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**Paradigm Shift in Language  
Engineering and Advocacy: From  
Language Rights to Inclusive  
Development Communication**

Delivered by

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FROM LANGUAGE RIGHTS TO INCLUSIVE  
DEVELOPMENT COMMUNICATION**

*“A shprakh iz a diyalekt mit an armey un a flot”*

(A language is a dialect with an army and a navy)

-Max Weinreich (Yiddish linguist)

*Kò sí ibi tí à kò tí ñ dáná alé; ọ̀bẹ̀ ló dùn ju ra lọ.*

(Yorùbá wisdom)

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My Lords, Spritual and Temporal  
Distinguished Guests and Friends of the University  
Gentlemen of the Press  
Ladies and Gentlemen  
Great FUTARIANS!

Madam Vice Chancellor, Distinguished Ladies and Gentlemen, with a great sense of privilege, and a heart of gratitude to Almighty God I present the 158th Inaugural Lecture of the Federal University of Technology, Akure (FUTA), titled: ‘Paradigm Shift in Language Engineering and Advocacy: From Language Rights to Inclusive Development Communication’. This Inaugural Lecture is the first to be delivered from the Institute of Technology-Enhanced-Learning and Digital Humanities. Two inaugural lectures have been presented from the General Studies Unit while it was part of the School of Sciences: The first was delivered by Professor Grace Tola Olutunla on 26th April, 2001, titled: "Entrepreneurship for Economic

Development" while the second was delivered by Prof. R. O. Abiola on 7th July, 2009, titled: "Management in Ancient and Modern Civilisations". Prof. (Rev. Fr.) A. G. M. Adedeji also presented a valedictory lecture titled "Leadership is Stewardship" in December of 2019.

Madam Vice-Chancellor, I am grateful for the opportunity to share with this distinguished audience what I have been up to for the past 32 years and 11 months, for I joined FUTA on September 3, 1990.

### **My FUTA Journey**

My journey to FUTA started with an interview for which I arrived at 8am and was interviewed at 6pm. The story was that the interview was ready to close for the day, but Prof L. B. Kolawole asked that they should just give me a chance. One of the questions I was asked had to do with what I would do if a student whistled to me in class. My response was, "I would whistle back". As I had some experience with drama, I was also asked whether I could start a drama group for the university. My answer was, "give me a job first." My first appointment letter required me to resume on October 1, 1990. However, I had to resume in September to give me the opportunity of attending a training programme under the Communication Skills Project for Universities of Technology and Agriculture (COMSKIPTECH) under a partnership by the Overseas Development Administration of the British Government (managed by British Council) and the Federal Government of Nigeria (managed by the National Universities Commission). This marked the beginning of an exciting journey that has brought me in contact with helpers of destiny: professional, spiritual and social.

Though none of my degrees was taken from FUTA, I am as FUTarian as FUTarian can be. I came here a mere slip of a girl; in fact, students would come to my office to ask me out. FUTA has shaped me; my research has been shaped by FUTA requirements, and my worldview has been shaped by FUTA-based interactions.

## **1. EARLY RESEARCH ACTIVITIES**

Madam Vice Chancellor, my early research activities were in the areas of English for Academic Purposes, as we sought to deepen the gains of COMSKIPTECH. A major issue affecting teaching in low-resourced contexts is large class management. Olubode-Sawe (1997) reports how students evaluate some of their teachers' attempts to solve the problem of

large classes: breaking up their large classes into smaller ones, using group /pair work for classwork and assessment, administering identical tests to the different classes at the different hours; and suggests ways of ensuring that lecturers teach to the same standard, improve the dynamics of group work, and prevent cheating in tests. Aborisade & Olubode Sawe (1999) focuses on a cardinal frontier in communicative language teaching (CLT) – classroom methodology. The paper reports on the successful use of a new approach adopted in FUTA for the teaching of reading skills within the general CLT approach. New insights emerge on teaching reading skills which must emphasize continuing attention to materials evaluation based on learner needs and objectives, text contextualization and task type analysis. Similarly, Aborisade & Olubode-Sawe (2011) examines developments in language teaching ethos with specific emphasis on teachers’ competences in a knowledge age, highlighting strengths and specific aspects of lack and constraints in the practice. The paper draws on the experience of an ICT-supported programme as good practice, providing evidence of the impact of this practice on students’ engagement as an example of the possibilities for the teachers and institutions in low-resource environments.

More recently, I have focussed on other areas of research, especially after my PhD research in terminology.

## **2. LANGUAGE ENGINEERING**

### **2.1 Introduction**

My subsequent research activities have focussed on language engineering and advocacy, hence the title of this lecture: **Paradigm Shift in Language Engineering and Advocacy: From Language Rights to Inclusive Development Communication**. I will now go ahead to unpack my title, trace the history of language planning/engineering in Yoruba and highlight my contributions to the field of language engineering, including boots on the ground work in terminology development, translation and advocacy.

In computing and natural language processing, language engineering is a line of research and development that is focused on creating electronic tools capable of processing natural language, in oral and written formats (Aguilar & Acosta, 2020). My research in this area is limited to research in tone mark restoration (Asahiah, Odejebi, Adagunodo & Olubode-Sawe (2017). I also co-supervised the “Development of a Web-enabled Digital Yoruba Phrasebook” (Fagbolu, 2015) and “Development of a Prosodic Text-to-

Speech System for the Yorùbá Language Using Unit Selection Method” (Akinwonmi 2018).

In linguistics, language engineering is a deliberate effort to influence the function, structure or acquisition of languages or language varieties within a speech community. It is a continuous and dialectical process including orthography design, corpus planning, materials development, and encouragement of language use at all levels to account for and communicate the changing experiences of speakers as well as aspects of human legacy called knowledge. It is the process within a language which enables it to capture contemporary notions and ideas in order to meet the challenges of proper communication in modern terms (Yusuf, 2018). In the literature, this is variously referred to as language planning or language development.

The term ‘development’ presupposes a lack or paucity of an ingredient needed for the achievement of a particular objective, plus an effort to make up for that lack in order to attain the goal. It is a process of empowerment which must be differentiated according to whom it seeks to empower and in what terms: cultural, technical, economic, etc. Applied to language, we may distinguish between processes that seem to be automatic, that is, seeming to progress without conscious human intervention and those that are the results of efforts by professionals or governments. The first could be simply called growth. Language planning refers to those deliberate efforts to influence the behaviour of others with respect to the acquisition, structure, or functional allocation of their language codes (Cooper, 1989). Two strands of research are now recognised in language planning. The first includes activities like graphization, standardization and modernization, the sum of which is referred to as language development (Fasold 1984: 248). These activities are carried out on general purpose languages and may even start at a level where a language has not been reduced to writing. In the second strand, terminology planning, workers assume the existence of linguistic norms and a level of grammatical and orthographical stability to consciously and systematically study and develop special purpose languages, according to the needs and requirements of communication in specialized domains.

## **2.2 The Need for Language Engineering**

Madam Vice Chancellor, one may well ask, why on earth do we need language engineering? In recent decades, linguists and language planners have focused their attention on the grave issue of language endangerment.

Many speakers of smaller, less widely spoken languages switch from their native tongue to another for a number of reasons. Parents, wishing to give their children a headstart, start speaking English, the official language to them at home. The intergenerational transmission of the heritage language therefore reduces, and the populations using the heritage language as their first or primary language reduces gradually (becoming dormant), until it is no longer used or understood by anybody. Language engineering is required to arrest language endangerment.

A lot of language engineering efforts occur within the context of language planning occasioned by multilingualism, which necessitate efforts by appropriate authorities in social groups to select a language variety for the purpose of “equipping it with the capacity of being used as a medium of either instruction or communication” (Massamba, 1987). However, equipping a language with capacity to fulfil certain functions does not guarantee that it will be so used. Language planning efforts must therefore include all deliberate steps taken, by governments and their agencies, by language groups or even individuals, to influence how people acquire and use languages and for what purposes.

What benefits are thought to accrue from language engineering? Olubode-Sawe (2010d) suggests that language engineering to produce technical terminology in indigenous languages (TTIL) is crucial in popularizing development programmes of a technical nature. As Bamgbose (1994) recommends, five elements should go into a broader definition of development, three of which are germane to this discussion. He recommends that economic development be linked to social and cultural development, for the improvement of man’s condition in society; that it should be home-grown rather than imported; and that economic development must include mass participation and grassroots involvement in order to ensure that it is widespread and genuine. This requirement for mass participation means that more people must be reached with information they can understand and respond to, thus the need for TTIL. A related matter is the need for TTIL in adult and non-formal education. Terminologists, whether as term creators or translators need to make available information that people need to improve themselves in a form that they can access and in a language that they are familiar with. This can only be done if the capacity of the language to express scientific concepts is enhanced through the deliberate creation of the required technical terminology.

There is of course TTIL for language education. For indigenous languages to meet the needs of both the current age and the future, the syllabi in primary and secondary schools need to be revised in such a way that students will learn to use core as well as general vocabulary in numerous professional fields of human activity including traditional occupations, building, government and politics, sports and entertainment, religion, education, transport and communications, journalism and advertising, as well as science and technology development. That prospect calls for the expansion of the terminology of the language. This proposal was articulated by Professor Oladele Awobuluyi in an opinion piece titled “Time to Modernise Nigerian Languages” and published in *The Nation* of March 22, 2019 which I quote in some detail. He proposes that:

- indigenous languages having numbers of speakers that make such a policy both economically viable and sustainable be developed for teaching all subjects at all educational levels as well as for governance also at all levels within their respective linguistic communities;
- indigenous languages lacking the requisite numbers of speakers for use as outlined above be developed for governance up to appropriate levels and also for teaching all subjects up to appropriate levels, with English language taking over thereafter;
- all students in the country regardless of their ethnic origins should study English as a language subject up to at least the School Certificate level, or even the first degree level if so desired, for communicating with speakers of other indigenous languages in the country as well as with the nationals of other countries based within or beyond our borders;
- Abuja and Lagos, because of their somewhat mixed populations, be considered for one university institution each where English will be the language of instruction; and
- newspapers that currently publish only in English should each add at least one regional edition of



similar content and quality in the indigenous language of their respective home bases.

Several positive outcomes are expected from the proposal above. First, it is expected that instruction in the mother tongue medium would go beyond the primary level, leading to an increase in literacy levels. Statistics from the National Literacy Survey of 2010 show little difference between youth literacy in English (76.3%) and in any language (85.6%). For adults, however, there is a significant difference when other languages are reckoned with in literacy computation. While only 57.9% of all adults (male 65.1% and female 50.6%) are literate in English, 71.6% of all adults are literate in any language, with the percentage of literate women rising to 63.7%.

Even if the languages were to be made ready to perform the functions itemised above, it is doubtful that they would be used as intended. This is a question of economics: ‘the medium and language most likely to be used are those that are most efficient for the work at hand’ (Christopher 2006: 191). This is where advocacy comes in.

### **2.3 Language Advocacy**

Language advocacy refers to forms of behaviours or processes that aim at endorsing, promoting and influencing policies to stakeholders in order to attain societal change. In order to advance a particular understanding of language, language advocacy must take a position that favours certain policies and opposes certain widely held practical understandings of language, language use, language users, and language policies (Faltis, 2015, Flubacher & Busch, 2022). In linguistic anthropology, language advocacy is typically associated with social, regional, and anti-colonial movements committed to defending and promoting indigenous or minoritized languages and to claiming official recognition of previously unrecognized languages such as sign languages, non-territorial languages, or creoles.

