Studies on Indigenous Signed and Spoken Languages in Africa

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Edited by

Emmanuel Asonye and Mary Edward

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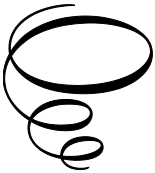

Studies on Indigenous Signed and Spoken Languages in Africa

Edited by Emmanuel Asonye and Mary Edward

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This book honours the steadfast dedication of all individuals who work persistently in the field of indigenous African languages, both spoken and signed. It is a tribute to the scholars, linguists, educators, and activists who devote their time and energy to unravelling the complexities of Africa's linguistic landscape. We dedicate this collection, "Studies on Indigenous Signed and Spoken Languages of Africa," to those who labour persistently to conserve, comprehend, and appreciate Africa's different cultures' rich linguistic legacy. Your efforts transcend borders, ensuring that these languages thrive in the face of current difficulties and contribute to the vibrant cultural mosaic of Africa.

—Emmanuel Ihechi Asonye (PhD)
Founder and CEO, Indigenous Hands and Voices (IHAV); Save the Deaf and Endangered Languages Initiative (S-DELI)

—Mary Edward (PhD)
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ACKNOWLEDGEMENTS

This book is the result of the collective efforts of many committed scholars and researchers who have worked persistently to advance the study of indigenous African languages. Their dedication to studying these languages from a regional viewpoint has made a substantial contribution to the field of African language research, broadening our awareness of the continent's linguistic variety. The chapters in this volume demonstrate a diverse range of linguistic analyses and approaches, all of which contribute to the overarching goal of understanding and maintaining indigenous languages in Africa. The authors' research brings to light the distinct and nuanced characteristics of languages spoken and signed in Cameroon, Gabon, Ghana, and Nigeria.

We are grateful to the contributors, whose innovative research has expanded our understanding and appreciation of these languages. Their dedication to unravelling the complexities of African linguistic history has been crucial in furthering our understanding of language rights and documentation in the context of indigenous African communities.

Furthermore, we want to thank the organisers of the first international virtual conference on indigenous African signed and spoken languages, which was held in 2021. The Conference was organised by Save the Deaf and Endangered Languages Initiative (S-DELI) in collaboration with the Department of Africana Studies (University of New Mexico), National Institute for Nigerian Languages (NINLAN) and Nigerian Languages Project. The conference's theme, “Indigenous Hands and Voices of African Identity: Discourse on Language Rights,” laid the groundwork for the important conversations and research covered in this volume. The conference provided an essential platform for scholars, linguists, and language advocates to gather and exchange their important perspectives.

Finally, we would like to express our appreciation to the volume's readers and supporters. By using this book, you help to recognise and preserve Africa's indigenous communities' language history. Your enthusiasm and support serve as a catalyst for further research and comprehension of these different languages. We hope this volume serves as a tribute to the relevance and richness of indigenous African languages, urging future generations of academics to continue their efforts in the pursuit of linguistic knowledge and cultural preservation.

—Emmanuel Ihechi Asonye (PhD) and Mary Edward (PhD)

INTRODUCTION

STUDIES ON INDIGENOUS SIGNED AND SPOKEN LANGUAGES OF AFRICA

EMMANUEL ASONYE
AND MARY EDWARD

Africa is known for its diverse linguistic heritage as well as its rich cultural heritage and magnificent landscape. The continent is a linguistic treasure trove, with around one-third of the world's languages spoken within its borders. This linguistic wealth is the result of the interaction between indigenous languages, which are deeply rooted in many ethnic groups, and imported foreign languages, which were left as a legacy of colonialization. Scholars have long been interested in the history, origins, and linguistic peculiarities of African languages. As of 2021, Africa had about 2000 languages (Eberhard et al. 2022), each associated with diverse ethnic groups spread over the enormous continent. The linguistic environment reflects the continent's rich cultural tapestry and millennia-old legacy. Some of these languages have prospered across vast territory, while others have remained limited to small villages and local communities. Nigeria is Africa's most linguistically diverse country, with 522 languages (Eberhard et al., 2022). This diversity reflects the varied nature of African communities and their extensive histories.

Africa's languages can be divided into two groups: indigenous languages and imported languages. Indigenous languages are profoundly established in distinct ethnic groups' traditions, customs, and history. They have changed throughout the years to meet the changing needs of their speakers. Imported languages, such as English, French, and Portuguese, on the other hand, were introduced to the continent during the colonial era. Despite their foreign roots, these languages have become vital components of communication, education, and governance in several African countries.

Within Africa's wide linguistic landscape, a distinct dichotomy arises between majority and minority languages. While majority languages have

extensive usage and support, minority languages frequently encounter obstacles in maintaining their relevance and vitality (Brock-Utne 2017). The dominance of dominant languages can marginalise minority languages, resulting in decreased usage and, in some circumstances, endangerment (Brock-Utne 2017; Edward 2022) Recognising the importance of conserving linguistic diversity, efforts must be taken to safeguard and revitalise these minority languages so that they can continue to contribute to Africa's rich cultural heritage.

