "AdaSL is the lingua franca between the hearing and the deaf signers, GSL is the 'secret code' that is used by the deaf to conceal issues from the hearing people" and "[a] shift to GSL is preferred in deaf-deaf conversations in which hearing people are not meant to be included."

Most of the indigenous members of the community have at least one person who is deaf in their extended family. A few hearing couples have one or two children who are deaf or hard of hearing. From interactions we had with some of the hearing signers, they believe the genes that cause people to be deaf are sometimes passed on to the hearing members of the community who have some blood relation with the people who are deaf and hard of hearing.

Data collection

Eleven members of the Deaf community in Adamorobe were recruited for this study. These were made up of 5 males and 6 females aged between 24-72 years. Seven of the consultants were either married or in cohabiting relationships and 4 were single. The interview sessions involved focus group discussions with the consultants. A semi-structured interview guide was created by the authors to guide eliciting information from the consultants. We analysed the results of the findings in sections below.

Limitation of the study

The main limitation of the study is the sample size of 11 consultants out of the 40 identified members of the Deaf community in Adamorobe. We were constrained by time and resources to interview all the 40 identified members of the Deaf community in Adamorobe. However, we presume that 11 consultants from varied age-groups give a general representation of the Deaf community in Adamorobe.

Results

Our findings from the interview sessions are discussed in the subsections below focusing on Deaf education, language and development.

Deaf education in Adamorobe

Table 2 presents the summary of the educational levels of members of the Deaf community who were consulted. These figures were based on the research findings of the 11 consultants who were recruited for this study.

Table 2

Educational status of interviewees

No.	Formal education	Level if Yes
1.	No	
2.	No	
3.	No	
4.	No	
5.	No	
6.	No	
7.	No	
8.	No	
9.	No	
10.	Yes	Vocational
11.	Yes	SHS

From table 2, we identified only 2 educated Deaf individuals among our 11 consultants. The ages of the two educated consultants are 24 and 25 as compared to the older consultants who are between the ages of 45 and 72. From these figures, we deduced that education for members of the Deaf community is recent in Adamorobe as compared to

educating hearing people. These numbers reiterate earlier reports by Kiyaga and Moores (2003) that in the face of poverty, there are few services provided for people regarded as disabled and these include Deaf people. It is possible that education for the other 9 consultants were not considered necessary or relevant even if there was a school for people who are deaf and hard of hearing a few miles from Adamorobe. Further, two of the consultants aged 69-72 were born when there was no formal education for people who are deaf and hard of hearing in Ghana.

Further discussions with the consultants and other hearing members of the community revealed that Deaf education was not prioritized in the past. Although the older Deaf people among the consultants remember the exploits of the Rev. Dr. Andrew Foster and the subsequent establishment of a school to teach deaf people in Adamorobe, education for deaf Adamorobeans did not become a reality until recently. We identified three major reasons inhibiting Deaf education in Adamorobe from our discussions with the consultants. These are rejection, poverty, and teenage pregnancy.

Rejection towards Deaf people is prevalent in developing countries. Asonye, Asonye, and Edward (2018) and Kiyaga and Moores (2003) identify rejection as one of the major limitations of Deaf people across Africa. In Adamorobe, the rejection experienced by the older Deaf consultants was very mild. However, they were denied the opportunity to live life to their own expectation as the community perceived them as inferior to the hearing members of the society. They were therefore denied education because they were not fully accepted as being able to do all that their hearing contemporaries could do.

Poverty is a challenge in developing countries (Pernia & Quibria, 1999) and Ghana is no exception. The widespread poverty among rural communities is a major contributing factor for lack of education for children in rural communities. It is an undeniable fact that rural livelihoods have faced several challenges and one such challenge is the need for money and other social benefits (Edward, 2018). The stark poverty they live in makes it difficult for parents to educate their deaf and hard of hearing children. Basic education is free in Ghana, but poor parents still find it hard to afford basic needs of the school-going child. In some instances, when the meagre family resources cannot support more than one child, preference is given to the hearing child over the deaf or hard of hearing child. The following are two excerpts from signed discussions with the consultants:

> **AK**: CHILD GO SCHOOL GOOD. MONEY NOT HAVE, UNIFORM NOT HAVE. CHILD GO FARM WORK WORK WORK. MONEY NOT HAVE. (AdaSL Gloss)
>
> *It is good for the child to go to school. However, we do not have money, we cannot buy uniforms. The child has to go to the farm and work because we do not have money.* (English)
>
> **KP**: I TELL DEAF CHILD GO SCHOOL. CHILD SAY NO. MONEY NOT HAVE. I GO FARM WORK WORK. MONEY NOT HAVE. (AdaSL Gloss)
>
> *When I tell deaf children to go to school, they refuse. I work at the farm. I do not have money.* (English)

Currently, education for young Adamorobeans seems to have improved. Two of the consultants who have had formal education shared their experiences. They could read and write English and were bilinguals in Ghanaian Sign Language (GSL) and Adamorobe Sign Language (AdaSL). We also identified other young deaf Adamorobeans who were schooling at Mampong School for the Deaf. The older generation did not benefit from education but the younger deaf and hard of hearing are being educated. However, a few encounters with two young adults (these meetings were not formal interview sessions) showed a lack of interest in education. A 17-year-old deaf young adult was not sure of a career after school and preferred to stay at home rather than to go to school. This decision of his was motivated by the fact that his elder sister had completed school and still works at the farm. We found out that the negative attitudes towards education is caused by the non-improved statuses of some of the educated deaf in Adamorobe.

A few of the young women withdrew from school as a result of teenage pregnancy. From our consultants, we identified teenage pregnancy as a major challenge to deaf education. The teenage girls are swayed with gifts and attention and they ultimately fall for their hearing "predators." The very fortunate ones are either married by these men or at least live together with their *baby-fathers* in a co-habitation union. These pregnancies alter their education pathways and ultimately the teenagers drop out of school, ending their educational journeys and life dreams. Some of the deaf daughters of the consultants have been victims of teenage pregnancies.

Knowledge in Signed languages and English

The main language of communication for deaf Adamorobeans is AdaSL that is used by both deaf and hearing signers.

AdaSL is a native language for Deaf people in Adamorobe. It is acquired in the family or through intra-community communication. Ten out of the 11 interviewees acquired AdaSL from their immediate families because they had a Deaf parent or deaf siblings. Only one signer acquired AdaSL from other Deaf members of the community because she was from a predominantly hearing home. As L1, or first language users of AdaSL, all the 11 interviewees confirmed that they are highly proficient in AdaSL.

Only two of the signers confirmed their proficiency in GSL as excellent. The other nine interviewees could code-mix with the few GSL lexical items they have acquired through language contact. The nine uneducated interviewees could neither read nor write in English. The table below presents the summary of the proficiency level of GSL among the eleven interviewees.

Table 3

Proficiency in Ghanaian Sign Language

No.	Proficiency in GSL	Level	Place of acquisition
1.	Yes	Minimal	Interaction with other GSL users, personal training in the past, church meeting
2.	Yes	Low	Interaction with other GSL users, church meeting
3.	Yes	Low	Interaction with other GSL users, church meeting
4.	Yes	Low	Interaction with other GSL users, church meeting
5.	Yes	Low	Interaction with other GSL users, church meeting
6.	Yes	Low	Interaction with other GSL users, church meeting
7.	Yes	Low	Interaction with other GSL users, church meeting
8.	Yes	Low	Interaction with other GSL users, church meeting
9.	Yes	Low	Interaction with other GSL users, church meeting
10.	Yes	High	School
11.	Yes	High	School

We identified LOW proficiency as being able to use few lexical items from GSL through code-mixing, basic knowledge of GSL alphabet (for own name and for others) and ability to sign ten or more basic sentences in GSL. The lexical items that were identified in the AdaSL sentences included signs for household tools and objects, locations (e.g., CHURCH, SCHOOL, HOSPITAL), and abstract concepts (e.g., RICH, POOR, TROUBLE, FORGET, HOT).

The basic sentences borrowed from GSL include the following;

> NAME ME …
> DEAF ME.
> I MARRY/ I MARRY NOT
> I WORK …

We coded MINIMAL proficiency as the ability to communicate in GSL through code-mixing, code-switching, knowledge of GSL lexical items, numeracy, alphabets, constructing complex sentences in GSL, basic knowledge of the differences between GSL and AdaSL. Minimal signers were rated as active communicators. HIGH proficiency signers could communicate in well-structured GSL sentences and are very proficient in every aspect of the language needed for education and communication.

In as much as a lack of education is a major determinant of acquiring GSL in Adamorobe, we did not identify any educated deaf adults among our interviewees. The two educated signers (ages 24 and 25) had high knowledge in GSL and this was acquired through formal education. One other signer had minimal knowledge acquired through personal training, interaction with other GSL users and through church meetings. The influence of church in GSL acquisition in Adamorobe is very relevant in this context. In a recent discussion (May 2018) with deaf Adamorobeans, we identified one other church besides the weekly Lutheran Deaf church that runs every Sunday at Adamorobe. The Lutheran church operates in both GSL and AdaSL, partially because the Pastor is not from Adamorobe but form Accra and he is a

proficient user of GSL. A few other Deaf people have started attending a church outside Adamorobe. This new church has interpretation services for Deaf members and this is done in GSL. Deaf Adamorobeans are therefore introduced to GSL through religious activities (Edward, 2015b).