In countries where indigenous languages have already been allocated important functions such as official language or language of education, it is easy to deal with shortfalls in vocabulary through comparative terminology work. The purpose of terminology development here is to ensure the proper transfer of specialized knowledge from the source language to the target language. Terminology planning, as a branch of language planning, is the conscious and systematic development of special language to fit the needs

and requirements of communication in specialized domains, where new technical terms come into languages the world over. These terms constitute terminologies, which may be defined as ‘the set of terms with their specialized meanings (concepts) used in the special purpose languages of specific domains’ (UNESCO 2005)

In other contexts, either languages have not been allocated particular roles, or those roles are allocated officially but not in reality. Nigeria falls into this category.

### **3. HISTORY OF YORUBA LANGUAGE ENGINEERING**

#### **3.1. Colonial Period**

Codification efforts for Yoruba started with the arrival of European explorers, missionaries and imperialist-colonists in the 19<sup>th</sup> century A.D. Bowdich recorded numbers 1-10 in Yoruba; Mrs. Hannah Kilham, a Quaker missionary recorded a few words in Yoruba in 1828 and Reverend John Raban of the Church Missionary Society published three booklets on Yoruba vocabulary in the 1830s (Awobuluyi, 1994). Most of the work was done by foreigners based in Sierra Leone. A significant exception to this trend was the returnee slave boy Ajayi, who later became Bishop Samuel Ajayi Crowther. He started working on Yoruba in Freetown but later returned home in 1840s to join the missionaries in Abeokuta. A lot of the early efforts went into devising orthography for the language, to facilitate the translation of divine literature. In 1841, Gollmer published excerpts from the *Book of Common Prayer* and parts of the Gospel of Matthew and by 1847, Ajayi Crowther had commenced work on translating the entire Bible into Yoruba (Arohunmolase, 1985:3). By the middle of the 19<sup>th</sup> century, there were several reference texts on the Yoruba language including *A Grammar and Vocabulary of the Yoruba Language* (Crowther, 1852), *A Grammar and Dictionary of Francais-Yoruba* (Baudin, 1885).

Another important milestone in Yoruba language planning was its use in the media. In 1859, Henry Townsend published *Iwe Irohin fun awon Egba ati Yoruba*. The real import of this is that there was a sufficiently large readership, literate in Yoruba, to justify such a venture. Other Yoruba-medium newspapers followed, catering mainly to urban-community or political interests as the names, which usually include the name of a locality, suggested: *Iwe Irohin Eko* (1885) *Eko Akete* (1922) *Eko Osose* (1925) *Osumare Egba* (1935) and *Irawo Obokun* (1952). According to

Arohunmolase (1985), these newspapers were the vehicles on which Yoruba prose, poetry and drama rode into being. They are also credited with introducing many new words into the language including the term for newspapers, *iwe-irohin*.

### **3.2 Independence Period**

The status of Yoruba just prior to independence was that of a language that was strong not only as a mother tongue but also as a second language in Nigeria to the South and West of the Niger. Egbokhare (2004) attributes the strength of Yoruba (alongside Hausa and Igbo) to the Richards Constitution of 1954 which created the regions. The leadership of Western Nigeria obviously had high hopes for an improvement in status of Nigerian languages. In 1953, the Western Regional Government set up two technical committees to evolve grammatical and scientific terms for Yoruba, ‘the first formal and conscious efforts at enriching and enlarging the Yoruba lexicon’ (Awobuluyi 1994). Delano also published the first ever monolingual dictionary of Yoruba, *Atumo Ede Yoruba* in 1958, that same year R. C. Abraham published his Yoruba-English *Dictionary of Modern Yoruba*.

Nigeria became politically independent in 1960 but the locus of power was still in the regions. Work on orthographic reform continued and in 1965, Bamgbose published *Yoruba Orthography*. The Western Region Ministry of Education also set up two committees (in 1966 and 1969) to determine orthographic standards for the whole region. Their recommendations were set forth in *Káàárò-Oòjìire: A Report on Yoruba Orthography*. Sustained academic interest in the language resulted in advanced research and publications during the independence period. Between 1960 and 1969, there were several PhD dissertations on Yoruba language and culture, including Bamgbose (1963), Adetugbo (1967), Awobuluyi (1967), Ogunba (1967), Abimbola (1969) and Adedeji (1969). Numerous journal articles were published on aspects of Yoruba language, literature, culture and society. Nigerian universities started awarding degrees in Yoruba about this same period. The University of Ibadan turned out its first graduates in 1969 and those of Lagos, Ife and Ilorin soon after (Arohunmolase 1985).

### **3.3 Contemporary Period**

A more important development was the major language status accorded to the Yoruba language in the statute books. The National Policy on Education (NPE) designates Hausa, Igbo and Yoruba as major languages, one of which

should be learnt by every Nigerian school child, in addition to their mother tongues. Two provisions of the 1979 constitution could have been realized had policy on language education been faithfully implemented. Section 53 of the 1989 Constitution provides that “the business of the National Assembly shall be conducted in English, and in Hausa, Igbo and Yoruba when adequate arrangements have been made therefor”. Legislative business at the national level has continued to be conducted in English, despite the publication of the *Quadrilingual Glossary of Legislative Terms* in 1991. A similar situation played out in 2018, when the Lagos State Government promulgated the Yoruba Language Preservation and Promotion Law. The Law makes the teaching of Yoruba compulsory in private and public schools in the state, and includes Yoruba in the General Studies programmes of state-owned tertiary institutions. The move was hailed by many, including the South West Think-Tank, (as reported by Vanguard, 2018, February 19), though questions were asked about the workability of “forcing” non-Yoruba speakers to have a credit pass in Yoruba to study Medicine or Engineering. Other stakeholders saw the legislation as a trailblazer. Awobuluyi (2018, March 1) commended the Law as “...a necessary step in the right direction, which is that of not letting our only native language go into extinction before our very eyes within, rather than outside, its own native community.”

Newspaper reports suggested that the policy took off in primary and secondary schools immediately but sixteen months (roughly three semesters) later, only one state-owned tertiary institution out of six, Adeniran Ogunsanya College of Education, Ijanikin (AOCOED), had included Yoruba in its General Studies Programme, and had an admission policy in which students with at least a Pass in Yoruba at SSCE have an added advantage. The point here is that there is sometimes a gap between policy and practice, often informed by an unwillingness to pursue policies to logical conclusions. For example, on the heels of the promulgation of the Yoruba Language Preservation and Promotion Law in Lagos State, Professor Oladele Awobuluyi reveals in a personal communication that he wrote to the Lagos State Governor and Governors of the other Yoruba-speaking states that the only thing that could truly "protect and preserve" the language was massive terminology creation followed by official use of the language in education and governance at all levels. According to him, none of them paid any attention to that suggestion.

The AOCOED programme is for two semesters, spread over two years. GSE 004: *Ìfààrà sí Èdè, Itàn àti Àṣà Yorùbá* (First Semester, 100 Level) and GSE 005: *Gírámà Èdè àti Ònà Ìbáńisòrò Yorùbá* (Second Semester, 200 Level). GSE 004 includes topics such as *Álífábẹ̀tì àti Àkọtọ̀ Èdè Yorùbá, Yorùbá gẹ̀gẹ̀ bí Èdè Alohùn, Òwe Yorùbá, Òrọ̀ Àyálò, Orírùn Yorùbá, Àwọ̀n Èyà Yorùbá, Àwọ̀n Ìbílẹ̀ Yorùbá, Àwọ̀n Oúnjẹ Yorùbá, Èkọ̀ Ilé, Èèwọ̀ Ilẹ̀ Yorùbá, and Òńkà*. GSE 005 includes *Oríkì Gírámà, Ìsọrí Òrọ̀ nínú Gírámà Èdè Yorùbá, Yorùbá nínú Ònà Ìbáńisòrò tí ó Gbòòrò, Àkàńlò Edè and Àkàńlò Edè Ayàwòrán*. This kind of curriculum would require the creation of new terms, especially for the graphic communication (*Àkàńlò Edè Ayàwòrán*) component and the course content itself gives reason to cheer. That is, until one finds out that the courses are taught in English. When I expressed my sadness about a Use of Yoruba course taught in English to my informant, a lecturer at AOCOED, she replied, “Lagos is a cosmopolitan state. Some of our students don’t speak Yoruba.” Despite the policy-reality mismatch, the Yoruba General Studies programme represents a positive change of priorities, for during the previous administration headed by Mr. Babátúndé Fàṣọlá, the government’s focus was on the promotion of Chinese (<https://www.vanguardngr.com/2012/11/fashola-defends-planned-introduction-of-chinese-in-lagos-schools/>).

Nevertheless, the mismatch of policy and reality suggests that terminology development programmes need to be rethought in terms of what they are intended to achieve, that is, the desired outcomes of terminology development programmes. The communicative scenario(s) for which lexical expansion is undertaken must be specified. According to Cabré Castellví (2003), possible scenarios include communication among specialists, between specialists and semi-specialists or technicians, between specialists and learners, as well as popularisation of science and technology. For workers interested in international intra-professional communication, the scope of terminology would be limited to the standardisation of concepts. This is usually done by national standardisation bodies or the International Organization for Standardization, and it is limited to the concepts and vocabulary of specialized languages, is thematic and prescriptive in nature, and is performed by subject-field specialists following globally accepted procedures (Pavel, Nolet & Leonhardt, 2001).

Working in a development communication context presents a different challenge. In developing contexts, scholars must pay attention to knowledge

structures because terminology development aspects of language planning are informed by the requirement to control knowledge expansion or change (Antia & Ianna, 2016). Terminology is informed by the necessity to transmit specialized knowledge units or knowledge structures that either were not previously present in the conceptual universe of speakers of a specific language or not attested in a form deemed sufficient for new communication (Antia 2000). Terminology work may proceed as the creation of single standalone terms, comprehensive creation of registers for a particular field, news translation, interpretation in religious settings, translation of government documents, science popularisation or literary translation. In this work therefore, terms/words formed in any of the circumstances here described are treated under the umbrella of language engineering, which is an aspect of language advocacy. Important works in Yoruba language engineering include Odetayo’s dictionary of engineering physics, which includes the following equations:

Avogadro’s Law (*Òfin Afogadiro*)

*Iye àfiyewéye* (ratio) *ilópo* (product) *òrinrin* (pressure)

*P*, *àti àfo-inú* (volume), *V*, *pèlú igbóná ogidi* (absolute temperature), *I*, *kúsi kiyè* (constant), *K*.

$$\frac{P \times V}{T} = K$$

Archimedes’ Principle (*Òfinipilè Akimidi*)

*Abara* (body) *tó rì sínú alátowòṣàn* (fluid) *pátápátá tàbí diè yíó rì ibisókè* (upthrust) *tó ṣe déédéé pèlú itèwòn* (weight) *alátowòṣàn tí abara náà bì kúrò*.