African language research is not a new endeavour. Linguists and academics have spent decades trying to decipher the complexities of these languages. The majority of study, however, has generally focused on spoken languages, leaving indigenous African sign languages understudied and underappreciated. Addressing this research gap is critical because sign languages play an important part in the lives of deaf populations, providing unique insights into the different language modalities.

The survival of indigenous African languages is dependent on a number of variables, including the creation of conducive environments for their continuous use. This includes encouraging bilingual education, instilling pride in native languages, and incorporating them into formal educational systems. Additionally, adequate linguistic documentation and description are critical for the survival of these languages. Linguists must work with native speakers to accurately record the nuances and grammar of these languages, ensuring that their heritage is passed down to future generations.

This volume presents research on indigenous African language, either spoken or signed. The areal perspective of this volume contributes to the research on African languages. The contributions in this volume present different linguistic analysis and methodologies to understanding indigenous languages in Africa. This volume emerged from original papers presented at the first international virtual conference on indigenous African signed and spoken language held in 2021. The theme of the conference, Indigenous Hands and Voices of African Identity: Discourse on Language Rights, focused on research done in areas of linguistics and language documentation in indigenous signed and spoken languages in Africa. The volume name “Studies on Indigenous Signed and Spoken Languages of Africa (SISSLA)” is a compilation of novel research on indigenous African spoken and signed languages. The contributions present original research on indigenous languages in Cameroun, Gabon, Ghana, and Nigeria.

The different contributions cover sign language research, onomastic, translation, language development and documentation, and tonology. The

overall purpose of this book is to provide insight into the indigenous spoken and signed languages in African countries highlighting their unique features while creating awareness for language endangerment. Some of the discourse in this book focus on the linguistic of indigenous African sign languages, Deaf culture and sign language endangerment, translation, teaching and learning indigenous African languages, socio-cultural implications of indigenous personal names, communicative practices, tones in indigenous languages among many others. The different chapters discuss important issues relevant to the sustenance of indigenous African languages and contributors are from different academic and research institutions in Africa, Europe, and North America.

The structure of the volume

The book is divided into five parts focusing on different discussions on indigenous African languages.

Part I: Sign Languages presents research on indigenous sign languages in Cameroun, Ghana, Nigeria and Gabon. It has chapters on linguistic description, iconicity, creolization, language endangerment and deaf education.

Asonye and Akpan's chapter, "A Preliminary Study of Magajin Gari Sign Language" presents a preliminary study of Magajin Gari Sign Language (MGSL). MGSL is an indigenous signed language used in Kaduna North in the northern part of Nigeria, with a small number of speakers. Their research is the first detailed study on the MGSL, and the authors present detailed demographic information on MGSL and the users. An important point raised in this chapter is the lack of child users of MGSL and the need for immediate documentation.

Dolza and Ebouaney's chapter is titled "Contrastive analysis between the Langue des Signes Française and Langue des Signes Française used at the St. John the Baptist School of the Deaf and Special Needs Children of Bertoua." The authors identified the possible creation of a creole sign language at the St. John the Baptist School of the Deaf and Special Needs Children of Bertoua, which seem to be different from the popular Langue des Signes Française (LSF). The authors highlight the fact that signers do not seem to be aware of the existence of a Cameroonian Sign Language and they think they are using the Langue des Signes Française. This novel or better still creole sign language is indigenous of Bertoua school for the deaf. The school's location has a strong linguistic fragmentation and that might support the emerging sign language in Bertoua.

Edward's two chapters in this volume consider two different aspects of Adamorobe Sign Language (AdaSL). Her first chapter, "Iconicity in lexical and grammatical categories in Adamorobe Sign Language" explores iconicity in AdaSL, an indigenous sign language used in Adamorobe in Ghana and discusses lexical and grammatical data on iconicity in AdaSL. The chapter also considers the different strategies for form-meaning resemblance mapping. Finally, the chapter compares AdaSL to other sign languages to demonstrate that the visual-spatial modality of sign language permit diverse iconic strategies to be used by signers.

Edward's second chapter, "*Signing Out*: Linguistic Contact and Possible Endangerment of the Adamorobe Sign Language" considers a major issue in Deaf communities with linguistic diversity. The chapter considers language contact and its effect in Adamorobe. Edward highlights the fact that AdaSL is gradually losing popularity among the native signers, and the younger deaf are signing with the Ghanaian Sign Language. Finally, Edward discusses how language contact and local laws have led to a progressive endangerment of AdaSL and proposes documentation as the means to preserve this language as a linguistic artifact.

The final chapter in Part 1 is from Paul Mouziengou who considers the "Sign Language Situation in Gabon." Paul considers the linguistic diversity of Gabon and the enormous influence of deaf education, emphasising how it has provided deaf people with the tools they need to survive in Gabonese society. The chapter also mentions the presence of foreign based sign languages and indigenous sign languages in Gabon. Exploration of indigenous sign languages is an important step towards recognising and protecting Gabon's deaf community's cultural identity.