We identified that knowledge of English is directly linked to education. None of the uneducated signers could either read or write. This is not specific to deaf Adamorobeans. Uneducated Ghanaians are unable to read and write English even though they can make basic English sentences or speak Pidgin English.

Table 4. Formal education and the ability to read and write

No.	Formal education	Reading	Writing
1.	No	No	No
2.	No	No	No
3.	No	No	No
4.	No	No	No
5.	No	No	No
6.	No	No	No
7.	No	No	No
8.	No	No	No
9.	No	No	No
10.	Yes	Yes	Yes
11.	Yes	Yes	Yes

Language and Development

We identified the acquisition of languages learned in school (GSL/English) as a marker of progress. The progress was measured in terms of how the interviewees perceived their current state. Eight out of the eleven interviewees determined that lack of education has had a negative impact on their lives. These eight Deaf people were subsistent farmers. One other person was not sure if education could have improved his life or not. The two educated Deaf people determined their current state as positive and appreciated their education. Although one's current job is not directly linked to her education, she felt education has given her respect and self-confidence.

Another issue we identified was the fact that lack of education and jobs promoted teenage pregnancies in Adamorobe. All the eleven consultants agreed that the lack of education and the absence of jobs for the young Deaf people in Adamorobe were major causes of the prevalent teenage pregnancies in Adamorobe. All the participants agreed that the main reason for promiscuity among the young Deaf females was the poverty they lived in. The two young female participants had one child each and one was single, and the other was engaged in co-habitation. Table 5 represents the perception of the participants in the relationship between lack of education/ jobs and teenage pregnancies. The second column represents the educational status of participants and the third and fourth columns represent perceptions.

Table 5

Relationship between lack of education, teenage pregnancies, and lack of jobs

No.	Formal education	Lack of education promote teenage pregnancy	Lack of jobs promote teenage pregnancy
1.	No	Yes	Yes
2.	No	Yes	Yes
3.	No	Yes	Yes
4.	No	Yes	Yes
5.	No	Yes	Yes
6.	No	Yes	Yes
7.	No	Yes	Yes
8.	No	Yes	Yes
9.	No	Yes	Yes
10.	Yes	Yes	Yes
11.	Yes	Yes	Yes

Discussion

Our interviews with the eleven Deaf people from Adamorobe support that teenage pregnancy, unemployment, lack of education, and language development are some identified issues affecting the livelihoods of deaf Adamorobean people. We discussed the effects of poor education and language stagnation in the lives of deaf individuals in Adamorobe. Previous research has indicated the link between deafness and poverty (Kubba et al., 2009). Our investigations at Adamorobe further support this linkage. From our interactions with the Deaf consultants, we deduce that the ability to find a meaningful job as a Deaf Adamorobean is partly linked to one's education and training. However, some of the older Deaf people who are not gainfully employed are not able to afford basic needs of their deaf and hard of hearing children. The cycle of poverty is continued as these Deaf teenage children of our consultants become victims of teenage pregnancies and ultimately drop out of school.

Stigmatization of deaf people is a worldwide issue and it is more prevalent in poorer societies where the ability to speak (orally) is linked to the sense of being and wellness. The constant rejection of Deaf people leads to low self-esteem and this ultimately causes lack of interest in personal growth and development. In Adamorobe, teenage Deaf girls are sometimes victims of sexual exploitation. These victims are sexually abused by "evil" men who give them "portions of drinks mixed with sleeping pills" (comments from interviews). The pregnant teenagers are sometimes abandoned by these evil men and they are left to cater for themselves and the babies alone. A few others who are impregnated end up in co-habitation unions with the fathers of their children.

Another deep-seated stigmatization is the rejection of Deaf women by their "baby fathers." Most Deaf women we interviewed would prefer to have children with other deaf men but for the fear of the marriage law and societal discrimination (also in Kusters, 2012a), they find it convenient to be in sexual relationships with hearing men to increase their chances of having hearing children. The joy of having hearing children is worsened when these fathers abandon the duty of taking care of these babies to the Deaf mothers. One disadvantage of the marriage law is broken relationships and lack of economic support (Edward, 2018).

In addition to this, one Deaf person revealed that her hearing daughter was taken away by her hearing partner without her consent. The hearing partner was posted to teach at the government basic school in Adamorobe in the early 1980s, at the time Deaf people were least regarded. He impregnated the deaf Adamorobe teenager and left the community with the child without informing the mother of where he was going or details of where to find him. A further interview with other members of the community revealed that this incident was caused by stigmatization. The educated man (teacher and hearing) did not want his daughter to be associated with an uneducated Deaf woman.

Stigmatisation is further compounded by joblessness. From all indications, one of the basic requirements for a good job offer is education (Edward, 2018). However, because most Deaf people in Adamorobe are not educated, it affects their ability to be gainfully employed. Farming, selling, stone quarry, among others are some of the few economic ventures that deaf Adamorobeans engage in. Poverty is a deep-seated challenge that affects Deaf livelihoods in Adamorobe.

The struggles of Deaf students in Africa include access to quality education, financial support, and an enabling environment to aid quality studies (Kiyaga & Moores, 2003; Ajavon, 2006). We found out from our consultants the relationship between education and employment; all the Deaf consultants attributed good education to good jobs. We further did a matching up of person, educational level, and employment. We identified a strong relationship between education and good jobs (100% of signers linked good education to good jobs). The older Deaf people who were interviewed valued education or schooling as an important remedy to end poverty among the Deaf people. This confirms an earlier report by Kusters (2012a). The frustration felt by Deaf adults for their lack of education and "contrasting this with the opportunities that the deaf children from Adamorobe get nowadays, as they attend the school in Mampong" (Kusters, 2012a, p. 2777), most Deaf adults believed that the younger generation is better off. Having a good education is tantamount to getting good occupations for Deaf individuals, which ultimately leads to their social and economic development.

Table 6

Education levels and occupation of Deaf people

No.	Age	Gender	Education level	Occupation
1.	55	M	Null	Farmer
2.	72	M	Null	Farmer
3.	49	M	Null	Farmer
4.	45	M	Null	Farmer
5.	60	M	Null	Herbalist/Farmer
6.	55	F	Null	Farmer
7.	53	F	Null	Farmer
8.	69	F	Null	Farmer/stone quarry work
9.	55	F	Null	Farmer
10.	24	F	Vocational training	Hair stylist
11	25	F	Senior High School	Trader

Conclusion

Persons who experience hearing loss around the world have been discriminated against in diverse ways and these acts of discrimination have impeded their growth, well-being, and livelihoods. From our study we have outlined the status of education and its effect on the language development of Deaf people and how this contributes to stagnated economic growth. The remaining part of the paper presents the alternatives to making Deaf lives better. We briefly discuss the roles of the family, society, and government institutions (and other private institutions) in improving the lives of Deaf people and ultimately giving them access to acquiring GSL and English in addition to AdaSL.

The problems and stigmatization of Deaf individuals begin with the family (Asonye, Asonye, & Edward, 2018). Stigmatization and rejection of deaf and hard of hearing children by the family is mostly as a result of ignorance and lack of understanding (Ajavon, 2006). This ignorance leads families to brand deaf and hard of hearing children or disabled children as "cursed" and maltreat these children. These children are sometimes hidden from the public or abandoned. We were surprised to find out from the former Headmaster of the Mampong Demonstration School for the Deaf that some parents abandoned their children and refused to come for them during vacations. The first step to ending this stigmatization by immediate families is education and demystification of deaf and hard of hearing as a "curse from some supernatural being." We advocate for a national or regional forum to educate and erase this erroneous thought that families have about disabilities. We believe these efforts will go a long way to break the barrier between Deaf people and their hearing family members.

Societal laws and regulations like the Adamorobe marriage ban (Nyst, 2007; Kusters, 2012; Edward, 2018) have created a divisive society that has stripped Deaf people of their rights to marry among themselves. We suggest that the growth

and development of Adamorobeans who are deaf is dependent on the relationships they build among themselves, how much they support each other, and how society perceives and treats them. We are of the view that AdaSL shared by both deaf and hearing people of Adamorobe is an important bridge between the deaf world and the hearing world. However, we identified that there are few hearing signers of AdaSL currently and this decline is due to the following factors; migration of different people into Adamorobe, the death of many Deaf Adamorobeans, and the gradual shift to GSL (Edward, 2015b; Edward, 2018; Akanlig-Pare & Edward, 2020).

AdaSL is currently listed in Ethnologue[5] as an endangered language as recorded by both Nyst (2007) and Edward (2015b). The special inclusion of deaf Adamorobeans into the larger community through a shared signed language used by both Deaf and hearing people in Adamorobe is at the verge of becoming "a relic of the past" (Kusters, 2012a, p. 2780). AdaSL is endangered, because the number of Deaf and hearing signers has reduced and currently the language is predominantly used by Deaf people. Further, we suggest a shared culture for deaf and hearing Adamorobeans that will encourage Deaf people to seek to improve their livelihoods through education and acquisition of skills through training.