Other works include *A Glossary of Technical Terminology for Primary Schools in Nigeria* which appeared in 1981, a final version *A Vocabulary of Primary Science and Mathematics in Nine Nigerian Languages* (Vol. 1 Fulfulde, Izon and Yoruba (1981/1987), *Ede Iperi Yoruba I (Yoruba Metalanguage, I)*(Bamgbose ed., 1984) and *Ede Iperi Yoruba II (Yoruba Metalanguage, II)* (Awobuluyi ed., 1990)

#### 4. MY JOURNEY INTO LANGUAGE ENGINEERING

In 1996, Elder Andrew Caleb Oluremi Ojuri of blessed memory challenged me to read the Bible in the Yoruba language.

Then, in 1997, I started an ill-fated PhD programme at Ondo State University, then in Ado-Ekiti. My first supervisor was Professor D. Olu Olagoke. I had written up to chapter three in 2002 when he decided that he wanted to go home and prepare to meet his God. Another supervisor worked with me for two years and then relocated to the University of Ibadan. I shopped around for a supervisor in UI and OSUA for about two years. Utterly frustrated, I turned to Adekunle Ajasin University, Akungba-Akoko. As it happened, one of the Ilorin 44 and my lecturer at the University of Ilorin, then Dr. Francis Oyebade was Head of the Linguistics programme. I told him I wanted to take a PhD in anything. He said I should take a PhD in an area I was genuinely interested in.

Fortuitously, we were plumb in the middle of a building project. I related informally with the construction workers and was quite amazed by the terms they used. I heard words I could readily interpret like *látáràìtì*, *gíráfù*, and *àbẹstòṣì* but I also heard strange terms like *línṭéèdì*, *àpífà*, and *ṣokiròṣòbù*. It was a revelation. This was in 2005. My husband is an estate surveyor and builder, therefore data were readily available. I wrote the paper, “Language Development in the Local Building Industry: Some Linguistic and Curriculum Implications”, which I presented at International Conference on Science and Technology, Federal University of Technology, Akure in August 2005. Since then, I have gone on to work in terminology development, translation, and pragmatics.

## **5. RESEARCH ENDEAVOURS IN TERMINOLOGY**

### **5.1 Indigenous Terminology**

Madam Vice Chancellor, to change a thing, one must understand how it works. A study of indigenous terminology is a necessary part of terminology planning for African languages with a focus on domains such as agriculture, forestry, traditional medicine and pharmacology, technology (e.g., blacksmithing, architecture) and traditional religion. Olubode-Sawe (2013b) is a study of Yoruba plant terminology. Many Yoruba plant names are descriptions of physically observable characteristics of colour and size. The plant has a general name and some physical feature is added to narrow the referent. Thus, *Cresmapora triflora* is named Bùjé-wẹwẹ and *Rothmania longiflora* is Bùjé-dúdú. Some names utilize personification, euphemism, pun and other displays of native wisdom. Another strategy in Yoruba plant nomenclature is to use animal names. Thus, *Stylochiton hypogaeus* is *ìṣu àpàrò* (‘partridge yam’) and *Dioscorea bulbifera/ Dioscorea praehensilis*

ìṣu-ahun (tortoise's yam). Plants are named as animal body parts, as in *Cyanotis lanata* (Ahón-adiẹ), and *Heliotropium indicum* (Àtápàrí-òbúko/Ogbe àkùko). Finally, some plants are actually identified as animals: *Gloriosa superba* is named Àkàlàmbò (hornbill), *Chenopodium ambrosioides* is Asín (Shrew) and *Oricia suaveolens* is Àfin adie (albino hen). Plant names might be specified by a reference to gender, as in *Pausinystalia macroceras* (Abo idágbón) and *Pausinystalia talbotii* (Akò-idágbón), or by explicit references to sexual organs: *Setaria chevalieri* (Okò ẹṣin) and *Hybanthus enneaspermus* (Alókólẹpòn). Other examples are presented in Table 1.

**Table 1: Methods of Plant Nomenclature**

<b>Botanical Name</b>	<b>Yoruba Name</b>	<b>Gloss</b>	<b>Reference to</b>
<i>Cresmapora triflora</i>	Bùjé-wẹwẹ	small Bùjé	<i>Colour/size</i>
<i>Rothmania longiflora</i>	Bùjé-dúdú	black Bùjé	<i>Colour/size</i>
<i>Cola hispida; Cola milenii</i>	Àtẹwó-ẹdun	Patas monkey's palm	<i>Peculiar shape</i>
<i>Marantochloa flexuosa</i>	Ewé-okó	penis leaf	<i>Peculiar shape</i>
<i>Abrus precatorius</i>	Ojú-eyelẹ	pigeon's eye	<i>Peculiar shape</i>
<i>citrus medica</i>	ọsàn làkùrẹgbé	orange for rheumatism	<i>Peculiar character</i>
<i>Cocos nucifera</i>	Àgbòn	Coconut	<i>no tag</i>
<i>Combretum mucronatum</i>	Àgbòn-igbó	forest coconut	<i>Specialisation tag</i>
<i>Paullinia pinnata</i>	Ìṣu-omódé	children's yam	<i>Specialisation tag</i>
<i>Solanum erianthum</i>	Ewúro-Ìjẹbú	Ijebu bitter leaf	<i>Ethnic tag</i>
<i>Allium cepa</i>	Àlùbòsà-gànbàrí	Hausa onion	<i>Ethnic tag</i>
<i>Ocimum gratissimum</i>	Èfinrin-ajá	dog's mint	<i>Attributed to animal</i>
<i>pancratium trianthum</i>	Àlùbòsà-erin,	elephant's onion	<i>Attributed to animal</i>
<i>Ertthrococca anomala</i>	Èékànná-òbe	antelope's fingernail	<i>Animal anatomy</i>



<b>Botanical Name</b>	<b>Yoruba Name</b>	<b>Gloss</b>	<b>Reference to</b>
<i>Laennea acida</i>	Èékán-ajá	dog's fingernail	<i>Animal anatomy</i>
<i>Pausinystalia macroceras</i>	Abo idágbón	Female	<i>Gender specification</i>
<i>Carapa procera</i>	Abo ògán-anwó	Female	<i>Gender specification</i>
<i>Cannabis sativa</i>	Akọ-tábà	male	<i>Gender specification</i>
<i>Nicotiana tabacum</i> ; <i>Nicotiana rustica</i>	Taba	Unspecified	<i>Gender specification</i>
<i>Momordica cissoides</i>	Akọ-ejìnrin	Male	<i>Gender specification</i>
<i>Desmodium mauritianum</i>	Adòdó	uncircumcised penis	<i>Sexual organ</i>
<i>Hybanthus enneaspermus</i>	Alókólépòn	with penis, with testicles	<i>Sexual organ</i>
<i>Boschia augustifolia</i>	Okó-eran	animal's penis	<i>Sexual organ</i>
<i>Cissampelos owariensis</i>	Bámijókòó	given name	<i>Proper name</i>
<i>Eupatorium odoratum</i>	Akíntólá (-ta-ku)	Chief S L Akintola,	<i>Proper name</i>
<i>Tridax procumbens</i>	Adégbilẹ̀	given name	<i>Proper name</i>
	Kẹ̀hìndé	second twin	<i>Proper name</i>

## 5.2 Scriptural Translation

In Olubode-Sawe (2015), I describe the methods employed in creating words used in the translation of the Christian Holy Scriptures into the Yoruba language. This area of terminology work is of research interest for many reasons. First, one of the domains where the indigenous languages hold sway is the religious sphere; language use in that domain is therefore important for language maintenance. In addition, the subject of the Holy Scriptures is not limited to worship and theology but also includes history, mathematics (numeration), technology (especially construction), and diplomacy. Minerals, flora and fauna, have to be named, as well as architectural details, articles of clothing and jewellery, musical instruments and other articles which cannot always be identified with precision. The most important

method was found to be terminologization where an existing word is used for a concept. In simple equivalence, an existing word is used with the same meaning, such as *ètùtù* (sacrifice or atonement). We can also have semantic re-sizing where *buredi* refers to any type of food. Strategies of composition include composition by description of function or purpose, e.g., *apoti majemu* (ark), *òṣùwòn iwúwo* (balances and weight); of process/mode of production, e.g., *sòrò òdì* (blaspheme). An interesting method is composition by idiomatization where a colourful idiom is used instead of a straightforward description. So ‘palmerworm’ is translated as *kòkòrò kénimánì* and ‘cankerworm’ as *kòkòrò jejere* (Joel 1:4). *Kòkòrò kénimánì* translates literally to ‘insect of “that-one-should-not-have” alluding to the destructive power of the object; a suggestion that whatever a person stores, the insect will destroy it, thereby reducing the person to abject poverty.

In Olubode-Sawe (2012), I show from five translations that accuracy is the overriding semiotic principle in Bible translation, and that newer translations use a more contemporary idiom. A similar principle focuses on the purpose of translation: inculturation of Scripture, defined by Omojola (2001) as “making the word of God incarnate among a people group. The Holy Bible ...has taken up the Yoruba flesh. Hence it is not only that God can talk to them in their own language, but now has become present in a very vivid and concrete way in the events and lives of the Yoruba”. Compare an earlier translation in Column 1 to a later translation in Column 2

Older translation	Newer translation
<p>Èyí tí ó kọ jáde jẹ ọmọ pupa, irun si bo gbogbo ara rẹ bí aṣọ onírún, nítorí náà, wọn pè é ní Esau. Lẹyìn èyí ni arákùnrin èkejì jáde wá, ọwọ̀ rẹ̀ si di Esau ni gígìsẹ̀ mú, nítorí náà ni wọn se pe orúkọ rẹ̀ ni Jakòbu. Ọmọ ọgọ̀ta ọdún ni Isaaki, nígbà tí Rebeka bí wọn. Gẹ̀nẹ̀sìsì 25:25-26 YCB  <a href="https://bible.com/bible/911/gen.25.25-26.YCB">https://bible.com/bible/911/gen.25.25-26.YCB</a> (1900, revised 2004)</p>	<p>24 Nígbà tí àkókò tó láti bímo, ó bí ìbejì, 25 <b>Táíwò</b> jáde, ó jẹ ọmọ pupa pèlú irun ni gbogbo ara rẹ bí aṣọ onírún, a si pè é ní Ésaú. 26 Lẹyìn náà ni <b>Kẹyindé</b> arákùnrin rẹ jáde síta tí ọwọ̀ rẹ̀ di gígìsẹ̀ Ésaú mú; a si pè é ní Jákòbù. Ísáákì pé ọgọ̀ta ọdún nígbà tí a bí àwọn ọmọ méjì náà.  <i>Bibèlì Mímọ̀ Atọ̀ka àti Ìwé Deutero-Kànonìkà</i>  <i>1990 revised 2002, 2004, 2022</i></p>

### 5.3 Studies in Yoruba Mathematics

One of the sources of complexity in the Yoruba numeral system is that number derivation in Yoruba is by a compounding of the cardinal numbers,

involving several mathematical operations: addition, subtraction or multiplication and bracketing. In some numbers, all four processes may occur (Olubode-Sawe, 2013). Addition occurs in isolation only in non-derived numbers: *èwá* (10), *ogún* (20) and *ogbòn* (30). In derived numbers, it occurs in combination with the other processes. Take for example *igba ó lé métàlàá* ( $213 = 200 + 13$ ) and *egbòkàndínlogún ó lé ogòòrùn-ún ó lé kan* ( $3901 = 200 \times (-1 + 20) + (20 \times 5) + 1$ ). Subtraction occurs in isolation in both derived and non-derived numbers, and in combination with the other processes. Thus 50 is reckoned as three-twenties less 10 (*àádòòta < èwá dín nínú ogóta*). Subtraction is also used in generating odd multiples of hundreds from multiples of *igba* (200): see 500 (*èédégbèta < òrún dín nínú egbèta*); generating some odd multiples of thousand from *egbèwá* (2000); 5000 is reckoned as three two-thousands less one thousand (*èédégbàáta < egbèrúndín nínú egbèwá mèta*). Multiplication is used in generating decades, hundreds and thousands. Multiplicands are base numbers *ogún* (20) *igba* (200), and derived bases *egbàá*(2000) and *egbààwàá* (20000). The use of some fractions shows that the concept of division was known. *Ìdajì*, literally, a division into two ( $\frac{1}{2}$ ) and *ilàrin*, a slicing into four ( $\frac{1}{4}$ ) are commonly used number words. Of greater interest are number values that have variant renderings, especially in counting cowries. For example, *egbààlónamèèédógbòn* is the same as *òkè méjì-àbò*.