Part II: Translation presents research on the issues of translating and effective communication. The two chapters in this section consider pandemic communication challenges (Covid-19) and the legal communication challenges.

Chiemezie's chapter "Challenges to Media Translation Services: Implications for Effective Communication during the Covid-19 Pandemic" presents the challenges of translating foreign concepts into local languages and the challenge that this poses to communication effectiveness. The author presents the Covid-19 awareness jingles with focus on the choice of words and how the media employed translation and translated terms established by professional bodies for the promotion of the Igbo language. Chiemezie compared the efficiency of the translation to Igbo and identified

that only one of the media outlets paid a near perfect adherence to the existing translation.

Patricia Ngozi Ijioma's chapter on "Doublets in Legal Parlance in English and Igbo: Implications for Translation" considers the challenges of translating English doublets into Igbo for legal purposes. The author discusses the problems faced by Igbo legal translators and suggests the way forward. Ijioma emphasises the importance of cultural context and meticulous attention to detail in the translation process by diving into the challenges encountered by Igbo legal translators. Legal concepts are firmly established in their different cultures, and any loss or distortion of meaning during translation can have serious implications for legal comprehension and implementation.

Part III: Onomastic, considers the study, origin, and social implications of names. The chapters under this section focus on sociocultural study and the meaning of Igbo names.

Okoli and Egenti's chapter "A Sociocultural Study of Nicknames in Igbo" focuses on nicknames and nicknaming within the Igbo culture of Nigeria. The authors consider the nicknames used by both old and young people living in different locations of Anambra State in Nigeria. The chapter concludes that different sociocultural factors contribute to nicknaming in the Igbo culture and the choice of a particular nickname is indicative of the bearer's identity, cultural inclination, current and future realities.

Okeogu and Emejulu's chapter *"Ahamefula*: Restoring Pride and Meaning to Igbo Names" considers Igbo names as a social communication construct. Exploring the Igbo philosophical, sociological and cultural concept of identity, the authors found out that the decline in choosing Igbo names and the preference for Judeo-Christian and English names is part of a bigger picture. The neglect of families to pass on their Igbo identity and language to their children is a recipe for identity loss in the future.

Part IV: Language Development and Documentation covers a wide range of topics relating the development and documentation of African languages. From language teaching and learning strategies, linguistic classifications, orthographical development, language attitudes and language rights, Part IV raises the borderline issues of most African languages. The lack of interest in the development of languages in many African nations have led to issues of endangerment and moribund languages.

Chikezie and Ikonne embark on a vital exploration of the pivotal role that multiple intelligences play in the teaching and learning of Igbo

language in their chapter, “Assessment of Multiple Intelligences and Effective Teaching and Learning of Igbo Language in South-East Geo-Political Zone, Nigeria.” The authors' research delves into the complexities of tailoring instructional methods to meet the different learning styles and aptitudes of the students in Nigeria's South-East Geopolitical Zone. Recognising that individuals have different intelligences and learning preferences, Chikezie and Ikonne argue for the use of a variety of teaching methods, with a particular emphasis on activity-based teaching practises. Educators can better meet the specific needs and skills of each student by embracing a diverse range of instructional methods, thereby building an environment favourable for effective Igbo language teaching and learning.

Asonye and Fatosin’s chapter considers “Noun phrase in Alago” a minority language, spoken by about 350,000 native speakers in the northern part of Nigeria. The authors delve into the constituent structure of the Alago noun phrase giving light on the numerous aspects that comprise this linguistic construct. Asonye and Fatosin reveal the intricate relationships and functions that each ingredient plays within the noun phrase by investigating the roles played by these constituents. Furthermore, the authors explore the position of the head in the Alago noun phrase. Understanding the placement of the head is critical in understanding how the noun phrase transmits meaning and expresses relationships between different elements.

Adeolu’s chapter on “Multi-variety pattern of language endangerment: Language attitudes and variety definition in Nigeria” throws light on a pattern of language endangerment where minority varieties give way to majority languages. Using Yoruba (majority) and Iffe (minority) as case studies, the author considered the different variables that trigger preference and alignment with majority languages. Adeolu brings attention to the issues faced by minority languages in Nigeria and worldwide by shining light on this multi-faceted pattern of language endangerment.

Imelda Udoh considers “Language Rights and African Indigenous Spoken Languages” and explores the linguistic rights of speakers of indigenous African languages of both majority and minority groups. Udoh considers the fact that although provisions are made for the rights of the Indigenous African languages, the huge numbers of the languages involved, and the complexities of the sociolinguistic realities erode these rights and render the efforts on implementation ineffective. The chapter proposes the need to promote language rights, especially of the indigenous languages, bearing in mind that language rights are particularly important for accessing other aspects of human rights.