The role of government and other private institutions in the development of Deaf people's education and language cannot be over-emphasized. The onset of Deaf education in most nations in sub-Saharan Africa began as a religious intervention by Rev. Dr. Andrew Foster (Kiyaga & Moores, 2003). Religion has always been tied to Deaf lives and the act of *saving deaf souls* led to the training of many Deaf individuals in signed languages. In Ghana and a few other African countries, the missionary work of Rev. Dr. Andrew Foster later became government projects and Deaf education had support of the government (Kiyaga & Moores, 2003). We believe that the government has the primary role of ensuring equal educational opportunities for all. Basic education and (recently, in 2017) senior high school is free in all government institutions in Ghana but access to this education is sometimes impeded by other logistical factors including the following: Inadequate classroom units, inadequate funding from government, lack of trained personnel to work in special education schools, and lack of teaching and learning materials.

We acknowledge the fundamental roles of private institutions in Deaf education through donations of various kinds, medical and social outreaches, volunteering, among others. The creation of Deaf churches and Deaf units in several communities in Ghana have led to GSL development for Deaf people who have not had access to formal education. A few groups use a mixed version of American Sign Language (ASL) and GSL and this is exemplified in religious sessions in Adamorobe (Edward, 2015b). In as much as the private institutions have contributed to growth and development of Deaf education and language, we also caution for a systematised approach that will ensure that the beneficiaries of these private interventions are not given a "diluted" version of either AdaSL or GSL.

From our data, language development and education (training) is tied to socio-economic development of Deaf Adamorobeans. We advocate that language centres should be created by government and other non-governmental institutions that would train uneducated Deaf Adamorobeans in AdaSL, GSL, and English. This attempt would aid in ensuring that they gain access to facilities and jobs that are opened for deaf people who are able to read and write.

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[1] This section is adapted from author number 1's ongoing PhD dissertation on Ghanaian Sign Language and Adamorobe Sign Language on "Iconicity as a pervasive force in language: Evidence from Ghanaian Sign Language and Adamorobe Sign Language"

[2] This interview was done in a similar research involving users of Ghanaian Sign Language (GSL). One requirement for a deaf child's acceptance in deaf institutions is the proof of an audiological report that validates that the child is deaf or hard of hearing.

[3] A referendum on December 27, 2018 accepted the creation of 6 new regions in Ghana bringing the number of administrative regions to 16.

[4] Most of the uneducated members of the Deaf community in Adamorobe know few GSL signs.

[5] https://www.ethnologue.com/language/ads

5. The Ghana National Association of the Deaf (GNAD)

DANIEL FOBI AND RICHARD DOKU

Abstract

This chapter focuses on the Ghana National Association of the Deaf (GNAD); how and when it was formed, its aim and objectives; membership; past, present and future activities; how it is funded; and the achievements and challenges of the association. In this chapter, what necessitated the formation of the association and when it was formed and formally recognized in Ghana and by the World Federation of the Deaf (WFD) will be addressed. The chapter will highlight the current number of GNAD members and GNAD's prospects for growth. The governing structure of GNAD will be presented. The youth wing of GNAD and their current role in promoting the activities of the association will also be discussed. Based on comparisons made with sister associations of the Deaf from around the world, conclusions and recommendations will be made.

Keywords: *Ghana, Deaf, National Association, Achievements, Challenges, Activities*

Introduction

Rev. Dr. Andrew Foster, a Deaf African American and a graduate of Gallaudet University arrived in Ghana in 1957 his main aim being to spread the gospel of Jesus Christ to deaf individuals and to introduce them to literacy and numeracy through sign communication (Oppong & Fobi, 2019). Foster's activities could be said to have been the starting point where deaf people began to form communities that were for the purpose of advocacy work. An example of a deaf movement initiated by early Ghanaian deaf was what was named "Ghana Society of the Deaf" formed in between 1959 and 1962 (G. Amenumey, personal communication, November 2018). Although Deaf people in Ghana had begun to form communities whenever they come together in a specific geographic location long before Foster's arrival in Ghana in 1957, these Deaf communities and their activities were not geared towards advocacy. The umbrella organization in Ghana that advocates for the welfare of D/deaf people, whether members or non-members, is the Ghana National Association of the Deaf (GNAD). GNAD is said to have been formed as far back as 1968. The deaf people before this period were unrecognized individuals who were usually hidden from the public because of stigmatization by their families, killed through rituals such as by draining [what?] or buried alive (because they were considered a curse, or unpleasant spirit playing on the family) or, according to a victim, even exchanged for food commodities (Amedzofe, personal communication, November 2018).

Rev. Dr. Andrew J. Foster and Early Deaf Association

Until the introduction of formal education for the deaf in 1957, there was no movement for advocacy by deaf people even though they sometimes met up for social gatherings. Formal education for the deaf was introduced in Ghana in 1957 by the late Rev. Dr. Andrew J. Foster (Oppong & Fobi, 2019). As a pastor, Foster visited homes of deaf people in Accra to educate them. According to Ayi (R. Ayi, personal communication, November 2018) one of the oldest deaf people still alive (at the time of writing this chapter), Foster, while educating parents of the deaf on the importance and need for education, was advocating and motivating deaf people to socialize and come together in order to present a common front. Ayi said,

When my father did not like the idea of sending me to school because he wanted me to help on his fishing boat, Foster told him that the deaf people in America are living independent lives and doing a lot that is supporting their families and the deaf communities through education. After this, my passion for education was high and the desire to meet other deaf people was tempting. There were times when my father would beat me, resulting in a fight between him and my mother because I went to Foster's private classes and spent some time with my deaf friends. (Personal communication, November 2018)

Oppong and Fobi (2019) espoused that Foster identified a few individuals aged over 10 years and enrolled them as

students in his private residence in Accra. At that time, foster held classes for his students in the homes of parents of deaf children, but often educated his students in a primary school building on the weekends. Amenumey (personal communication, November 2018) said that although foster's work was meant to preach the gospel and also educate the deaf, he could attribute the start of the deaf association to Foster's work, stating that,

Dr. Tetteh Ocloo, Stephen Dadzie, Steve Boateng, myself (Pastor Godfrey Augustt), and a few other deaf people who travelled out of the country to further their education in the United States and other African countries in the early 1960s and returned to instigate the formation of the deaf association were all beneficiaries of Andrew Foster's early educational initiative. (Augustt, personal communication, November 2018)

The inspirations and exemplary life of Foster gave deaf people the courage to start advocating for their rights. The first advocacy movement was the Ghana Society of the Deaf. Though the leaders of this association were not known, people like Mr. Godwin Amenumey, Mr. Humphrey Akaba, and Mr. Jonathan Amuah (all of whom are still alive at the time of writing this chapter) are a few known deaf individuals who claimed to have been members of the association when it was established. The Ghana Society of the Deaf (GSD), was located in Accra. It was made up of mostly middle-aged deaf people who were being taught by Foster in his private school for the deaf. They were deaf individuals who thought they (the deaf) have rights as humans and have to be treated as such after being exposed to American deaf culture through Foster's teachings.

The GSD did not function well and suffered challenges because deaf people did not have literate leadership. The majority of deaf leaders at that time were illiterate and could not keep documentation of their activities. According to Amuah (personal communication, November 2018), in around 1965, the leaders of the GSD attempted to mobilize the members by visiting individual homes and even the Mampong Secondary Technical School for the Deaf to educate the students about the association. However, this did not work.

In 1968, Ocloo, Dadzie, and Boateng returned to Ghana from the United States and paid a visit to the deaf community in Accra. During their visit, they discovered that, the deaf people were marginalized, discriminated against, and were not accorded the rights and privileges they deserved. They also noted that, the deaf community lacked leaders who served as transporters of their problems to the people in authority and the society within which they lived. (E. Sackey, personal communication, November 2018).

This group was led by Ocloo. The movement of Deaf finest heroes according to Mr. Emmanuel Sackey (President of GNAD at the time of writing this chapter) was the beginning of the birth of the Ghana National Association of the Deaf, and consequently, the name "Ghana Society of the Deaf" was changed. Nevertheless, according to Ocloo some members did not like the abolishment of the GSD. Ocloo who is still alive (at the time of writing this chapter) was unable to respond to questions during a visit in November 2018 due to his advanced age and health problems.

Ghana National Association of the Deaf

The Ghana National Association of the Deaf (GNAD), which is the umbrella organization of association of Deaf people in Ghana, was established in 1968. As we have already stated, GNAD's existence is as a result of some Deaf scholars (Ocloo, Dadzie, and Boateng), who felt there was the need to mobilize the deaf people and establish an avenue where deaf people can have their voices heard. However, after the establishment in 1968, the association suffered leadership challenges. Ocloo dissolved the Interim Management Committee (IMC) and was subsequently voted the first president in the same year. See Table.1 for list of the presidents of GNAD from 1968 to date.

Table 1
List of GNAD president from 1968 to date

Name of President	Date of Presidency
Dr. Seth L. Tetteh Ocloo	1968 – 1977
Mr. Daniel M. Atiemo	1977 – 1978
Mr. Andrew N. Nortey	1978 – 1979
Mr. Samuel N. Adjei	1979 – 1983
Mr. Godwin E. Amenumey	1983 – 1990
Mr. Francis Boison	1990 – 2000
Mr. Paul Braafi	2000 – 2003
Mr. Samuel K. Asare	2003 – 2010
Mr. Emmanuel K. Sackey	2010 – 2018
Mr. Matthew Kubachua	2018 – Date

In 1996, the General Assembly (GA), the highest body of the association (according to the constitution) finally dissolved the Ghana society of the Deaf and attempted replacing it with the Association of Parents of Deaf Children (APDC). This did not work as many of the parents did not show interest (E. Sackey, personal communication, 2018).