Let's do some computation: A simple sum of five thousand, six hundred and seventy-eight plus three thousand, nine hundred and three (in Sum A) is *èédégbàáta ó lé egbèta ó lé èjìdínlogòrin* plus *egbòkàndínlogún ó lé ogòòrùn-ún ó lé mèta* in Yoruba (Sum B).

**Table 2.1: Computation in Hindu-Arabic Numeration Style**

		Th	H	T	U
		5	6	7	8
	+	3	9	0	3
step 1	=	8	15	7	11
step 2	re-compute (units as tens)	8	15	8	1
step 3	re-compute (hundreds as thousands)	8+1	5	8	1
step 4	<b>Finish</b>	<b>9</b>	<b>5</b>	<b>8</b>	<b>1</b>

**Table 2.2: Sum B: (Yoruba Numeration Style)**

		+Tw- TH/ egbàá	-Th èéd-	+Tw-H igba	-H èéd-	+TWT (+/-) ogún	T (+/-) éwá/àád-	U (+/-)
		3	-1	3		4	0	-2
	+			19		5	0	+3
step 1	=	3	-1	22		9	0	1
step 2	re-compute (ogún → igba)	3	-1	23	-1	4	0	1
step 3	re-compute (igba → egbàá)	3+2	-1	3	-1	4	0	1
step 4	<b>Finish</b>	<b>5</b>	<b>-1</b>	<b>3</b>	<b>-1</b>	<b>4</b>	<b>0</b>	<b>1</b>

Needless to say, the answer of Sum B: (5,-1), (3, -1), (4) (0) +1 (*èédégbàárùn-ún ó lé èédégbèta ó lé òkànlélógòrin*) is equal to the answer in Sum A: 9,581

<i>èédégbàárùn-ún</i>	<i>ó lé èédégbèta</i>	<i>ó lé òkànlélógòrin</i>
nine thousand	plus five hundred	plus eighty-one

The need to simplify the Yoruba number system for learners has motivated some revisions of the number system, notably Armstrong (1962), Oyelaran (1980), and Fakinlede (2003). Olubode-Sawe (2010) reviews these three and proposes a revised system with the following elements: that higher numerals should be compounds of cardinal numbers 1-10; that vestigial subtraction should not be used; and the full form of ten ‘èwáá’ should be used in all numerals that are based on it. Òrún and egbèrún are retained for 100 and 1000, respectively, while coinages are proposed for higher numerals.

**Table 3.1: Revised Yoruba Numerals**

Numeral	Yoruba term
4	èrin
14	èrinlééwáá
60	eéwááfà
64	èrinlééwááfà
100	òrúnkan
764	òrúnje àti èrinlééwááfà
8,764	egbèrún méjo, òrúnje àti èrinlééwááfà
98,764	èjóléwáásàn-án-egbèrún, òrúnje àti èrinlééwááfà
298,764	òrúnjì àti èjóléwáásàn-án-egbèrún, òrúnje àti èrinlééwááfà
3,298,764	egbinrin méta, òrúnjì àti èjóléwáásàn-án-egbèrún, òrúnje àti èrinlééwááfà

<b>43,298,764</b>	egbinrín mètáléṣwáárin, òrúnjì àti èjòlèwáásàn-án-egbèrún, òrúnje àti èrinlèṣwááfà
<b>543,298,764</b>	òrúnrún-ún àti ètáléṣwáárin egbinrín, òrúnjì àti èjòlèwáásàn-án-egbèrún, òrúnje àti èrinlèṣwááfà
<b>1,543,298,764</b>	egbùrú kan, òrúnrún-ún àti ètáléṣwáárin egbinrín, òrúnjì àti èjòlèwáásàn-án-egbèrún, òrúnje àti èrinlèṣwááfà
<b>31, 543, 298, 764</b>	egbùrú mòkanlèṣwááta, òrúnrún-ún àti ètáléṣwáárin egbinrín, òrúnjì àti èjòlèwáásàn-án-egbèrún, òrúnje àti èrinlèṣwááfà

**Table 3.2: Fractions and Decimal Fractions**

<b>Eto Onka Iyeó Idá</b>		<b>Ètò Ònkà Idá Onidésimà</b>	
A System for Naming Fractions		A System for Naming Decimal Fractions	
$\frac{1}{2}$	Ìdájì	0.04	òfo, síku òfo, èrin
$\frac{1}{5}$	ìdárùn-ún	1.4	òkan, síkuèrin
$\frac{3}{5}$	èta-idárùn-ún	7.64	èje, síku èfà, èrin
$\frac{5}{28}$	àrún- idéjòlèṣwáájì	5.0009	àrún, síku òfo, òfo, òfo, èsán
$33 \frac{3}{5}$	ètáléṣwáátaàtièta-idárùn-ún	33.33	ètáléṣwááta, síkuèta , èta

## 6. COMPUTER-MEDIATED COMMUNICATION

### 6.1 Computed-Mediated Communication and English for Academic Purposes

Ajayi & Olubode-Sawe (2014) present the perception of some Nigerian undergraduates on the antecedents and consequences of internet use, especially the relationship between internet use and academic achievement. Findings from a questionnaire survey carried out in the University of Ibadan, Nigeria in 2009 indicated that though the students' reported frequency of use was not significantly related to their academic performance, there was a significant relationship between their internet use habits and scholastic achievement, with students who report using the internet mainly for academic purposes performing better on tests and assignments. Aborisade, Fola-Adebayo & Olubode-Sawe (2013) present the FUTA case study of how the blended learning environment fosters a Community of Inquiry in EAP courses. It reports the course organization, drawing evidence from students' activities and responses to a Constructivist Online Learning Environment survey on MOODLE VLE using four data sets which were treated using eclectic methods. Student activities and perspectives in their interactions indicated the development of reflective thinking, leading to the conclusion that in technology-challenged contexts, African digital immigrant youth can make critical contributions to sustainable development if educational practices shift the paradigms of teaching and learning.

Olubode-Sawe (2017b) investigated the participation of seven teachers in an online community of inquiry as they taught 3300 full-time students in GNS 101, a freshman study skills course in the Federal University of Technology, Akure, Nigeria. By means of a quantitative content analysis, the study sought to find out the types of teaching presence found in the online component of a blended undergraduate EAP course, the extent of each type and the frequency of the components of each type of teaching presence. Direct instruction and facilitating discourse were found to be more prevalent than instructional design and organization. Integration, a group of communications that depict teachers attempting to integrate their offline and online contacts with their students, was also discovered. The study also functioned as an assessment of the course, revealing significant differences in teachers' online behaviours and, consequently, in the type and volume of tutoring received by the various departments taught by various teachers. In its conclusion, it called attention to areas that needed rigorous monitoring in jointly taught courses and in the assistance that teachers need to provide to their students.

Olúbòdé-Sàwẹ̀ & Olúdélé (2011) examine non-expert perspectives on climate change by investigating how some university freshmen view the concept. Some evidence is provided that careful choice of the carrier content of writing tasks affects students' perspectives on environmental issues and leads to the development of reflective thinking, as the term papers show that a majority of the students understand the environmental and economic impacts of climate change, have become aware that the phenomenon is real and present in their localities.

## **6.2 Computer-Mediated Communication and New Media Technologies**

In Olubode-Sawe (2010a), I explore how the demands of modern-day discourse behaviour may impact upon the use of indigenous African languages in computer-based communication gadgets to access or publish information on the information superhighway. Using a critique of one such effort at translating information on one brand of cell phone into major Nigerian languages, the paper proposes further refinement in subsequent terminology projects, especially the possibility of producing one-key symbols to represent the distinctive graphological symbols of indigenous African languages. Olubode-Sawe (2017a) discusses the limited use of mobile telephony in Nigeria, despite its being hailed as a major revolution of communication in Nigeria on account of its widespread usage by different

strata of society. Social networking uses still prevail: voice calls and SMS for family and business/professional purposes and entertainment: interactive programmes on radio/television, games/promos. The economic possibilities provided are yet to be harnessed in a purposeful, consistent manner in the agricultural production/extension sector to provide or access market, trade and extension information. This paper critiques the Zambia National Farmers Union market and trade information service online enquiry system on [www.farmprices.co.zm](http://www.farmprices.co.zm) and its SMS version ‘ZNFU 4455’ and suggests how it can be adapted in Nigeria’s multilingual setting, using languages of wider communication in the six geopolitical zones. The contributions required of critical stakeholders: terminologists, agricultural extension officials, mobile telephony services providers, and regulatory agencies are also highlighted.

Olubode-Sawe (2014) analysed features of politeness in text messages by Yoruba-English bilinguals in a Nigerian University town. The commonest strategies used were explicit expressions of politeness through words (EEPWs), apology, explanations (giving reasons) and using in-group identity markers. The paper also identified what is termed as Yoruba relational strategies (YRS) such as extended greeting, self-incrimination, and acknowledgement of previous favours. One of such YRS is *Bi omode ba dupé oore àná, á rí òmiràn gbà* (A child who appreciates yesterday’s favour is in line for another). We therefore find messages acknowledging prior favours. Another proverb that aptly captures a Yoruba relational strategy is *eni to ba mọ ejó è lébi kì í pé lóri ikúnlẹ* (he who acknowledges his fault gets pardoned easily). This strategy may be termed ‘self-incrimination’. EEPWs include extended greetings and expressions of interest in the recipient’s welfare, which are not just polite, but are also useful for establishing the basis of future communication.