The chapter by Ukaegbu and Chinedu is titled "Employing indigenous Nigerian languages in health communication to social media publics." The authors believe that social media has become a popular source of exchanging health-related information during pandemics. Their chapter discussed how three major Nigerian languages, Hausa, Igbo, and Yoruba, were used on YouTube to educate Nigerians about the COVID-19 pandemic. It also analyses how these languages are effectively used in connecting with the Nigerian social media public in order to assist them in responding appropriately to the pandemic. After evaluating 75 YouTube videos, the authors claim that little attempt was made to employ Hausa, Igbo, and Yoruba languages to sensitise Nigerians to the pandemic in the form of animation and genuine footage on YouTube. The chapter finds that the majority of videos used in talking about the virus on YouTube were in English and Nigerian Pidgin English rather than Hausa, Igbo, and Yoruba, implying a low utilisation of indigenous Nigerian languages in health communication on social media.

Oyinloye argues in the chapter "Towards a Typology of Interfixation: Making a Case for Yorùbá" that Yorùbá attests interfixes rather than infixes. Oyinloye's analysis revealed that interfixation in standard Yorùbá often entails reduplicating a root noun (base) to the left, followed by the insertion of an affix between the reduplicant and the root noun, and the derived word reflects some phonological shift. According to the proposed interfixation typology, Yorùbá strictly adheres to "bi-morphemic interfixation with identical constituents" and predominantly attests "interfixation with modification," with only a few instances of "interfixation without modification" in the language involving consonant-initial roots where only the -k- interfix is used.

The chapter "An Investigation of Selected Lemmas and Their Morphology in English, Ipe, and Yoruba" by Olagunju looks into selected lemmas and their morphology in the Ipe and Yoruba languages. The study demonstrates that blending, compounding, coinage, backformation, borrowing, and descriptive translation are among the morphological processes used by the Ipè and Yorùbá languages in the formation of their lemmas. The chapter concludes that it is necessary to pursue additional research interests in the morphology of indigenous languages in order to save them from extinction and/or death.

Iyalla-Amadi's chapter "Digital Numeracy In Kalabari: Proposed Numerical Models For A Digital Age" discusses the significance of digitalization in the modern era. It emphasizes the importance of digital numeracy for individuals to thrive in the 21st century, paralleling literacy skills in reading and writing. To bridge this gap, the chapter proposes the

integration of new numerical models, including decimal-based and digitally-compliant counting systems, tailored for the Kalabari language. This aims to empower Kalabari speakers, particularly the younger generation, to engage more meaningfully with contemporary technology, fostering a digital revolution that revitalizes the language and aligns it with the demands of the digital age.

Part V: Tonology provide a comprehensive overview of tonal phenomena within three languages, exploring the tonal levels, patterns, and functions in Ósósọ̀ and Ghòtùọ̀, while uncovering the intriguing phono-semantic aspect of tonal homophones in Ibibio. These studies are valuable contributions to the field of linguistics, furthering our understanding of the rich and diverse tonal systems present in the languages of Africa.

Legbeti's chapter explores "Tone in Ósósọ̀." Focusing on the understudied Edoid language, Ósósọ̀, the study investigates its tonal levels, tone patterns in lexical categories, and the basic function of tone. The findings reveal Ósósọ̀ as a discrete level tone language with two basic tones, High (H) and Low (L), with an additional downstep high at the phonetic level, resulting in a terrace pitch melody. The L tone is less restricted in the language, allowing it to follow another L in a disyllabic form, whereas H is realized as a downstep (!H) when it occurs consecutively. This chapter provides valuable insights into Ósósọ̀'s tonal system and contributes to a broader understanding of tonal languages.

Bankale's chapter "Tone in Ghòtùọ̀" investigates the tonology of Ghòtùọ̀, one of the North Central Edoid (NCE) languages spoken in Edo State, Nigeria. The author emphasises the lexical and grammatical functions of tone in Ghòtùọ̀. Tonal processes including tonal elision, segmentalization, assimilation, and morphotonemic alternations are also considered. The chapter defined Ghòtùọ̀ as having a unique terraced level tone system with three tone levels of High, Mid, and Low, with a downstep responsible for the terracing. This tone system distinguishes Ghòtùọ̀ from most Edoid languages with the typical two tone plus a downstep. Ghòtùọ̀ non-low tones before a Low cause an immediate downstep, while high tones do not.

The chapter "A sketch on tonal homophone in Ibibio" by Noah and Okon examines tonal homophone as a phono-semantic phenomenon in which a linguistic form has the same sound-tone equivalence but provides various denotative meanings. The preliminary findings of this study indicate that: a) tonal homophony is not only more common than commonly assumed, but it is also a notorious factor in semantic ambiguity; b) it has implications for translation and automatic speech

recognition; and c) it can be used covertly, but effectively, for hate speech, vilification, and deception.