GNAD's vision is "to achieve an active and productive deaf community with access to education and information, and steady economic activities that can sustain and maintain quality and security of life" (GNAD, 2019, para 2). Its mission is to mobilize members, remove communication barriers, create awareness on deaf issues, and advocate for equal opportunities for Deaf People. In 1973, GNAD was recognized as a voluntary association and accredited by the Ministry of Manpower, Youth, and Employment. GNAD was granted a permit to operate as a non-governmental and non-profit organization by the Department of Social Welfare and the Registrar of Companies, Ghana (GNAD, 2019). GNAD is a member of the World Federation of the Deaf (WFD) and Ghana Federation of Disability Organizations (GFD). (See figure. 1 for organogram of GNAD/ GNAD-YS.)

Membership

In Article 13, under Membership and Dues, the constitution of GNAD declared that membership of the association shall be open to all deaf people in Ghana who have attained the age of 18 years. It also stated that a person who desires to join the Association shall submit an application for registration supported by an existing member who shall serve as a sponsor. This had been the case since the establishment of the constitution in 1996. A new applicant pays a registration fee. Of the estimated 110,625 deaf people in Ghana, GNAD has mobilized approximately 11,000 members (about 60% of whom are male and 40% female).

GNAD Wings

GNAD has there (3) wings. These are the Women Wing (WW), the Youth Wing (YW), and the Sport Wing (SW). These wings were developed as a result of certain needs and challenges registered by members during the GA in 1996. For instance, during the 1996 GA, there was a proposal on health training issues for all associate leaders. However, the leaders selected were all males although the issues on the proposed health related training focused mainly on women's health issues. This did not go down well with the female participants who felt their rights were being relegated by the males. Thus, the WW was formed.

Women Wing

As we have already stated, the disruptions in GNAD's GA in 1996 over the selection of males for a proposal meant for women related issues was what led to the establishment of the Women Wing Association of the Deaf in Ghana. However, the question arose, "what influenced these women at the GA to suddenly rise against the decision to select males for the said proposed project?" Akaba revealed that, during his time of reign as the regional president for the Greater Accra Regional Association of the Deaf, he had been encouraged by the president, Francis Boison, in around 1994, to form a

women wing movement. Akaba and Amenumey started to encourage the women in Greater Accra to initiate the women's wing movement. During the GNAD 1996 GA held in Kumasi in the Ashanti Region of Ghana, many of the leaders of the women wing movement in Accra were present including President Boison's wife, Mrs. Grace Boison. These women constituted the group who argued against the selection of males for the proposed project. Consequently, the women's wing association was established that year during the 1996 GA. See Table. 2 for a list of GNAD-WW presidents from 1996 to date.

Table 2

List of GNAD-WW president from 1968 to date

Name of President	Date of Presidency
Mrs. Grace Boison	1996 – 2005
Mrs. Comfort Arko	2005 – 2010
Mrs. Patricia Baffour	2010 – 2019
Mrs. Doris Anokye Birago	2019 – Date

WW is the association under GNAD which sees to the affairs of Deaf women and girls. As a wing of GNAD, WW association does not have its own constitution. There has been no documented achievement of the Women Wing association. However, people like Madam Patricia Baffour and Mrs. Grace Boison (both of whom were ex-presidents) claimed (personal communication, November 2018) that WW had organized a number of local workshops and training for its members both in the districts and national levels. They also revealed that WW had obtained project funding from international and local organizations like the African Women Development Fund, and DANIDA, which had led to the training of some members in hair dressing, tailoring, soap making, bead making, and other vocational trainings. In addition, equipment and tools were given to the members who participated in those trainings. Baffour and Boison also further indicated that their organization had been able to see that some of their members were able to participate in international events such as Miss Deaf World. A notable participant of this event, who was also the first Deaf woman from Ghana to represent the Deaf women in such an international event (Miss Deaf World – Australia 2007), was Mabel Adjei Mintaah.

Women Wing is particularly challenged with finding capable leaders. Sackey (personal communication, 2018) lamented that the problem with finding suitable women leaders for the Women Wing is one of the challenges of GNAD. He explained that, many of the women have low educational backgrounds and lack leadership skills. They have low self-esteem and cannot identify their associated personality traits or self-awareness. He further indicated that, those who have had education up to tertiary level in recent times are also unwilling to be part of the women's association. Another challenge is meeting attendance. Members do not respond to local meetings. However, they will come in high numbers where there is an event that pays for transportations and refreshments. Another challenge of the WW is funding to undertake projects and internal activities of the association leaders. Due to low patronage of meeting by members, the association is unable to obtain revenues from membership dues. It is also difficult winning proposals for their projects.

Youth Section

The Ghana National Association of the Deaf –Youth Section (GNAD-YS) is a wing of Ghana National Association of the Deaf (GNAD). It was founded in 2009 through a pilot project between Deaf youth in Denmark and Deaf youth in Ghana. The idea of the partnership came from the GNAD/Danish Deaf Association (DDL) partnership. GNAD and DDL had developed projects together for more than 16 years. The cooperation has developed from a small bilateral project to a multilateral cross-disability project funded by DANIDA. Through DDL, a connection was created with Danske Døves Ungdomsforbund-DDU (Danish Deaf Youth Association). This led to a pilot project in 2009 and subsequently resulted in the establishment of GNAD-YW. However, there was little contact between DDU and GNAD-YW after the pilot project, which unfortunately did not lead into a partnership project due to lack of resources within DDU. The youth association, however, managed to survive. In 2014, GNAD in collaboration with Danske Døves Ungdomsforbund-DDU (Danish Deaf

Youth Association) sent one male and one female deaf youth to Denmark for an international leadership and project management course for Deaf youth. As a result of their studies and experience, a preparatory and another pilot project between DDU and GNAD-YS took place between 2015 and 2017.

GNAD-YS and GNAD share the same vision and mission. In brief, the vision of GNAD-YS is to work for an active and productive Deaf community that has access to education and information, as well as steady economic activities that will sustain and maintain quality and a secure life. The mission is to mobilize members, remove communication barriers, create awareness on issues pertaining to Deaf people, and to advocate for equal opportunities for Deaf youth. The GNAD-YS has five (5) board members. See Table. 3 for a list of GNAD-YS presidents from 2009 to date.

Table 3

List of GNAD-YS president from 2009 to date

Name of President	Date of Presidency
Benjamin Kwadwo Bekoe	2009 – 2016
Richard Doku	2017 – Date

The youth activities are monitored and supervised by the GNAD staff. GNAD-YS does not have a specific organization policy, although, it has its own constitutions. See also Figure 1 for organogram of GNAD/GNAD-YS and their details.