Olubode-Sawe (2016) discusses how humour is generated in *Oga at the Top series* (OATT), a puppet political satire programme featuring prominent actors on the Nigerian political scene. This was in the lead-up to the 2015 Presidential elections. The question of how multimodal phenomena in humour bearing texts combine to create a humorous political commentary has not been addressed within the Nigerian context. The chapter therefore explored how different semiotic resources were combined to create humour in OATT. From the 25 videos selected from Season One, the humour creation mechanisms in OATT were found to include caricature of national leaders, re-interpretation of contemporary happenings, musical parody,

script opposition in conversation, inter-textuality and physical violence. Needless to say, the butt of most of the jokes was President Goodluck Jonathan and his wife, Patience. Though the stated function of the series was to exploit the Nigerian political climate for humour, the analysis shows that the audience has appropriated the videos for their own ends based on the functions they felt they could serve. The chapter concludes with the significance of the online distribution of the videos. Tolu Ogunlesi, the Nigerian collaborator on the BuniTV crew who created the videos was later to be appointed Special Assistant on Digital/New Media by President Muhammadu Buhari.

Olubode-Sawe (2020) investigates co-agency in meaning production of news stories of the Agatu-Fulani conflict of May/June, 2016. Newspaper stories are typically not presented solely as text, but are usually accompanied with images; this paper shows how accompanying images contribute to or detract from those characterizations. Only about half of the pictures factually match the stories, and in only a third does the mood match the visual. In some stories, the photos actually subvert the text, telling a slightly different story from that presented in words. These two aspects of the relationship between text and visual have emerged: information and emotion. The most effective stories are those which match the information in the text with the emotions evoked by the visuals. Those stories would have both a factual and a mood match. The most interesting relationship found between texts and visuals is that of subversion: where a journalist needs to report a story, yet wants to tell another story different from the bland facts in their report.

## 7. SOCIOLINGUISTIC ISSUES

My research in this area focuses on Yoruba proverbs, circumlocutions, and metaphorical construal. Olubode-Sawe (2009) discusses how the hearer arrives at a meaning when she hears a proverb and provides an interpretive framework that is hearer focused; the possible pathways by which a hearer may arrive at meaning. Using proverbs from every-day interaction, such as *Bí gbogbo igi bá ñ wó pa 'ni, kì í şe bí ti igi ata, An ké sí ẹran olúwo, ùgbín náà wii*, “*hèèò*”, *Bí Sàngó ñ p'aràbà, tó ñ fà'rókò ya, bí ti igińla kọ*” three strategies for analysing Yoruba proverbs are proposed: pun decomposition, reference mapping and cue-word analysis. Pun decomposition is implicated in such proverbs as “*Bàbá olórùlé kan tó sọ'mọ rẹ ní Ariléyan; nibo ni yóó yan sí?*”. The paper shows that proverbs provide a sociolinguistic shield for their users, in Gricean fashion. Many of them make propositions that are



face-threatening and would be used only when an unfriendly state of affairs exists between the Addressor and the Addressee. By using proverbs, a speaker can make many confrontational propositions indirectly, leaving the interpretation to the hearer; and if challenged about the purport of a proverb he has used, the speaker can deny it. Perhaps this explains why the Yoruba sometimes put the onus for proverb meaning on the speaker, as is evidenced by such sayings as *olówe l'òwe ñyé* (it is the proverb user who understands the meaning). However, If a speaker denies the obvious implicature arising from a proverb, the Addressee or a third party may remark, *olówe tí kò bá m'òwe ara rẹ, èrù jà ló n bà á* 'a proverb user who claims ignorance of his own proverb is only afraid of trouble'.

Olubode Sawe (2003) critiques the characterisation of scientific discourse as objective, logical, precise and plain through a textual analysis of a text on astrophysics. The text was found to contain process and nominal metaphors from cookery, human relationships, birth and death, as well as other methods of scalar relativisation. Scientists conceptualise nuclear testing and warfare as surrogate sexual activity: a limited nuclear strike is an act of sexual penetration with withdrawal before ejaculation, while an extensive assault is a "wargasm". Stars are born, feed on/off their companions, steal gas from another star and finally die. The paper recommends the recognition of a distinguishable discourse function of imagination in scientific texts.

Conceptualization in science often involves metaphor and metaphors must be treated carefully in the context of comparative terminology work. Scientists cannot discuss the natural world without resorting to metaphors in some way or another (Garfield 1986), because metaphorical conceptualization is fundamental in scientific modelling (Vandaele and Lubin, 2005). Metaphorical thought is inherent in such conceptualizations as 'particles are waves', 'time is a spatial dimension', 'gravity is the curvature of space-time' (Brown, 2003). Metaphorical construal is evident in these examples taken from immunology, an aspect of medicine, cited by Garfield (1986):

surveillance, self/nonsel self discrimination, tolerance, repertoire, signal, proliferate, engulf, protect, digest, release, secrete, trigger, drain, encounter, organise, architecture, migrate, recognise, bind, dispose, generate, initiate, destroy, recruit, kill, activate, repair, trap and

carry ... Each of these is a word that has a “day to day” meaning but is now used, analogously, to enhance understanding of the workings of the immune system.

Olubode-Sawe & Inya (2016) describe metaphorical construal in the creation of obstetric terminology for use by community birth attendants, identifying discrepancies that involve incongruity in metaphorical extensions, (arising from incongruous concept relationships) and the use of equivalents without an eye to derivability or consistency. Specialists are a very important resource bank in language documentation and terminology planning processes for any language. The specialists that participated in this research were able, with various degrees of facility, to use or create medical terminology in Yorùbá. Though some used metaphorically incongruous terms, most were able to recognise metaphorically consistent Yorùbá equivalents of medical terminology, and were able to select them from a list. However, since incongruity could impair communication with non-specialists, it is imperative that terminology created should be as clear as possible. We conclude that terminologists need to pay close attention to conceptual metaphors inherent in source terms, and see how metaphoric and metonymic mappings can be done in a consistent and productive manner. The use of traditional terms by the specialists also marks them (the specialists) as being very crucial in language documentation and revitalization efforts for any language. Words which may lose currency may, if useful for and used in technical communication remain alive because they serve a purpose.

## 8. DEVELOPMENT COMMUNICATION AND ADVOCACY

### 8.1 Status Report on Terminology Development and Advocacy

Owolabi (2006) provides a summary of Yoruba terminology development works since 1953, shown in Table 4 below.

Table 4: 2006 Status Report on Yoruba Terminology

Areas covered by Yoruba Terminology	Approximate Number of Entries
Primary Science and Mathematics 1953	760
Linguistics, Literature and Methodology	2,070 (YMET-I) 1984; 860 (YMET-II) 1990
Legislation and Politics 1981	8000 (QGLT)

Engineering Physics 1993	1,500
Total Number of Technical Terms	13,190

Since 2006 (when Owolabi’s summary was published), a lot of progress has been made in Yoruba language engineering by researchers working privately or with government sponsorship. Some of the works are analytical works, that is, the product of research leading to the award of a degree. Others are commissioned translations while others involve working with digital formats and new media.

#### *Analytical Works and Advocacy*

Yusuff (2008) is a PhD dissertation which presents a morphological analysis of newly created Yoruba terms whether created by scholars and non-scholars, evaluating them for appropriateness, effectiveness and adequacy. Olubode-Sawe (2010d) is another PhD dissertation on terminology development and includes as an appendix ‘English - Yoruba Vocabulary of Building Construction’ (Èdè Ìpèrì fún Ìmò Ìkólé ní Èdè Gẹ̀ẹ̀sì àti Èdè Yorùbá). The over 1400 Vocabulary is presented in two parts. In Part I, an English entry term is followed by a Yoruba equivalent term, its part of speech and definition, all in Yoruba. Part II presents an alphabetical list of Yoruba entries (term and part of speech only) followed by English equivalents. A sample is presented at Appendix I. Komolafe (2021) evaluates Yoruba crop production terminology in South-western Nigeria while Eleshin (2023) is concerned with standardization. It identifies inconsistencies and inappropriateness in the use of terms by the media, proposes a method of harmonisation of the terms and a model for terminology development. Works on advocacy include Owolabi (2006, 2007) Awobuluyi (2018, 2019) and Isola 2013.

#### *Terminology Projects and Commissioned Translations*

One of the more recent large scale terminology projects is the *Metalanguage for HIV, AIDS and Ebola discourses* in Hausa, Igbo and Yoruba project. According to Lead Researcher Herbert Igboanusi, researchers collected commonly used terms from hospitals, Ebola management centres, media houses and HIV/AIDS NGOs in 10 states of Nigeria as well as from UNAIDS and UNESCO online resources, and medical dictionaries. Workshops were then held, first to train participants on lexical modernisation, then to generate equivalents for the source terms and finally, to evaluate and standardise the terms created, in conjunction with such

stakeholders as Network of People Living with HIV and AIDS in Nigeria, Society for Women and AIDS in Africa, Nigeria and media practitioners in the three languages concerned (Igboanusi, 2017). The final output comprises three volumes: *English-Hausa Glossary of HIV, AIDS and Ebola Related Terms* (Amfani& Ibrahim, eds., 2017), *English-Igbo Glossary of HIV, AIDS and Ebola-Related Terms* (Igboanusi & Mbah, (eds.) 2017), and *English-Yorùbá Glossary of HIV, AIDS and Ebola-Related Terms* (Yusuff, Adetunji & Odoje, eds., 2017). The Igbo version has 1574 terms while the Yorùbá and Hausa versions each has 1572 terms apiece.

*Àtúnṣe Òfin Ìrìnna* (translation of The Revised Highway Code) was undertaken by Professor Akinwumi Iṣòla and revised by Professor Kola Owolabi; and *Òfin Ìṣàkóso Orilẹ̀-Èdè Nàìjíríà ti Odún 1999* (translation of Constitution of the Federal Republic of Nigeria) was undertaken by a team led by Professor Kola Owolabi. The first has been published and the draft of the second has been forwarded to the Federal Ministry of Information and National Orientation which commissioned it. A more recent project is the translation of the Sustainable Development Goals into Nigerian languages. The Yorùbá version, *Ìlẹ́pa Ìdàgbàsókè tó duró ṣinṣin (ní èdè Yorùbá)* (IIDS) was undertaken by a team led by Dr. Kòla Tubòsun. The Hausa version is titled *Muradan Raya Kasa mai dõrewa* (Hausa).

One organization that has been active in Yoruba language advocacy is the Centre for Yorùbá Language Engineering (CEYOLENG) (*Ibi Iṣẹ́ fún Ọ̀nà Ìṣàmúlò Èdè Yorùbá*), based in the University of Ìbàdàn, Nigeria. It was incorporated in 2012 for the purpose of revitalising or strengthening, developing, promoting, propagating and preserving Yorùbá language and culture. The NGO with areas of activity that cover terminology development, translation, skill development and Yorùbá language access advocacy is led by Professor Kola Owolabi. (See more at [www.ceyoleng.org](http://www.ceyoleng.org)). I am happy to say that I am on the CEYOLENG team.