The way forward

The different parts of the volume contribute to different discussions on African languages. Although there seem to be a recent interest in the linguistics of minority languages in Africa, there is still a lot more to be done and linguistic coverage is still minimal. It is of no doubt that African linguistics is gradually incorporating novel linguistic fields (such as sign language linguistics), but the more researchers delve into the linguistic of African languages, the more emergent documentation and description is needed (Asonye, Edward and Asonye 2020; Essegbey, Laughlin, and Henderson 2015.). While research on some moribund and endangered languages seem to bring an air of hope, there is also the worrying effect of language shift boosted by the desire to be associated with the languages of power and authority. Even the majority languages such as Igbo are not left out in this gradual loss of interest (Nwabueze and Okoli 2016). Fortunately, there is resurgence of Africans with positive identity about the language and their culture.

The different contributions in this volume indicate the need to be intentional about promoting, documenting, and describing the linguistic features of African languages. The chapters on sign languages indicate the need to be intentional about African indigenous sign languages. A rich cultural heritage such as the Adamorobe Sign Language stands that brink of endangerment if users are not intentional about their language development. Magajin Gari Sign Language does not even have young users and the younger deaf people only know Nigeria Sign Language (an offshoot of American Sign Language), Gabonese deaf students are aware of the presence of indigenous sign languages, but they are educated in foreign-based sign languages just as the case in Ghana, Nigeria and many African countries. The way forward is the promotion of indigenous African sign languages beyond the local communities and a concentrated effort to make the indigenous sign languages appealing to both the native users and people outside the community. The rich linguistic features of indigenous African sign languages can be best documented if there is an enabling environment for the languages to thrive.

Whereas sign languages face the challenge of neglect and endangerment, most spoken languages in Africa are gradually losing speakers because of factors such as economic viability and the prestige (Brock-Utne 2017). Users seem to align more with the languages of power and control as

compared to the minority languages used in local communities and villages. The presence of foreign languages and cultures in Africa is also a major barrier to learning indigenous African languages. For example, legal terms are lifted from foreign languages like English, French and Latin and translating these words into local languages are without challenges. The baptism of the African continent into foreign systems began with colonialization and since then, even our naming patterns are motivated by colonial tendencies with a gradual emersion of English-based names and Judeo-Christian names over names of indigenous African identity.

The way forward is to identify that indigenous African languages are linguistic and cultural heritages and therefore, preserving them begins with African linguists. Describing the linguistic features of sign and spoken language, developing materials, and promoting indigenous language rights are important for the sustenance and growth of indigenous African languages.

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PART 1

SIGN LANGUAGE

CHAPTER 1

A PRELIMINARY STUDY OF MAGAJIN GARI SIGN LANGUAGE

EMMANUEL ASONYE AND ANIEFON AKPAN

Abstract

Language documentation focuses on the record and storage of endangered languages for posterity. Indigenous languages in Nigeria are endangered because the native speakers abandon their native languages and speak a foreign language (for instance English) and these native languages are not transmitted to the younger generation. A few Indigenous Nigerian sign languages have been identified and documented. Our project aims to produce a preliminary study of Magajin Gari Sign Language (MGSL) in order to contribute to the documentation of endangered languages. MGSL is an indigenous signed language identified to be used in Kaduna North in the northern part of Nigeria, with a small number of speakers. To ensure comprehensive documentation, annotation, and storage of data; the study employed the seven dimensions of the portability approach (Bird and Simons, 2003) as a guiding principle. Language consultants were selected using a purposive sampling technique, and audio-visual equipment was utilized to record the manual-visual signs used in Magajin Gari. The result for this research indicates that the Magajin Gari Sign language makes use of iconic and arbitrary signs in communication. In addition, fingerspelling is not an intrinsic element of MGSL, as the language has yet to create its manual alphabet, as it is with many indigenous African sign languages. There is need for further analysis and investigation in the MGSL to assist in the development of formal linguistics materials for MGSL.

1. Introduction

Sign language awareness in Nigeria extends back to Andrew Foster's works in 1960, although this is not the year that activities on the deaf and

sign language began in Nigeria. However, the dynamics of sign language use and Deaf education in Nigeria changed around the time of Andrew Foster's arrival in Nigeria due to a lack of written or pictorial documentation and research in the Indigenous Nigerian Sign Languages.

Andrew Foster was an African American deaf missionary, who played a significant role in the establishment of Deaf schools in Africa. The first Deaf school in West Africa was set up in Osu, Ghana by Andrew Foster in 1957. Foster also established Nigeria's first Deaf school to use manual methods in Ibadan in 1960. Foster was primarily on a mission for Deaf Africans. He inspired the public and government of African countries that he visited to educate Deaf Africans through signed language as opposed to spoken language, which was the general practice at the time. Due to lack of documentation tradition in Nigeria in the 18th century, the efforts of Nigerians such as Alision Izzet, S. A. Dawodu and other Nigerians were not documented before the arrival of Foster (Asonye, Emma-Asonye, and Edward 2018, 7).