Figure 1

Organogram of GNAD/ GNAD-YS

GHANA NATIONAL ASSOCIATION OF THE DEAF-YOUTH SECTION
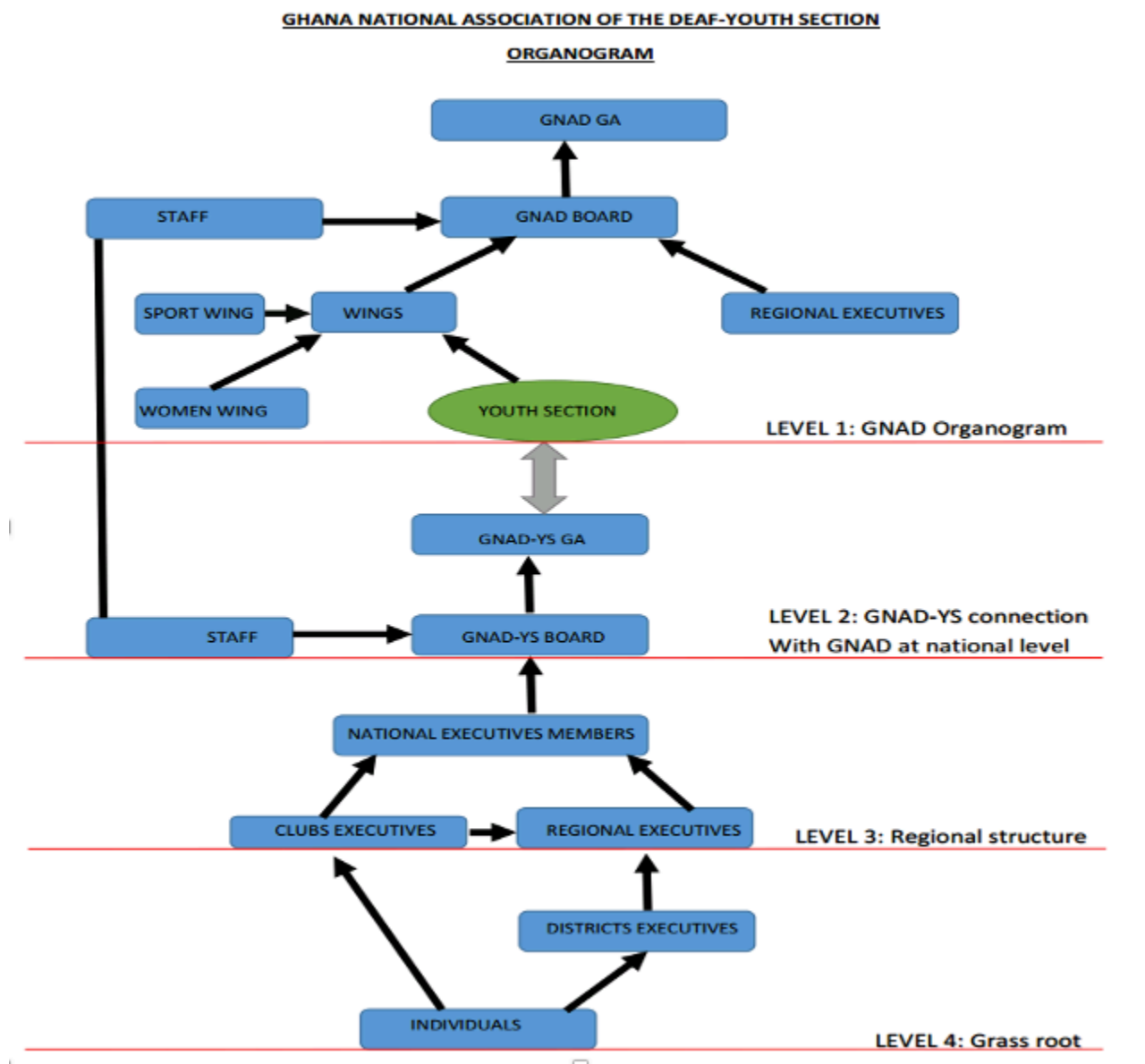
ORGANOGRAM

Details of the GNAD-YS organogram extracted from the GNAD constitution (2017)

Level 1:

GNAD structure: This is part structure of Ghana National Association of the Deaf (GNAD) where youth section (in green) is indicated under "wing". The Youth Section (YS) is part of the executive board of GNAD (the YS president as representative).

LEVEL 2: **This is the structure of the GNAD-YS.**

GNAD-YS GA: The General Assembly (GA) is the highest authority of the association. It makes decisions and has the power to influence, change and amend process of administration and constitution. Delegates to the GA shall consist of 4 members (2 males and 2 females) each region and 5 national executives where election of the national executive is to be conducted. However, where projects and or financial needs affect the number of participants, the board reserves the right to communicate their decisions in such cases.

The Board: the GNAD-YS board is the second highest decision-making body and which sees to the administration of

the association. The board is composed of 5 national executives. A representative from the NEM for specific meeting may be needed where necessary.

The Staff: GNAD-YS does not have staff of its own since the association is a wing. The board therefore collaborates its administration with the GNAD staff.

Level 3:

The National Executives Members (NEM): the NEM is the third powerful decision-making body which can influence the regional and club executives as well as present and communicates issues and findings to the board. It shall be made up of presidents from each youth club and regional associations.

The Club Executives: The Club is either be school clubs or individual groups other than the district associations. They shall elect their executives who shall see to their administration and represent them at NEM meetings. The Club executives may collaborate with their regions for regional executives meeting.

The Reginal Executives: it is made up of 2 district leaders (the president and secretary from each district). They shall elect their regional leaders (5 executives) which will see to the administration of the regional youth associations. The president of the regional executives shall participate in NEM meetings.

Level 4:

Districts Executives: this is made up 5 elected leaders to administrate the association at the grass root level. They shall delegate 2 executives (preferably the chairman and secretary) for regional meetings.

Individuals: they are the individual members of the youth section at the grass root. Individuals at this level may decide to be a club member or district member.

Between 2015 and 2019, GNAD-YS had been able to obtain two fully funded pilot projects with two different organizations; Danske Døves Ungdomsforbund-DDU, Denmark and Mill Neck International – MNI, United States of America. GNAD-YS has provided a number of leaderships, human right based, advocacy trainings, sign language, membership mobilization capacity building UNCRPD training and timely interventions including youth educations and material provisions to support deaf schools; at districts, regional and national level. There are over three thousand (3,000) youth members across the regions of Ghana. GNAD-YS has four project sites; Wa in Upper West Region, Bechemi in Bono Region, Mampong-Akuapem in Eastern Region (funded by DDU) and recently Cape Coast in Central Region (funded by MNI). The recent pilot project at Cape Coast entitled "Promoting the Participation in Decision-making of the Deaf Youth through Leadership Training in Cape Coast Metropolis of Ghana" was to create awareness of the rights of Deaf youth and equip them with leadership and advocacy skills to increase their participation in decisions on issues that bother on their welfare in the Cape Coast municipality. GNAD-YS has also collaborated with local organizations, such as Fusena Aids (FUSAID)-Ghana, Peace Corp-Ghana, Youth Employment Agency, and others to organize local events for its members.

The youth section has been very active in recent times. However, there is the issue with Deaf young women in leadership. Despite many trainings and workshop, it is difficult to get Deaf females onto boards at both district and national levels. This sometimes affects proposals and project applications as most funding organizations require at least 2 females on the National Board of the youth association. Also, lack of funding to run the youth association is a big challenge. Most of the project funds are strictly for the project activities outlined in the project applications. This means funds cannot be used for any other propose. There are, therefore, lots of activities in which the youth association could not undertake education and advocacy for youth in Ghana

Achievements of GNAD

Over the years, GNAD had focused on two main areas. These are enhancing social participation and economic empowerment.

Enhanced Social Participation

GNAD provides family welfare projects to educate members of the Ghanaian Deaf community on important issues such as reproductive health, family planning and responsible parenthood, gender-based violence, and HIV/AIDS. GNAD also offers sports development projects in regional and district branches of the association to help develop and enhance

the physical and social well-being of Deaf Ghanaians, as well as encourage their participation in sporting activities in Ghana and abroad.

Economic Empowerment

This program aims to create a source of livelihood for unemployed members of the Association by implementing income generating projects on a per region basis. In the Central Region, thes projects include bead-making, batik and tie-and-dye production. In the Bono Region, soap-making, in the Eastern Region gari-processing, and in Ashanti and Volta Regions, farm projects. GNAD has also managed several smaller projects funded by various donors. See Figure 2 for lists of some of the funding donors for smaller projects.

Other achievements

GNAD has been able to mobilize around 11,000 members in the 16 regions of Ghana. As an advocate for the Ghanaian Deaf Community, GNAD is also interested in the welfare of the Schools for the Deaf in Ghana. GNAD also teaches signed language to individuals and organizations to ease the communication difficulties between members of the Deaf Community and the hearing public. GNAD continually lobbies and advocates for the rights of the Deaf in Ghana. In recent time, among other activities, GNAD has been able to lobby Parliament for the employment of Sign Language Interpreters (SLI) in the Parliament House of Ghana. There have also been official meetings with the Driver and Vehicle Licensing Authority over how best to develop policy to enable deaf people to acquire driving licenses and use the road safely. There is also a 3-year project initiative to institute a Ghanaian Sign Language Interpretation (Diploma) course at the University of Cape Coast to enable SLIs to upgrade their skills. A Ghanaian Sign Language dictionary is completed and in publication.

Figure 2

Funding donors for smaller projects

Challenges

In spite of GNAD obtaining grants and managing some pilot projects, the organization still faces financial challenges. GNAD is unable to generate its own income and rather depends on donors for its day to day operations mainly because grassroots support is significantly low. The lack of a steady stream of revenue for GNAD has led to her inability to carry out certain advocacy works such as legislation on signed language, legal representatives and advocates at the national level, and visibility with other Disabled People Organization (DPOs), which is also due to lack of rapport with these DPOs and state institutions.

Another challenge for GNAD is the issue of recognition of Ghanaian Sign Language as a national language for the Deaf. Should this be successful, GNAD believes possibilities would be limitless for the Deaf in Ghana. For instance, the proposal of policies and regulation on the use of Ghanaian Sign Language (GhSL) could be achieved much faster; there could also be regulations on GhSL for parents and teachers of the deaf, as well as private institutions who wish to initiate interpreting programs. "I seriously believe that after the interpreting program at UCC or any recognized institution, GNAD together with the Association could organize an accreditation test for prospective interpreters because the school alone cannot give that accreditation. This can also allow any person to take the test without going to the university" (Clement Sam, SLI for Parliament house-Ghana, personal communication, 2019).

A poor attitude of Ghanaians towards disability rights and advocacy is another major challenge to GNAD and Deaf people, in general. In Ghana, despite the existence of the Disability Law, Act 715 (2006), D/deaf and hard of hearing individuals face challenges in workplaces, businesses, and social environments (Grischow, 2015; Fobi & Oppong, 2018). They face many challenges in their attempts to patronize public and social services as well as engage in economic and income generating activities. Some of this can be attributed to inadequate or non-existent signed language interpretation services. For instance, there are no policies in place for the recruitment, training and placement of signed language interpreters in public institutions in Ghana (Fobi & Oppong, 2018; Oppong & Fobi, 2019). While public institutions mainly face the challenge of inadequate funds to improve or ensure availability of signed language and interpretation services, GNAD members also face difficulty in finding qualified interpreters due to the presences of unqualified and inexperienced ones, as well as the cost involved in engaging the few available qualified interpreters. GNAD and Deaf people also suffer challenges in benefiting from business opportunities. It is assumed by many that D/deaf people are unable to write and or express themselves proficiently in English. Therefore, those who wish to engage and expend their business are either rejected or a very limited number are provided services. GNAD research revealed that, unlike the illiterate deaf people, the deaf people who are able to write and prove they can engage with institutions to support their business are given support. GNAD believes the availability of signed language services will enable deaf persons to take full advantage of the existing business opportunities. GNAD calls for policies to promote the training and placement of signed language interpreters in both governmental and non-governmental organizations, teaching of signed language in schools and the creation of a database for signed language interpreters for easy access.