*Digitization and Application of Human Language Technologies in Yoruba* Significant research effort is being expended on making Yoruba available in digital formats. A significant achievement is the Global Yoruba Lexical Database v.1.0 (Awoyale 2008). This work is not terminology development per se but more of terminology popularisation, as it brings together in one place many of the terms already created. Awoyale's purpose for incorporating such works as *Yoruba Metalanguage I* (1984), *Yoruba*

*Metalinguage II* (1990), *Vocabulary of Primary Science and Mathematics* (1987), *Quadrilingual Glossary of Legislative Terms* (English, Hausa, Igbo and Yoruba) (1991), *Core Curriculum for Primary Science* (1990) and *Yoruba Monolingual Dictionary* (on-going) into the database was to “rescue them from the inevitable obscurity that time and technological advancement could bring upon them in the computer age”. The database also includes words from existing Yoruba dictionaries, as well as plant names, proverbs, riddles and idioms as examples of usage (Awoyale, 2008: 31). Another major worker in the field is Dr. Kayode Fakinlede, promoter of the Yoruba Science and Technology Encyclopedia [Yoruba-scipedia.wikidot.com](http://Yoruba-scipedia.wikidot.com). On this site, topics listed according to subject areas: Mathematics, Physics, Biology, Health Science, Nature Study, etc. It is best seen as a work in progress. The encyclopaedia is actually a bilingual glossary (English and Yorùbá) and not all topics are written in Yoruba and English as claimed. For example, the entry on science (*èkó imò-jinlè*) and universe (*òdùmarè*) are written only in Yorùbá.

A lot of postgraduate work has been done and is in progress in natural language processing (NLP) of Yoruba. This process really kicked off in the 2000s, with Masters’ thesis and PhD dissertations being produced in several aspects of machine translation including text-to-text, text-to-speech, speech-to-text, POS tagging, character recognition and diacritic restoration, e-learning systems, corpus production etc. Independent research is also being produced, and a conservative estimate is 70 titles in all aspects of machine translation as well as a few in language advocacy, e.g., Adegbola (2016) which makes a case for indigenising human language technologies. These titles are attached as Appendix II.

Another aspect of terminology development is institutionalised advocacy and technical support. A sample of three players in the field: African Languages Technology Initiative (Alt-i), YorubaName.com and Àtéléwò will suffice to give an indication of what is being done. Alt-i promotes the use of information and communication technologies in African Languages, through awareness creation, capacity building, software and hardware development, networking and advocacy. According to <http://www.alt-i.org/>, Alt-i has been instrumental in promoting postgraduate research in human language technologies, with a focus on information science, systems engineering or linguistics. The second, YorubaName.com is an online intervention to preserve and document all Yorùbá names in a multimedia

format, a contribution to the survival of African identities in their various expressions (<http://yorubaname.com/about-us>). YorubaName.com provides technology support for writing the Yorùbá language via the Igbo/Yoruba keyboard which enables the typing of all Yoruba graphemes with a combination of two keys, and another one or two keys for tone marking. The real advantage of the keyboard is that one can type orthographically correct Yorùbá when working online.

The third platform, Egbé Àtéléwó, is involved in advocacy as well as technical support, especially for the younger population. In May 2019, ÀTÉLEWÓ held a one-day master class on Yorùbá writing for the web, where they tutored participants in Yorùbá diacritics and provided them with Yoruba keyboard software (provided by YorubaName.com), as well as a mobile Android keyboard app.

Technology support is also provided through style guides provided by multinational software providers who need to localise their products. *The Microsoft Yoruba Style Guide* provides formatting, grammatical and stylistic guidelines for people involved in the localisation of Microsoft products for a Yorùbá-speaking market. Similarly, Sony Ericsson has published *Yoruba language guidelines and principles*, intended to ensure standardisation, i.e., that language and style are consistently and correctly used across Sony Ericsson products and by translators working in Yoruba. Mozilla's *Yoruba (yo)* has the same purpose but its range is much narrower than Microsoft's or Sony Ericsson's. In addition, several apps are available for typing Yoruba characters on mobile devices. Common ones include TouchPal, African keyboard, Multiling and SwiftKey. Some are designed for particular phones: Yoruba Keyboard by Moballo, LLC is only available for iOS devices.

## **8.2 Government Attempts at Language Advocacy**

The National Policy on Education (NPE) provides that each child should be encouraged to learn one of the three major Nigerian languages other than his mother-tongue. The three languages, as stipulated in the policy are Hausa, Igbo and Yoruba. Similarly, it provides that at the nursery school, the medium of instruction will be the mother tongue or the language of the immediate community while at primary school, the language of instruction will initially be the mother-tongue or the language of the immediate community and at a later stage English. This policy has not been successfully implemented. The reasons are not far-fetched. There are only 30 institutions

with Hausa programmes, 16 with Yoruba programmes and 12 with Igbo programmes. Fulfude is available only in two institutions, Edo, Efik/Ibibio, Kanuri and Tiv are available in one university each (See Appendix III). The manpower to implement the policy is just not available.

In December 2022, the government announced a new policy which will see primary education being provided exclusively in indigenous languages. The policy is more of a proposal because no plans for implementation have been made. This policy stands logic on its head by putting the cart before the horse. A Federal Executive Council cannot wake up one day to legislate the use of indigenous languages in early primary education by fiat. Where are the technical terms? Where are the books? More to the point, where are the teachers?

### 8.3 My Yoruba Advocacy Activities

In 2017, I was commissioned by the Ondo State Oil Producing Areas Development Commission to lead a workshop to develop their vision and mission. Afterwards, it was thought wise to translate into Yoruba. Table 5 shows the English and Yoruba versions. The English, Yoruba and Ijaw document is attached at Appendix IV.

**Table 5.1: OSOPADEC VISION, MISSION AND CORE VALUES**

ENGLISH	YORUBÁ
<b>ONDO STATE OIL PRODUCING AREAS DEVELOPMENT COMMISSION</b>	<b>ÀJỌ AŞÀMÓJÚTÓ ÌDÀGBÀSÓKÈ ÀWỌN AGBÈGBÈ ELÉPOLÈ NÍ ÌPÍNÌLÈ OŃDÓ</b>
<b>VISION</b> To be the most proactive and responsive interventionist agency that satisfies stakeholder aspirations with excellence in service delivery	<b>ÌRAN WA</b> Láti jẹ ibi-işẹ atètémúşẹşe àti ayárafèsì jùlọ, tí ó ní tẹ àwọn ẹni-òrán-kàn lórùn, tí ó sì tayọ ni ninu işẹ ifişèrànwọ
<b>MISSION</b> To transform the lives of the people and ensure total prosperity through intervention programmes in the oil producing areas of Ondo State	<b>ÌŞÈ-ÌRANŞÈ WA</b> Láti tún ayé àwọn èniyàn wa şe, kí a sì mú işerere jálẹjáko àti idàgbàsókè alálótọ bá àwọn agbègbè elépolè ni Ìpínlẹ Ońdó, nipa şişe àgbèkalẹ àwọn ètò amáyéderùn.
<b>CORE VALUES</b> <i>Compassion and Commitment</i> Showing genuine compassion and absolute commitment to the socio-economic welfare and security of the people of the oil producing areas and other stakeholders	<b>ÀWỌN AŞÀ TÍ A YÀN L'ÀAYỌ</b> <i>Ìfẹ ọmọnikẹjì pẹlú Ifọkànsin</i> Fífi ifẹ ọmọnikẹjì àti işişékára mú kí idàgbàsókè bá ọrọ-ajẹ àti àjùmọgbé-láwùjọ àwọn agbègbè elépolè Ìpínlẹ Ońdó; kí àwọn èniyàn wa àti àwọn agbèterù yòókù sì máa gbé ni àiléwu.

ENGLISH	YORUBA
<p><b>Education and Empowerment</b> Facilitating the provision of qualitative education and sustainable empowerment programmes, especially for youths, women and other vulnerable groups</p>	<p><b>Ètò Èkọ àti Isonidakin</b> Şişe ètò fún ipèsè ètò-ẹkọ to mú'ná dọko, pẹlú àwọn ètò asonidakin tó l'álòtò, ní pàtàkì, fún àwọn ọ̀dọ́, àwọn obinrin àti àwọn miiran tó nílò iranwọ</p>
<p><b>Ethics-Consciousness</b> Conducting our business in the fear of God and holding ourselves accountable to the people we serve</p>	<p><b>Ìwà Omolúàbí</b> Şişe işe wa pẹlú ibèrù Olọrun àti fifi ọ̀títọ́ bá àwọn tí a n'şişe sìn, tí a sì máa j'íyìn fun, lò</p>
<p><b>Teamwork</b> Promoting a spirit of mutual cooperation and coordination among staff and the people by obtaining feedback, in the interest of all stakeholders</p>	<p><b>Àjùmọ̀şìşẹ̀pọ̀</b> Mímú kí ẹ̀mí ifowọ̀sowọ̀pọ̀ àti ifètòşìşẹ̀pọ̀ wà láàárín àwọn ọ̀şìşẹ̀ àti àwọn èniyàn wa, nípa fifi àyẹ̀ gba isọ̀rọ̀ àti ifèsì, fún ànfàní gbogbo àwọn àgbàterù wa.</p>
<p><b>Ecological Responsibility</b> Using natural capital in a resource-efficient and sustainable manner, as trustees of present and future generations</p>	<p><b>Ìbọ̀wọ̀ fún Ayíká</b> Lílo àwọn orọ̀ àbáláyẹ̀ ní àyíká l'ónà to sà̀n jùlọ̀, tí yóó sì ní àlòtò; gégé bí àlámòójúto ogún àwọn iran ọ̀nì àti àrọ̀mọ̀dọ̀mọ̀ wọ̀n</p>
<p><b>Community Focus</b> Creating opportunities for full participation of the people of the oil producing communities in decisions that concern them and ensuring that projects are responsive/adapted to their needs</p>	<p><b>'Onínkan Làá Jẹ́ Ó Şe É'</b> Fífi àyẹ̀ gba àjùmọ̀şìşẹ̀pọ̀ àwọn èniyàn agbègbè elépolẹ̀ l'pínlẹ̀ Oñdó, kí wón l'ẹ̀nu ọ̀rọ̀ nínú ohun tí ó kàn wón, kí a sì rí i pé gbogbo işe-àkànşe ní ó bá àìní wọ̀n pàdẹ̀</p>

More about this project later.

Another aspect of my development communication endeavours is providing research support for science communicators who need to translate research instruments into Yoruba, so that they can reach underserved communities. In this area, I have translated the Montreal Cognitive Assessment (MoCA) Version 3, Hospital Anxiety and Depression Scale (HADS), COHEN Perceived Stress, Social Phobia Inventory (SPIN) and Kessler Psychological Distress Scale (K10). HADS, a typical example is attached at Appendix V. I have also worked on advertising projects for advertising agencies to develop their copy and check for style. The advertising for Rotana Milk is shown at Appendix VI.