Foster arrived in Nigeria with American Sign Language (ASL) and used the same in teaching the deaf people in Nigeria who attended the three Deaf schools established in Ibadan, Enugu, and Kaduna. Prior to the establishment of these Deaf schools by Andrew Foster, there was a Deaf school in Lagos established by the Nigerian government that used the oral method in teaching deaf children. It is argued that the Indigenous African Sign Languages were displaced because of Foster's decision to use ASL in teaching the Nigerian Deaf community and of course, other African Deaf communities where he worked (Kusters 2014, 470). Many indigenous Nigerian sign languages have been pushed to the margins as a result of this displacement, and their survival is threatened.

Presently, the varieties of signed language used in Nigerian Deaf schools is predominantly influenced by the American Sign Language vocabulary, with English grammatical structure, while the indigenous Nigerian sign languages are yet to be documented let alone be recognized or even developed to a standard that they can be used officially in formal settings. There are, however, efforts made by scholars, who have worked on some identified Indigenous Nigerian Sign Languages (INSLs). Scholars such as Schmaling (2000), who worked on Maganar Hannu (an Hausa Sign Language) in Kano State, and Orie (2013), who worked on a variant of Yoruba Sign Language in Akure, have done outstanding work.

In addition, an undocumented Nigerian Sign Language – the Bura Sign Language (BuSL), signed in Northeast Nigeria was identified (Blench and Warren, 2006) with little or no follow-up study on the language. These identified and described INSLs are used in Deaf communities in the

Northern and Western parts of Nigeria. In Southern and Eastern regions of Nigeria, there are indigenous Deaf communities which are yet to be documented. At the time of this study, *Maganar Hannu*, a variety of Hausa Sign Language, the Yoruba Sign Language used in Akure, and the Bura Sign Language were the indigenous Nigerian sign languages that have existing literature and documentation materials. There are schools for the Deaf in Akwa Ibom State, Cross River State and Imo State and the deaf students in these states have their local or village signs that they use apart from the School Sign Language (Asonye, Emma-Asonye, Edward 2018, 9). These local or village signs are yet to be documented or described and are endangered by the continuous neglect and use of School Signs in teaching deaf students in those regions.

The current endangered situation of many indigenous sign languages necessitates the implementation of a documentation strategy during research on any of the Indigenous Nigerian Sign Languages (INSLs) to preserve for posterity and provide a descriptive account for such sign languages. Recent research has focused on the documentation and development of INSLs (see Asonye, Edward, and Emma-Asonye 2020, 315; Asonye and Emma-Asonye 2013, 75).

The present work sets out to document and describe an indigenous Nigerian sign language used in Northern Nigeria for possible development and preservation. The sign language presented in this chapter will be referred to as the Magajin Gari Sign Language (henceforth, MGSL) which is used in Northern Kaduna. The objective of this documentation is to create a long-lasting record of the Magajin Gari Sign Language through a multimedia approach. This chapter presents preliminary analysis of the data from this documentation project.

2. A Review of Relevant Literature

There have been awakening efforts by linguists, deaf organizations, and language activists of different countries in documenting sign languages used across African Deaf communities and this suggests that sign language studies are beginning to get scholarly attention in African linguistics. For instance, the Kenyan Sign Language (KSL) has been researched and described with standardized forms. The KSL was adopted in 2010 as one of the official languages in Kenya (Miyamoto and Mori 2015, 17). Research in KSL (for instance, US Peace Corps 2004) indicates that the KSL uses the same basic word order of Subject, Verb, Object (SVO), and adjective-noun order as ASL, which is an inherent feature of spoken English. KSL also uses English and Kiswahili in Fingerspelling, and the

speed of Fingerspelling is slower than ASL (although depending sometimes on the signer).

Fingerspelling is defined as using the manual alphabet which is a representation of the spoken language alphabetic system with hand signs in spelling a word. Fingerspelling is an integral part of ASL, and it is based on orthography, (Haptonstall-Nykaza and Schick, 2007, 179). Baker (2010, 1) has also defined Fingerspelling as the use of hand shapes to represent letters of the alphabet. It is mainly used to represent words without a sign equivalent (Wilcox, 1992, 34). Other sign languages such as Ghanaian Sign Language (GhSL) and Kenyan Sign Language (KSL) have adopted the manual alphabet into their signing systems, (Mweri 2018, 170; Edward, 2014). Fingerspelling is used where the concept in the target sign does not exist, and to communicate the concept, fingerspelling is adopted. The use of fingerspelling is possible when there is a manual alphabet such as the British Sign Language or American Sign Language manual alphabets.