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6. Interpreting in Ghana

DANIEL FOBI; JOYCE FOBI; OBED APPAU; AND ALEXANDER MILLS OPPONG

Abstract

The aim of this chapter is to describe signed language interpreting in Ghana. Deaf individuals have over the past 6 decades received diverse forms of interpreting in different contexts, and for different purposes. Various forms of interpreting occur in Deaf communities and other social places like religious meetings, law courts, police stations, television programs, hospitals, and educational settings. Interpreting is offered to deaf individuals from basic schools through tertiary. As the need for best practices in interpreting continues to grow because of the growth in awareness among the Deaf population, there is the need for professional growth in interpreting for the consumers. However, there exist limited documentation of what has transpired over the years in interpreting for Deaf consumers. The professional practices of the interpreters in Ghana is also underexplored. The historical progression of interpreting in Ghana will be discussed. The models of interpreting within which interpreters have operated, the legislative documents which support Deaf individuals, and how interpreting is done and perceived in different communities will be highlighted. The paper will elaborate on the kinds of interpreting that exist in religious, law, hospitals, TV programmes, and educational settings for Deaf individuals. The chapter will also discuss how interpreters are recruited and trained to serve Deaf consumers at various settings. The discussion will focus on some best practices of interpreting in other parts of the world such as Australia, Belgium, Finland, Ireland, Netherlands, U.K., and U.S. and link those practices to what is currently happening in Ghana and make recommendations for Ghana.

Keywords: *Best practices*; *Deaf*; *interpreters*; *Legislature*; *perceptions*; *sign language*

Introduction

The aim of this chapter is to discuss signed language interpreting in Ghana. The chapter will describe the historical progression of interpreting in Ghana, forms of signed languages which exist for Deaf individuals and how interpreting is done and perceived in different communities.

Historical progression of interpreting in Ghana

Ghana is an English-speaking country of sub-Saharan Africa. The signed language used by the Deaf community has been developing for over six decades. Since the introduction of formal education for deaf and hard of hearing (DHH) people in Ghana by Rev. Dr. Andrew Foster in 1957, signed language has seen continual development and growth over the years. Foster was a graduate from Gallaudet University who was himself Deaf and aimed at reaching the Deaf community in Africa with the Gospel of Jesus Christ and also to formally educate DHH people. He introduced the DHH to basic literacy and numeracy skills through American Sign Language (ASL), which has later evolved into Ghanaian Sign Language (GSL), a blend of ASL and local Ghanaian signs (Fobi & Oppong, 2018; Oppong & Fobi, 2019). As a pastor, Foster visited homes in Accra to spread the Gospel and also to search for DHH individuals who were over 10 years old. He recruited them into his school, which he had started in his private residence in Accra. During this era in Ghana, there were no systems in place for early identification and management of DHH individuals. So, parents of children who are DHH were the people who could tell whether or not their children were DHH. The parents did this by observing their children, and usually if their children could not talk after age six, they concluded that such children were DHH (Oppong & Fobi, 2019). When Foster arrived in Ghana, parents, siblings, and relatives were people who usually served as interpreters for DHH individuals because of their familiarity with the signs of the DHH family members and their ability to understand what the DHH family members were conveying through their signs. Anytime DHH people came into contact with hearing people and needed to communicate, they would often use gestures or the services of a relative to interpret for them (both DHH and hearing people).

Between 1957 and 1970, Schools for the Deaf were established in the country and different teachers were trained and recruited to support DHH children in the country. The training that teachers of the deaf received at the time

and their interaction with DHH individuals familiarized the teachers with the signed language. They used the signed language acquired as a means of supporting the mediation process between the DHH community and the hearing community. They often served as interpreters in Parents Teachers Association (PTA) meetings in schools. Whenever there were events in the communities which involved DHH individuals, the community depended on teachers of the DHH to serve as interpreters. As the years went by and the communities saw the need to integrate DHH individuals into their activities, churches started to provide support services to DHH people. Churches took the initiative to evangelize to individuals who are DHH and brought them to church. What they did by way of communicating with DHH church goers was to write the Bible texts used for their services so that DHH church goers who could read would have access to and follow their sermons. In situations where teachers and relatives who could sign were available for individuals who were DHH, the church used those people as interpreters. In such cases, the church found some incentives for those interpreters and also engaged them in training other people who were interested in signed language so that they could serve as interpreters for the DHH parishioners.

The churches which championed trainings for their members were the Churches of Christ and the Jehovah Witnesses (Fobi & Oppong, 2018). Currently, more churches and Mosques in the country have joined in learning and training of signed language interpreters for their DHH members. In the educational settings, since the exit point for the majority of the DHH students is at the Senior Secondary (Oppong & Fobi, 2019), few DHH students who managed to get into tertiary education prior to the twenty-first century received any form of interpreting. Instead, they had to find their own means of coping with their education without any formal interpreting services provided. It was at the early part of the twenty-first century (i.e., around 2006) that tertiary institutions started recognizing the presence of DHH students and started providing them with some form of interpreting services. In 2006, the University of Education, Winneba, which is the "headquarters" of special education in Ghana, started admitting DHH students and provided some form of interpreting services for the students. The university used the services of final year students (students who were on one-year compulsory teaching internship practice) who, through their training in Education for the Hearing Impaired (EHI) in the Department of Special Education, had some signing skills to serve as interpreters for the DHH students. Occasionally, students who were in the same classroom with DHH students supported their DHH colleagues whenever their interpreters were absent. This kind of service provision continued for the DHH students until the year 2013 when the university officially recruited its first batch of fulltime interpreting staff. Interpreters who work in this university out of their experience with the DHH students continue to improve the services they provide but have not acquired any form of professional certificate to serve as interpreters. It must also be noted that, in Ghana, there is no professional body in charge of certifying interpreters.

Since the year 1968, when the Ghana National Association of the Deaf (GNAD) was formed to bring together the Deaf in Ghana and to serve as an advocacy group for the deaf, they have worked tirelessly to provide some form of support and training for their members by engaging and training more interpreters. Currently, GNAD has a catalog of interpreters across the various 10 Regions of Ghana (now Ghana has 16 regions but the catalog reflects the old regions), who they recognize. GNAD uses their services any time they interpreters are required.

Paradigms of Signed Language Interpreters

Interpreters who serve DHH individuals continuously work in different paradigms. For most of them, the paradigms they work in mostly depend on how they were first recruited and the setting where they work. Due to the nature and how interpreting has emerged in the country, most signed language interpreters are family members, church members, and classmates of DHH people. This association with the DHH people often makes the majority of interpreters feel DHH people need help since they are not able to advocate for themselves because of the communication difficulty they presume DHH people have. Such interpreters with this kind of motivation often work as "aid givers" and "helpers" for the DHH individuals. Interpreters who served DHH consumers using this particular paradigm of interpreting often have no formal training in interpreting and are often not remunerated (Frishberg 1986; Wilcox & Shaffer, 2005). The majority of interpreters who serve in this paradigm in Ghana are People from Deaf Families (PDFs, commonly referred to as Children of Deaf Adults, or CODA; see, for example, Napier & Leeson, 2016), neighbours, church members, friends, and classmates who often come in to support DHH individuals whenever there are communication difficulties emerging

for DHH people. Often since most interpreters believe DHH people cannot be independent without their support, the interpreters often accompany them to places like churches, banks, hospitals, police stations, court rooms, and sometimes even to schools. Such interpreters in Ghana do almost everything for DHH individuals, by trying to "educate" and "convince" hearing people on the "inefficiencies" for the DHH people. In the school settings, interpreters who operate in this paradigm wish they were given the opportunity to do assignments and even write exams for DHH individuals. Interpreters who often operate in this paradigm advocate for helping DHH individuals in an admirable way since they think that without them DHH individuals could not survive on their own personal, social, and professional businesses (Roy, 1993, 2000).