As part of my development communication activities, in 2018 I led a trilingual translation team to provide Hausa, Igbo and Yoruba versions of the *Guide for the Field Training of Cassava Farmers (Manual)*. I coordinated the translation of the manual, a collaborative project between FUTA's



School of Agriculture and Agricultural Technology & IDH - The Sustainable Trade Initiative. The rationale was that for the training to be most effective, it must speak to the farmers in a language they would understand. We developed three documents: *Jagoran Sanin Makamar Aiki-Domin Manoman Rogo* (Hausa), *Usoro Maka Ikuziri Ndị-ọrụ Ugbo Na Akọ Akpu* (Igbo), and *Atónisónà fún Ètò Ìdánilékòó Lóri-oko fún Àwọn Àgbè Èlégèè* (Yorùbá). In the course of the translation, I created 150 terms including the following:

**Table 5.2: Yoruba Terms in Agricultural Technology**

S/No	Term	Ọrọ
1.	pre-emergence herbicides	<i>apako májé-épò-ó-hù</i>
2.	post-emergence herbicides	<i>apako apa-èpò-mólẹ</i>
3.	block farm scheme	<i>ètò oko-àgbàro</i>
4.	out-grower scheme	<i>ètò Şògbìn-kí-n-ràá</i>
5.	support services	<i>àtilẹhin fún işẹ ògbìn</i>
6.	raw materials	<i>ohun-àmúlò-fìşennkanjádé</i>
7.	farm mechanization	<i>ifẹro-şoko</i>
8.	hypothetical production record	<i>àkòşilẹ ohun a şe (jẹ-n-şé-wò)</i>
9.	change in inventory	<i>iyàtò ninú erù tí àní</i>
10.	Depreciation	<i>idimiyelóri</i>
11.	net farm income	<i>owò tó wolé léyìn àyòşéyìn</i>
12.	gender prejudices.	<i>ifimòtélé-şòdíwòn takotabo</i>
13.	gender equity	<i>işètó fún takotabo</i>
14.	disease and pest management	<i>imójútó àrùn àti àwọn ajenirun</i>
15.	harvest and post harvest activities	<i>ìkórè àti àwọn àgbéşe lẹhin ìkórè</i>
16.	harvesting of roots and stems	<i>kìkórè gbòngbò àti òpó-igi</i>
17.	postharvest handling	<i>àwọn àgbéşe lẹhin ìkórè</i>
18.	loss reduction	<i>idínkù òfò</i>

Advocacy often involves awareness raising and civic engagement. For example, in Olubode-Sawe (2019), I established the fact that all Nigerian languages, including the so-called major ones, are endangered. Though the privileging of the major languages by the Constitution and the National Policy on Education is seen as “another patent form of intolerable dictatorship by the majority on the minority” (Tamuno, 2004: 45), the fate of the major languages is little better than that of the smaller languages. As Kuju (1999) observes, ‘it is not only the so-called minority or small languages that are endangered in Nigeria. Even the rich also cry’. An analysis of course options as published in the JAMB Brochure of 2004/2005 shows that more teachers are trained to teach French than Yoruba and Igbo combined by a

ratio of 26 to 23 (Olubode-Sawe, 2019). What this translates to is that most of our language education energies are expended on English and the foreign languages. With the exception of Fountain University, Osogbo with a Yoruba degree programme and Al-Qalam University, Katsina with a degree programme in Hausa, private universities in Nigeria do not award degrees in any Nigerian languages but several have programmes in foreign languages and International Relations. Such a (mis)placement of priorities shows that though Nigerian languages are managing to survive, and some are obviously stronger than others, they collectively are an endangered species needing focused and consistent preservation and augmentation efforts. For example, data from Igboanusi (2006) show that English has encroached into areas formerly thought to be the preserve of Nigerian languages. Both Yoruba and Igbo are being steadily replaced by English in both the spoken and written domains (Igboanusi, 2006). Olubode-Sawe (2019) suggests methods of arresting language shift and promoting indigenous language maintenance in Nigeria as a first step in preventing a large-scale shift to the languages of Europe with the potential loss of indigenous languages, and the typically eurocentric point of view and monologic discourse that this will engender. One such method is the recording and preservation of traditional knowledge in the original tongues. A survey of the language of early education of accomplished users of English in Africa, including those who “write good plays and literature” at present may convince people who think English should be introduced at the earliest possible time to children. Research results suggesting that first language competence, including MT literacy is a necessary foundation for the best results in second language acquisition and literacy (Tollefson, 1991) should be given publicity.

A recent survey by CEYOLENG shows very low student enrolment for Yorùbá in 32 Nigerian Colleges of Education and 11 Nigerian Universities in 2020/2021 academic year as is evident from the following data: NCE 300 level students of Yorùbá: 320; NCE 400 level full-time degree students: 59; undergraduate 400 level students: 175 and 101 Postgraduate Students, making a total of 655. The population of the Yorùbá-speaking States of Èkìtì, Lagos, Ògùn, Òndó, Òşun and Òyó, and the Yorùbá-speaking parts of Delta, Edo, Kogí and Kwara States is over 50 million. A clear sign of youths' low interest in Yorùbá study and a warning that the Yorùbá language may become endangered in the future if appropriate, sufficient, and timely care is not taken is the fact that there are far fewer than 1,000 students of Yorùbá out of this enormous population. This kind of data is useful to shake us out

of our sleep. The spelling of Yorùbá personal names is now more commonly anglicised by young people, as seen in ‘Hoyhinkhansorlar’ for Oyínkánsòlá, ‘Horluwabusayor’ for Olúwabùsáyò, ‘Harnifowoshey’ for Anífowòṣe, ‘Phamuyiwar’ for Fámúyiwá, ‘Mohjirohlar’ for Mojíròlá, and ‘Hormholharah’ for Ọmọlará. These spellings are not used in official documents, but these names are used on their online profiles, inscribed on their clothing and used in common interactions.

The most important advocacy strategy is using the language in high-value academic and social events. A not-so-recent example is Professor Akinwumi Ìṣòlá’s Convocation Lecture at Adekunle Ajasin University in March 2013. Titled *Ki ni a fẹ́ máa fi èdè Yorùbá ṣe?* (What really do we want with the Yorùbá language?), the advocacy consisted of three things: the content of the presentation, the appeal to authority and the medium. The content refers to the issues that were raised, especially the need to strengthen the Yorùbá language and use it in research and publications. Research is usually validated by corroboration: citing the work of authorities in the field. Professor Ìṣòlá validated his work by reference to Yorùbá folk wisdom through stories about language, the mono-label monkey and the multi-nomenclature goat, wise Àwòko and foolish Ọpẹ̀rè, Olongo, Ìròrè and Ṣoṣo, thus showing that indigenous knowledge is valid for research support. The most telling part of the advocacy drive was the medium: the lecture was presented in the Yorùbá language. It was a major victory for him and for research in Yorùbá, for he had been denied the opportunity of giving his inaugural lecture in Yorùbá, though Yorùbá was the language of instruction in his department and academic research was written in Yorùbá. The Vice Chancellor, Prof. Wándé Abímbólá, himself a Yorùbá scholar and cultural activist said that Yorùbá was not the language of inaugural lectures.

Similarly, with the permission of the presiding Bishop, Rt. Reverend Simeon Oluwole Borokini, *PhD*, I presented the vote of thanks at the Third Session of the Thirteenth Synod of Diocese of Akure (Church of Nigeria/Anglican Communion) in the Yoruba language. It was titled “Òrò Ìdúpé ni Sàá Kẹta ti Sínòṣùdù Kẹtálá ti Dáósísì Àkúrẹ̀ (Ìṣọ̀ Nàìjíríà-Ìdàpọ̀ Àngílíkàní) tí ó wáyé ní Ìṣọ̀ Ándérù Mímó, Aládèé-Ìdànrè ní Àbámẹta 3 Ọkùdù egbèrùn méjì ati ọkànlẹ́wàájì Ọdún Olúwa (2021). For that presentation, I devised terms for titles in the Anglican Church including: Chancellor: *Giwa Dáósísì*, Registrar: *Alábòòjútó-Àkòsílẹ̀*, Legal Secretary: *Akòwé-Ajẹmófìn*, House of clergy: *Agbo-Ilẹ̀ Àlùfáà*, Rt. Revd (the title for a Bishop): *Èni Ọ̀wọ̀ Gíga Jùlọ̀*,

Venerable: *Eni Ọ̀wọ̀ Gíga* and Revd. Canon: *Eni-Ọ̀wọ̀-Agba*. The existing term for Reverend is *Eni-Ọ̀wọ̀*.

**Table 5.3: Ecclesiastical Titles in the Anglican Church**

Title	Orúko-Oyè
Chancellor	Giwa Dáósísi
Deputy Chancellor I	Igbákeji Kíní Giwa
Deputy Chancellor II	Igbákeji Keji Giwa
Registrar	Alábòójútó-Àkòsílẹ̀
Deputy Registrar	Igbákeji Alábòójútó-Àkòsílẹ̀
Legal Secretary	Akòwé-Ajemófin
Clerical Secretary	Akòwé-Sojú-Àlùfáà
Lay Secretary	Akòwé-Sojú-Omo-Ijo
House of clergy	Agbo-Ilé Àlùfáà
House of laity	Agbo-Ilé Ijo
Hon. Justice	Eni-Iyí Adájó
Rt. Revd	Eni Ọ̀wọ̀ Gíga Júlọ
Venerable	Eni Ọ̀wọ̀ Gíga
Revd. Canon	Eni-Ọ̀wọ̀-Agba
Deacon	Díákóni
Diocesan Marshals	Àwọn ẹ̀sọ́-Dáósísi

### 9. ‘FÚTÀ MI NÍ ÈDÈ YORÙBÁ’

The most extensive terminology work I have undertaken is a glossary of FUTA-related terms and concepts. The compilation of ‘FÚTÀ MI NÍ ÈDÈ YORÙBÁ’ started in 2011, conceived as a glossary to be used on a FUTA Radio programme, *Iṣé Àṣelà*. The idea was that deans and heads of departments should be able to educate members of the host community (Akure and environs) about what their research entailed and how it could help the host community. A memo was sent to them to indicate terms they could use in a science popularisation programme in Yorùbá. Only one person responded, and personal interactions with them showed they did not think that scientific information could be presented in Yoruba. The radio programme never took off, and it seemed that the effort would go to waste. Nevertheless, as new departments and schools were created, I added more terms to the glossary. Two new categories were later added: ‘student matters’ and ‘levels and awards’.

Then came the 2018 Mother Language Day, with the theme “Linguistic diversity and multilingualism count for sustainable development”. I was able to get the General Studies Unit in FUTA interested in a programme to promote the work of the Unit, and Nigerian languages and culture. The programme was advertised on social media, and invitations were sent to the University Management and members of the community. The University Registrar, two deans and a few HODS were in attendance. There were presentations in Hausa, Igbo, Ibibio, Nigerian Pidgin and Yorùbá. FUTA Radio aired the programme live, and it was a talking point on campus, because it proved that basic information about the University could be shared in Yoruba. A direct outcome of the Mother Language Day terminology awareness programme was the invitation in May 2018 by the School of Agriculture and Agricultural Technology to translate a farmers’ training manual “Guide for the Field Training of Cassava Farmers” into Nigerian languages.

Terminology products often end up on shelves, in journal articles that no one reads, and on table tops. I have therefore created a website to popularise my terminology endeavours. Titled ‘*FÚTÀ MI NÍ ÈDÈ YORÙBÁ*’ it presents a little of what I have done over the years. It is available at <https://sites.google.com/u/0/d/138-zk8EYh56rwWzeUCJ3sfEigP5I3U1Q/preview>. You may also scan the QR code below to view the site.



The home page has an introduction in Yoruba, as well as ‘Aáyan Ítumò’, a sample of results of my translation activities: questionnaires, the translation of “Walls” (Chapter 12 of Fadamiro and Ogunsemi (1996)), and “*ÀKOSÍLÈ ÌDÁNILÉKÒ*” and ‘Aáyan Agbòràndùn’, a sample of results of advocacy activities.