In KSL, fingerspelling is possible for signers who can read and write (Mweri 2018, 170). Also, the Kenya Sign Language makes use of manual and non-manual signs during communications. Non-manual signs in KSL are used in creating meaning differences between sentences. For instance, the phrase “Deaf you” in Kenya can be freely translated as “you are deaf” and “are you deaf?” The difference between the two clauses is made clear through the use of facial expressions while the question is being asked. (Mweri, 2018,178). Similarly, in Ghanaian Sign Language question forms and declarative sentences are differentiated by facial expression (Edward 2014, 6). There is another sign language that has been researched in Ghana apart from the Ghanaian Sign Language (GhSL); the sign language is known as the Adamorobe Sign Language (AdaSL). While the Ghanaian Sign language (GhSL) is foreign-based, the Adamorobe Sign language is distinct and has its own signs which Edward (2021) claims that the Adamorobe Sign Language originated through local communities rather than the foreign Sign languages. The Adamorobe Sign Language originates from the Adamorobe village where the village is known for its high unusual incidence of hereditary deafness (Kusters 2012, 2771).

GhSL is the National Sign Language in Ghana, and it is said to “descend from American Sign Language” (Edward 2014, 4). In Nigeria, there are many sign language varieties that have not been documented. According to Krauss (1992), language endangerment is widespread and could affect half of the world's languages, including signed languages.

Although, there are many signed language variants in various states in Nigeria, such as the Hausa Sign Language in Kano, the Yoruba Sign

Language in Akure, and the Bura Sign Language in Bura village, which have been researched as independent language pieces; there is yet to be assigned an official indigenous Sign language in Nigeria. Save the Deaf and Endangered Languages Initiative (S-DELI) in collaboration with the Nigerian National Association of the Deaf (NNAD) are working effectively towards documenting and developing an indigenous national sign language that will represent the linguistic identity of the Nigerian deaf population. Currently, Signed English is used for communication in the media, schools, and churches where people of various ethnic groups assemble. This is analogous to the usage of English in public settings in Nigeria, where no acknowledged indigenous spoken language has yet to be adopted as a national spoken language. Although the signed language variety used in Nigerian Deaf communities is technically known as Signed English and, in some cases, Signing Exact English (SEE), many deaf and hearing signers frequently refer to it as American Sign Language (ASL), which reflects the language attitude that Nigerian signers have towards signed language.

There was no written or documented work on MGSL prior to this documentation; thus, in the study and documentation of African sign language linguistics, this research will fill the existing gap in literature and in Magajin Gari Sign Language. This study will also generate materials and data that will be relevant in future research.

3. History of Magajin Gari Deaf Community and Sign Language

The history of the deaf community in Magajin Gari, Kaduna North is traced only to the hearing Emir of Zaria that appointed the first deaf emir in 1962[1] to give the Deaf in that community, the power to oversee the affairs of the deaf people in that region and this was because of the growing population of the deaf people residing in Zaria and its surrounding settlements. Prior to the establishment of the rehabilitation center in Magajin Gari where the deaf people in the community usually hold their meetings, they used to convene for their meetings in the deaf emir's palace of Zaria. The population of deaf people in the Magajin Gari community was estimated to be five hundred (500) at the time of this

[1] The history of the Deaf in Magajin Gari was told by the chairman of the Kaduna Deaf Association at the time of this documentation, Mr. Michael Akaka and was corroborated by other elderly members of his association.

documentation and were mostly adults. Magajin Gari is a town in Kaduna north. The map showing the geographical location of Magajin Gari is given in Fig. 1-1.

Magajin Gari Sign Language is used in Magajin Gari town to communicate among members of the deaf (and hearing) communities. To the best of our knowledge, detailed data on MGSL had not previously been published at the time of this documentation. In this study, MGSL is considered a separate language and not a variant of "Maganar Hannu" (Schmaling, 2000), but a possible descendant of Hausa Sign Language.

Fig. 1-1 Map showing Magajin Gari town. Source: Google map

4. Theoretical Approach

This study adopts the Seven Dimensions of Portability, which focuses on the creation of digital materials. The seven areas are identified as portability problems encountered during digital documentation. Portability issues include the adoption of new tools and the essence of these tools as compared with the non-digital approaches that were previously used. Bird and Simons (2003) propose the Seven Dimensions of Portability under the following headings: content, format, discovery, access, citation, preservation, and rights. The seven headings serve as a framework of recommended best practices in documenting languages.

The content of documentation should be wide, using multimedia recordings, documenting the method used in obtaining data and description of the research process such as annotation. An open format is recommended in software and Hyper Textual Markup Language (HTML) is used to ensure the discovery of language resources online. Access to the documentation is required to be spelt out, especially for sensitive data for online publications. The local community should also be able to access the large resources through CD or DVD and possibly a sign language app. The citation issues focus on resource materials and instruments used in the documentation.

In addition to digital media form of preservation, Bird and Simons, (2003) recommends paper copy, which is known to survive for many years. Furthermore, the intellectual property rights of the document should be fully documented. In essence, the intellectual property right is concerned with clearly stating the aspect of the documented work that can be reused or accessed and by who. This theoretical approach guided the collection, processing and storing of data used for this research.