Another group of Ghanaian interpreters who believe that interpreting is a profession, view themselves as professionals and operate in a different paradigm of interpreting for DHH consumers. Though there is not professional body in charge of the training and certification of interpreters. These interpreters often do not want to align with one particular cohort of consumers (i.e., the hearing or DHH individuals) and as such often prefer to work as people who are "invisible" in the interpreting process. Those interpreters often operate in a paradigm referred to as the "machine" or "conduit" paradigm. Since the establishment of the Registry of Interpreters for the Deaf (RID) in 1964 in the United States of America (USA), interpreters began to critically assess the interpreting process and their role as interpreters (Wilcox & Shaffer, 2005). Interpreters' critical analyses of their role brought about the need for them to be viewed as invisible in the interpreting event and they worked much like machines. This paradigm suggested that interpreters should be nothing more than a conduit for communication; that interpreters should remain emotionally and personally detached from the interpreting situation. Interpreters who go by this paradigm only act as amplifiers whose role is solely to re-echo what is said in spoken languages to signed language and vice versa. They do not necessarily focus on encoding source messages and ensuring the same meaning and value of content are maintained when the messages were converted into the other language (spoken or signed). Wilcox and Shaffer (2005) explained that this paradigm has made interpreters alienate themselves from both the hearing and Deaf communities during the interpreting process. Interpreters who adopt this paradigm often do not socialize with DHH people because they think their role basically is to interpret and anything exceeding that is classified as unprofessional. Interpreters who support this paradigm advocate that interpreting programmes should ensure that they include some self-discipline in order to aid interpreters consciously detach themselves, staying neutral, impersonal, and objective in the execution of their duties (Quigley & Youngs, 1965; Wilcox & Shaffer, 2005). The interpreter's role as communication conduit has been explained as,

> The sign language interpreter acts as a communication link between people, serving only in that capacity. An analogy is in the use of the telephone – the telephone is a link between people that does not exert a personal influence on either. It does, however, influence the ease of communication and speed of the process. If the interpreter can strive to maintain that parallel positive function without losing vital human attributes, then the interpreter renders a professional service. (Solow, 1981, p. ix)

To consider interpreters in interpreting as "invisible" and to act as machines implies that interpreters do not exist and their contribution to the communication process should not be recognised. Some interpreters in the country argue that though it is necessary for interpreters to be professionals, there is the need for them to be assertive in their roles. This kind of argument makes some interpreters who have received some form of formal training and have acquired skills to operate using the communication facilitator paradigm. In the communication facilitator paradigm, interpreters advocate for the need for interpreter education and training to be a vital part in advancing the profession to see interpreters as individuals who have specific communication roles and responsibilities (Gish, 1990; Trine, 2013). Interpreters who operate within the communication facilitator paradigm, often have pre-assignment meetings with their consumers and discuss with them what their roles, responsibilities, and expectations are from their consumers in the interpreting process (Trine, 2013). Ingram (1974) proposed this paradigm. In his exposition on the paradigm, Ingram explained that there is the need for interpreters to be more assertive in their role: explain to hearing individuals what their roles are, arrange seating/lighting, exert control over the environment, and take responsibility to meet the DHH consumers prior to beginning their assignments. Ingram explained that this paradigm was meant to "define the interpreting process in a scientific manner and suggest implications for examining various aspects of interpreting within the framework of that model" (Ingram, 1974, p, 1).

In the communication facilitator paradigm, Ingram (1974) suggested four major critical contributors of an effective interpreting process. The four were the source (encoder or decoder), channel/interpreter (decoder and encoder), receiver (decoder or encoder), and the communication environment (setting). Figure 1 gives a diagrammatic view of Ingram's model. He viewed signed language interpreting as a communication process and as such each of the four key variables play active roles in the process. Ingram highlighted how the process of interpreting should be by stating that,

> When the hearing person speaks his message in English, the interpreter must decode the message from its spoken symbols to determine the thought embodied in those symbols and then encode the message once more into the visual symbols of the language of signs. The deaf person must then decode these visual symbols to arrive at the meaning of the communicated message. (Ingram, 1974, p. 2)

Although Ingram acknowledged that different stakeholders contribute to an effective interpreting process, he did not spell out the specific roles of each member in the process.

Figure 1

Communication Binding Context (adapted from Ingram, 1974)
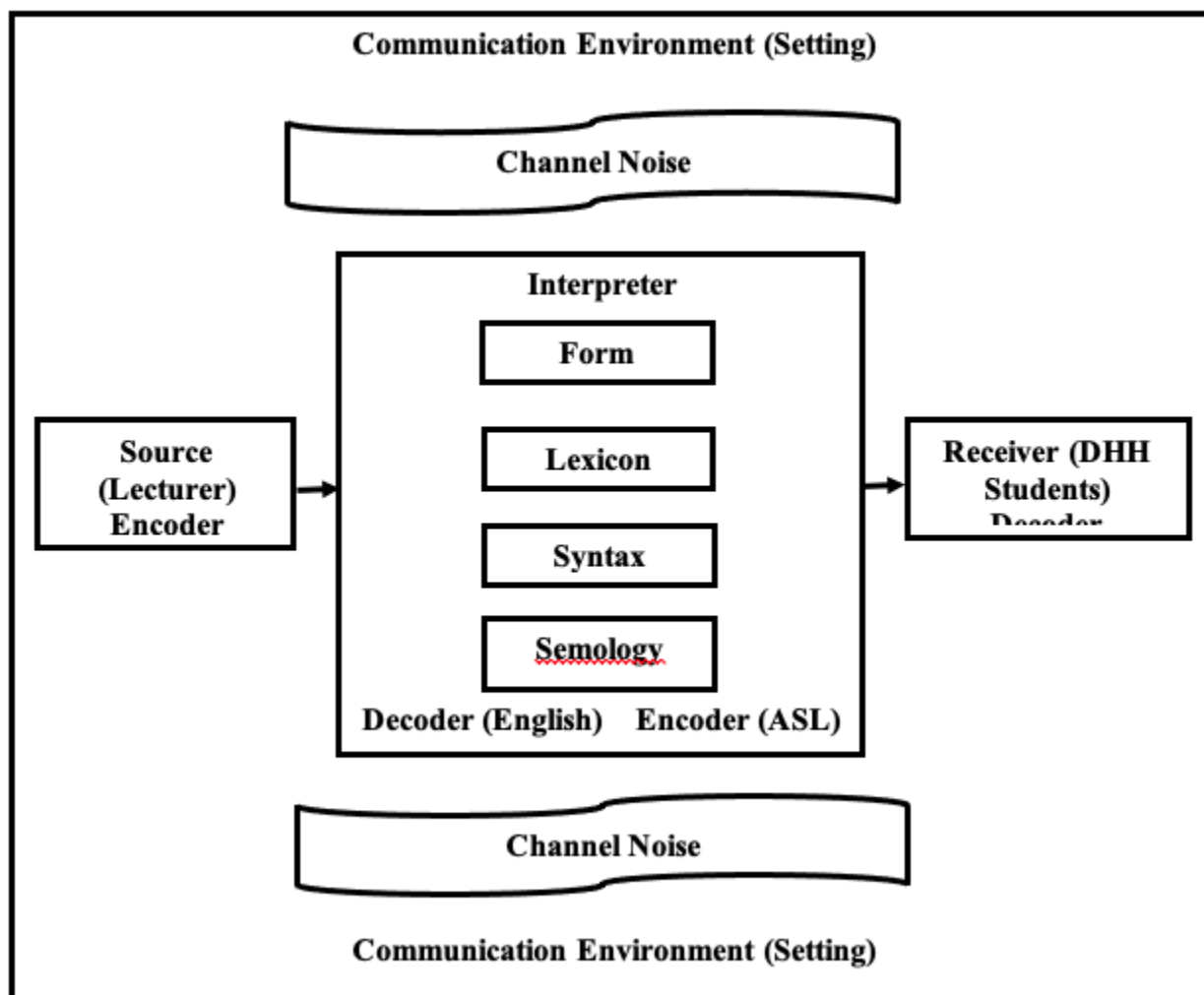
Also, some interpreters work on the assumption that language and culture are inseparable and for interpreters to conveniently mediate between DHH individuals and their hearing interlocutors, the interpreters need to understand and know how to work between the cultures of their consumers. Interpreters who work with this assumption employ the bilingual bicultural (Bi-Bi) paradigm. Interpreters who employ this paradigm of interpreting assume the responsibility of mediating between languages and cultures; between hearing and DHH interlocutors whilst helping the speaker to

achieve their goals in communication (Humphrey & Alcorn, 2001). Wilcox and Shaffer (2005) explained that Etilvia Arjona, a spoken language interpreter proposed the Bi-Bi model but it was Ingram, a signed language interpreter, who stressed that "language" and "culture" were inseparable. Roy (1993) added that the interpreting process is considered to occur in a situational/cultural context which forms part of the process. Roy added that it is important to consider the cultural context so that the gap that separates the sender and the receiver will be bridged. This paradigm allowed for signed language interpreters to take the responsibility for the exact transmission of communication by asserting the need for interpreters to mediate not only between two languages, but also two separate and very distinctive cultures.

Another paradigm that interpreters operate in is the Ally paradigm. This paradigm is often used by interpreters who work in educational settings (Wilcox & Shaffer, 2005). Interpreters who work using this paradigm insist that they are no longer responsible for pushing for the rights of DHH individuals, but rather lend themselves as an ally to their clients (both hearing and DHH), letting them know that the interpreter would accurately convey anything they wish to say. This paradigm endeavoured to avoid the inadvertent oppression of the DHH individuals. It is important to note that this paradigm assigns some responsibilities to each of the parties involved in the interpreting process particularly the hearing and DHH consumers, and the interpreter. In this paradigm, interpreters should see the DHH client as experts of Deaf Culture and signed language. It also important to add that the interpreter should allow the client to advocate for themselves whenever needed and their role as interpreters is to be responsible for providing accurate interpreting. The positive side is the attempt to empower the participants in the communication to advocate for themselves, while the interpreter still takes responsibility for the accuracy of communication. This paradigm allows interpreters to best decide the way to communicate a message in order to transfer the content meaning without necessarily interpreting whatever they hear/see.