5. Research Methodology

This research took place in the Magajin Gari town in Kaduna North Local Government Area, Kaduna, Nigeria. The location for the documentation was the rehabilitation centre in Magajin Gari. The population of the Deaf community in Magajin Gari is given at 500, out of whom twenty-five (25) persons were selected as language consultants for this documentation. The purposive sampling method was used in selecting the twenty-five language consultants. The basis for selecting the twenty-five language consultants was primarily based on the fact that they did not acquire a formal education and stayed in the community for a minimum period of fifteen years. The purpose of using these criteria was to avoid the interference of the School Sign Language generally referred to as American Sign Language within the Nigerian Deaf community.

On the first day of the data collection, fifteen (15) males and ten (10) females were selected with the help of their leaders for the documentation but, the men were reluctant to participate in the documentation but rather sent out their wives as it is cultural for men to go for menial jobs to fend for their families. However, on the second day, there were more men ready and eager to participate than there were women on the first day. This is because the news was spread across the community that the participants on the first day received stipends for their participation. The documentation was done for eight (8) hours a day for six (6) days, during which time a

large number of lexical signs, biographical data, and Deaf cultural accounts were collated.

In addition to the twenty-five (25) language consultants, three bilingual signers who had formal education and are fluent in the School Sign and MGSL served as interpreters throughout the period and worked with the hearing sign language interpreters in the S-DELI research team. The deaf interpreters played a vital role in the collation of signs, creating a two-way, two-layer interpreting process from the hearing interpreter to the deaf interpreter to the deaf signer, who provides the sign through the deaf interpreter to the hearing interpreter, who voiced out the word.

Prior to the commencement of the documentation, the language consultants signed the consent forms after the forms were read (signed) for them. The consent form was in line with the ethics of language documentation, which gives the researchers the power to publish the data in both print and other formats as needed. They were made to understand that they had the right to withdraw from the documentation any time they wished to. However, there were no withdrawals, the language consultant showed a great sense of willingness to contribute to the documentation exercise.

Two video recorders were used in the recording of the sign language, while – Leica V- (Lux-4) was used to capture a close range or focused view of the signers, – Canon SX60-HS was used to capture a wider view, including the questioner, the two sign language interpreters, and the deaf signer. An in-person interview using a structured questionnaire and wordlist was used to collect data for this research. The research instruments for data collection included the 2015 modified 100 Swadesh wordlist, numbering system, animal photo album, pictures of local food products in Kaduna, and short sentences. The collected data were analyzed using the Eudico Language Annotator (ELAN) because of the visual, audio, and textual tiers used in the ELAN software. One textual tier was created to render the text of the signed words.

6. Team Participation and Pre-documentation Training

This documentation exercise was organized by Save the Deaf and Endangered Languages Initiative (S-DELI) through community-raised funds. Over 50 volunteers converged from across Nigeria and beyond for the 2-day pre-documentation training[2]. The areas covered in the training

[2] Prof. Imelda Udoh of the University of Uyo spoke on the topic "Documenting the Cultural Heritage of the Nigerian Deaf", Dr. Emma Asonye of the University of

included the use of ELAN (Eudico Language Annotator), Audacity and Handbrake in language documentation. ELAN is a visual textual software with tiers used to analyze language data, Audacity is an audio software used to process audio files and Handbrake is a converting software that converts files to any computer workable and compatible format; for instance, converting from MTS (MPEG transport system) to MP4 (motion picture 4). MTS and MP4 are digital multimedia container formats used in storing video data. This software is used in language documentation field to process and analyze sign and spoken languages and as such, it was pertinent for the participants to be trained on how to use the software.

Following the two-day training, a group of selected thirteen (13) volunteers headed to the Magajin Gari community for in-field documentation. The crew arrived in Kaduna on Sunday, met with the Magajin Gari deaf community on the same day, and began documentation on Monday, October 13 through Saturday, October 20, 2018, spending a total of seven days in Kaduna North. Daily documentation began at 9:00 a.m. and finished about 6:00 p.m.

7. Documentation of Magajin Gari Sign Language

Magajin Gari Sign Language is a language on its own just like every other Nigerian language with speakers; there is a need to document and develop MGSL for more scientific and sociocultural communication among the signers and for posterity use. Furthermore, as observed in the field during the documentation of MGSL, there was a scarcity of younger signers of the language; the youngest of the signers were in their 30s.

MGSL is a sign language in the Magajin Gari community used by deaf people for communication and expression of ideas. The Magajin Gari Sign Language has conventional signs used in communication and these signs have been developed to have specific meanings in the Magajin Gari community with systematic order in the way they are expressed. This is similar to the organization of sounds and words into meaningful expressions. In MGSL, the question, “what is your name” is signed as “your name what?” This is shown in Fig. 1-2 below.

New Mexico taught on the "Principles and Practises of Sign Language Documentation", and Ms. Aniefon Akpan, a PhD student at the University of Uyo and S-DELI Head of Research at the time; took the participants on the hands-on training of selected linguistic software.