The final paradigm that very few interpreters operate in is the progressive or "sore thumb" paradigm. Basically, this paradigm shows the evolution of the interpreter as a professional by following the same path that the profession has taken. Young student interpreters enter following the Helper paradigm (most often), viewing d/Deaf individuals as people in need of assistance. After graduation from interpreter training programmes (ITP), the young professional now enters a stage based entirely upon their ethics, or the conduit/machine paradigm. As the interpreter gains more years of experience, they progress to more accurate communication facilitator paradigm. Finally, they plateau as seasoned professionals using the communication, Bi-Bi, and Ally paradigm depending upon the situational needs.

Legislation supporting interpreting in Ghana

This section provides information on legislation supporting interpreting in Ghana. Generally, special needs education for persons with disabilities including DHH individuals and inclusive education is backed by legislation. However, the legislations are yet to be actively instituted and enforced. However, the Persons with Disability Law (ACT 715) of Ghana, which has 60 sections, was passed on August 9, 2006. The Act gave recognition to the teaching of signed language in colleges of education. The Act makes it a legal offense punishable by ten penalty units (a unit is GH₵ 12.00) or fourteen days imprisonment for any parent who refuses to enroll their school-age children in a school. It also makes it an offense for any head of public educational institution to refuse to enroll a school-age child on the grounds of disability such as deafness. However, since Ghanaian Sign Language (GhSL) is not officially recognized in the country, there is no specific legislation supporting interpreting.

Forms of signed language that exist in Ghana

Ghana has three different signed languages, the Ghanaian Sign Language (GhSL), Adamorobe Sign Language (AdSL) (see Edward & Akanlig-Pare, this volume), and Nanabin Sign Language. Ghanaian Sign Language is language used by the majority of DHH individuals in Ghana (Fobi & Oppong, 2018). It is also the language used as medium of instruction for schools for the Deaf in the country. Foster used ASL as medium of instruction in the schools for the Deaf he started in Ghana in 1957. With time, the Ghanaian deaf people combined their local signs and ASL, so GhSL is made up of ASL and local signs. Although it has not been officially recognised as the language of Deaf people in Ghana, GhSL continues to be the most common language for the majority of Ghanaian Deaf people. In some parts of Ghana, there are slight differences in the formation of some signs of GhSL, but these differences do not take away the fact that deaf people

who have acquired GhSL from one part of the country can communicate with a person who is Deaf who has learned GhSL from another part of the country. The variations in some of the signs in GhSL is often due to hearing people (usually, hearing teachers) who have acquired the language. The teachers often use their own created concepts in place of concepts that are not familiar to them. Again, based on the geographic location of Deaf people, their sign for some concepts may differ from some signs used by Deaf people from another part of the country.

The next signed language widely used by deaf individuals is in a community called Adamorobe in the Eastern Region of Ghana and is AdSL (see Edward & Akanlig-Pare, this volume). Adamorobe is a small community with a population of about 1400 which has a large number of Deaf individuals (Nyst, 2007, 2010). There has been a high incidence of hereditary hearing loss among some generations in this community. The Deaf people in the community have their own local signed language, AdSL, for communicating. AdSL is totally different from GhSL.

Also, in the Central Region of Ghana, there is a small village called Nanabin. Nanabin has a family which has three generations of deaf people (Nyst, 2010). That family has about 26 members who have their own way of communicating through signed language; the name of this signed language is Nanabin Sign Language (NaSL). Although NaSL and AdSL have some common features in their expressions, they are set apart from each other since knowledge in one of them will not enable one to communicate in the other (Nyst, 2010).

Perceptions of interpreting in different communities

Within different communities, in Ghana, interpreting is perceived differently. Amongst the local indigenous people, they are of the view that having a deaf child or being a PDF should automatically equip them with the skills and knowledge relevant to interpret. This kind of understanding often makes people think that, even without any form of training and certifications, interpreters can conveniently interpret for their consumers. Also, because of their cultural beliefs and superstitions, some people stigmatize interpreters across various communities in Ghana. Some people believe that deafness is contagious and that the ability to sign will likely result in giving birth to deaf children. This makes many parents discourage their children from associating with deaf people and learning signed language.

In the religious settings (often churches and mosques), people stress the need for people to learn signed language so that the word of God could be provided to Deaf people. They think that, being able to win a Deaf person's soul for God is often worth more than about 50 hearing souls for God (Clergy in Ghana, personal communication, 2016). As a result, religious organizations encourage the learning of signing and promote the activities of Deaf people so that Deaf people can be fully integrated into the religious communities. Some religious bodies especially the churches, have trained interpreters who serve Deaf people at their gatherings. Others have even trained some deaf people to be preachers, evangelists, and pastors. Often interpreters who visit religious gatherings are regarded as people with high levels of intelligence and skills who are often respected and given special treatments.

Interpreting in educational settings is done on different levels (basic through tertiary) of education in the country. Often it is in inclusive settings that interpreters are available. As part of the goals of inclusion, hearing students with deaf classmates often learn signed language and are able to communicate with their peers. Because of this, some people are of the view that such students should be used as interpreters without any form of remuneration or support. Some institutions do not see the need to hire and pay interpreters to support deaf students and this often leads to an inadequate number of interpreters in inclusive schools. Other institutions, mostly at the tertiary level, have tried to employ permanent interpreters and some part-time interpreters to support DHH students. A section of the community in education think that being able to interpret means that the interpreters have high level intelligence quotient (IQ) and such people regard interpreters in high esteem because they think interpreting is an art which requires high levels of knowledge and skills. Often, people in this community especially students and teachers, want to engage some individuals to learn signed language so that they can also communicate directly with DHH students. Another section of the educational community does not think interpreters should be given any special treatment. This group of people regards interpreting as a waste of time because they believe that since DHH students have literacy skills, there is no need for any form of mediation. Even though people's perceptions about interpreting continue to change with time because of education and awareness about DHH people, there still exists a group of people who hold on to the primitive idea that Deaf people are dependent on hearing people and cannot learn on their own.

Types of interpreters working in religious, law, hospitals, TV programmes, and educational settings

Different types of interpreters exist for DHH individuals in Ghana. In communities like Adamorobe and Nanabin, often family members of the Deaf community who have acquired both GhSL and (either NaSL or AdSL) serve as interpreters. The majority of interpreters in those communities are PDFs who have also had the opportunity of formal education in GhSL. They serve as interpreters whenever there are Deaf visitors to the community. Those interpreters are often Deaf themselves. Another form of interpreting which exists for local PDFs is from the AdSL or NaSL to local spoken language (often Akan). Anytime there are hearing visitors to the towns, the PDFs interpret for the deaf in the community and also for the visitors. Often if the interpreter serving in this community has had some formal education and can communicate in English, they often do the interpreting between the AdSL or NaSL and English. In situations whereby the interpreters cannot communicate in English, they often use a third person who is conversant with the local spoken language and English to do secondary interpretation.

In places where GhSL is used, interpreting is often done between the GhSL and English or the spoken language being used at the time. Settings including religious, legal, and hospitals often have interpreters mediating between local spoken languages and GhSL. On TV and educational settings, often interpreters serve between GhSL and English. In most cases in religious, legal, and hospital settings, there are no signed language interpreters available, so people use gestures and sometimes write in case the Deaf person is literate in order to communicate. In most of the formal settings (health, education, legal), there are no permanent interpreters available, so interpreters are called upon when their services are needed. On TV, it is only the Ghanaian Television (GTV) and Amansan Television (ATV) that have some permanent interpreters. For the most part, they interpret the evening news and national events. Even on those stations, the size and position allocated to the interpreters on screen often makes it difficult to see the hands and signs of the interpreters clearly.

Recruitment and training of interpreters in various settings

Different settings have different ways of recruiting and training signed language interpreters. With regards to the recruitment, often it is People from Deaf Families (PDF) who by virtue of having Deaf family members decide to learn signed language and eventually end up as interpreters. Some interpreters also acquire the language naturally because their parents are Deaf and are then recruited into the interpreting field. At religious settings, often announcements are made for interested people to come up to be trained to serve as interpreters for Deaf members. Again, some interpreters attend same schools with Deaf people and learn signed language in the course of their study and end up as interpreters. The Ghana National Association of the Deaf (GNAD) also organises and trains interpreters to support the Deaf community in Ghana. At educational settings, the majority of interpreters have had some training from the Education for the Hearing Impaired (EHI) of the Department of Special Education, University of Education, Winneba (UEW). The majority of students who receive their training from the EHI end up with some signing skills and eventually end up serving as signed language interpreters.

Conclusion

Globally, signed language interpreting has seen a face lift. Through advocacy of Deaf communities, different countries have recognized and accepted signed languages as formal languages and modes of communication for Deaf individuals. These recognitions of signed languages also push for the need for interpreting to be promoted in every country where Deaf individuals exist. Although interpreting has been in existence for Deaf and hard of hearing individuals since the formal initiation of signs into educational systems (Fobi & Oppong, 2018), many people have still not recognized interpreting services. Many are of the view that interpreting as many will refer to as "signing" is a free service that is often rendered by children, classmates, and church members with relationships to Deaf people. The providers of interpreting services (interpreters) in most of the cases think they are aid givers who provide some aid to Deaf individuals to facilitate their communication. In Ghana, there are mixed reactions toward what interpreting service is, and whether or not that service should be seen as a profession; this has been an ongoing debate among various stakeholders of the services.

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