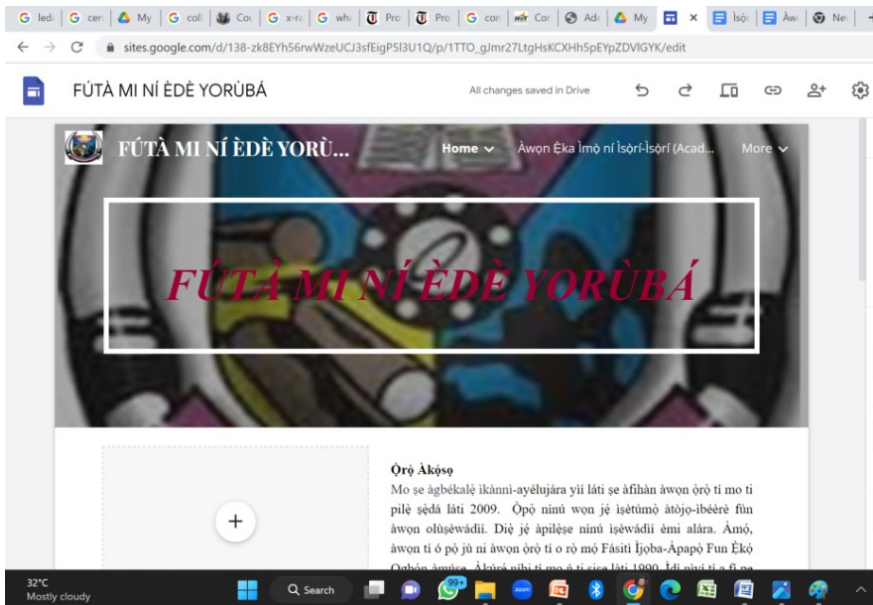


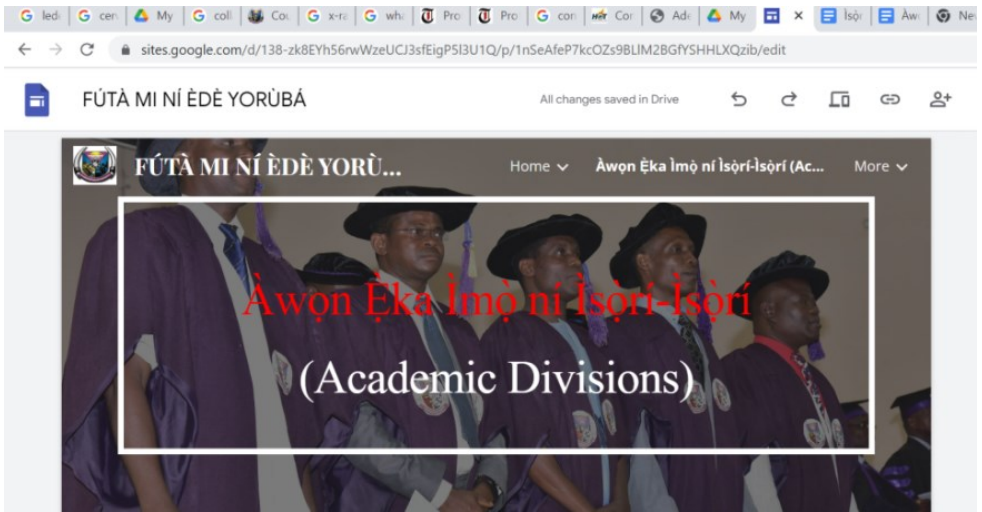
Figure 1: Screenshot of Homepage

### Òrọ̀ Àkọ̀sọ̀

Mo ẹ̀ ą̀gbẹ̀kalẹ̀ ikànni-ayélujára yíi láti ẹ̀ àfihàn àwọn ọ̀rọ̀ tí mo tí pilẹ̀ ẹ̀dà láti egbẹ̀rún méjì ó lé mèsàn-án ỌỌ (2009 AD). Ọ̀pọ̀ nínú wọn jẹ̀ ị̀ṣẹ̀túmò àtòjọ-ibéèrè fún àwọn olùṣewádíí. Diẹ̀ jẹ̀ àpilẹ̀ṣe nínú ị̀ṣewádíí ẹ̀mi alárá. Àmọ̀, àwọn tí ó pọ̀ jù ni àwọn ọ̀rọ̀ tí ó rọ̀ mọ̀ Fásití Ijọba-Àpapọ̀ Fun Èkọ̀ Ogbón-àmúṣe, Àkúrẹ̀ níbi tí mo n ti ẹ̀ṣiṣe láti 1990. Ìdí niyí tí a fi pe ikànni-ayélujára yíi ni **FÚTÀ MI NÍ ÈDÈ YORÙBÁ**

Púpọ̀ nínú àwọn ọ̀rọ̀ tí àwọn olùṣedá-ọ̀rọ̀ (terminologists) bá ẹ̀ ni wọn máa n ẹ̀gbé si orí tábilí tàbí inú iwé. Ìdí niyí tí mo fi rò pé ó yẹ kí n lo ogbón-àmúṣe ajemọ-ìfiròhin-ránsẹ̀ láti gbé àwọn ọ̀rọ̀-àpilẹ̀ṣedá wọnyí síta. Ẹ̀bí ilé-ẹ̀kọ̀ fún ogbón-àmúṣe la wà. Ẹ̀ káàbọ̀ sí **FÚTÀ MI NÍ ÈDÈ YORÙBÁ**.

The next page presents Àwọn Èka Ìmọ̀ ní Ìsọ̀rì-Ìsọ̀rì (Academic Divisions).



**Figure 2:** Screenshot of Àwọn Èka Ìmò ní Ìsòrí-Ìsòrí

**Table 6.1:** Àwọn Èka Ìmò ní Ìsòrí-Ìsòrí

Academic Divisions	Àwọn Èka Ìmò ní Ìsòrí-Ìsòrí
Federal University of Technology, Akure Motto: Technology for Self-Reliance	Fásití Ìjòba-Àpapò Fun Èkó Ogbón-Àmúṣe, Akurẹ Atónà: Ogbón-Àmúṣe fun igbẹkele ara ẹni.
Institute of Technology-Enhanced Learning and Digital Humanities	Èka Ìmò Ifogbón-àmúṣe-Segbè-fún-ẹkò àti Èkó Ipilẹ-Èdà Àfi-Kònbútà-Sẹ
School of Agriculture And Agricultural Technology	Ìsòrí-ìmò Iṣẹ-Ogbin Àti Ogbón-Àmúṣe Ajemóṣẹ-Ogbin
School of Basic Medical Sciences	Ìsòrí-ìmò Awon Sáyẹnsi Ipilẹ Ìṣẹgùn
School of Computing	Ìsòrí-ìmò Irògún
School of Earth and Mineral Sciences	Ìsòrí-ìmò Sáyẹnsi Ajemólẹ-Ayé Àti Ìwakusà
School of Engineering and Engineering Technology	Ìsòrí-ìmò Imoṣẹ-Aró Àti Ogbón-Àmúṣe Ajemó-Imoṣẹ-Aró
School of Environmental Technology	Ìsòrí-ìmò Ogbón-Àmúṣe Ajemáyiika
School of Health and Health Technology	Ìsòrí-ìmò llera Àti Ogbón-Àmúṣe Ajemólera
School of Life Sciences	Ìsòrí-ìmò Awon Sáyẹnsi Abẹmí
School of Logistics and Innovation Technology	Ìsòrí-ìmò Ajemó Ìkẹrúkiri Àti Ogbón -Àmúṣe Iṣohun-Ọtun

School of Management Technology	Ìsòrí-ìmọ̀ Ọgbón-àmúṣe Ajẹmọ-Ìmójútó-Orọ-Ajé
School of Physical Sciences	Ìsòrí-ìmọ̀ Àwọn Sáyẹ̀nṣi Àfọjúrí
School of Sciences	Ìsòrí-ìmọ̀ Àwọn Sáyẹ̀nṣi
School of Postgraduate Studies	Ìsòrí-ìmọ̀ Ìkẹkọ̀ Lẹyin Oye Àkọkọ̀
School of Pure and Applied Sciences	Ìsòrí-ìmọ̀ Sáyẹ̀nṣi Pọ̀nńbélé Àti Sáyẹ̀nṣi Alámùúlo

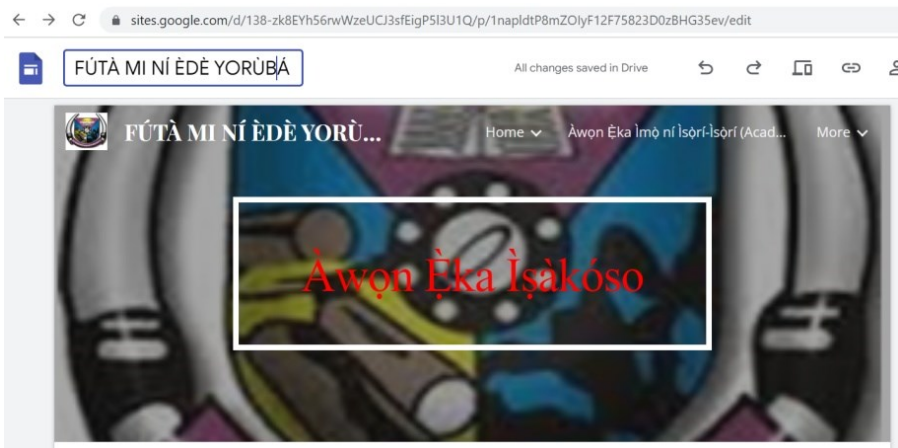


Figure 3: Screenshot of Àwọn Èka Ìṣàkóso

**Table 6.2: ÌṢÀKÓSO LÈLÈKAJÈKA**

ADMINISTRATIVE DIVISIONS	ÌṢÀKÓSO LÈLÈKAJÈKA 1
VICE CHANCELLOR'S OFFICE	ỌFÍÌSÌ ỌGÁ-ÀGBÀ FÁSITÌ
REGISTRY	ÈKA ÌMÓJÚTÓ ÀWỌN ÀKỌSÍLÈ
LIBRARY	ILÉ-ÌYAWÈÈKÀ
BURSARY	ÈKA ÌMÓJÚTÓ ÌṢUNÁ-OWÓ
COMPUTER RESOURCE CENTRE	ORÍKÒ ÌPÈSÈ ÀMÚLÒ KỌNBUGÀ
ADVANCEMENT CENTRE	ORÍKÒ AṢAKÓSO ÌTÈSÍWÁJÚ
CENTRE FOR RESEARCH AND DEVELOPMENT	ORÍKÒ ÌṢEWÁDÌÌ ÀTI ÌDÀGBÀSÓKÈ
CENTRE FOR SPACE RESEARCH APPLICATIONS	ORÍKÒ ÌṢEWÁDÌÌ KÁÀ-ỌRUN ÀTI ÌMÚLÒ WỌN
CENTRE FOR GENDER ISSUES IN SCIENCE AND TECHNOLOGY	ORÍKÒ ÌGBÉYÈWÒ ỌRÀN TAKO-TABO NÍNÚ SÁYẸNṢI ÀTI ỌGBÓN-ÀMÚṢE



<b>ADMINISTRATIVE DIVISIONS</b>	<b>ÌŞÀKÓSO LÈLÈKAJÈKA 1</b>
CENTRE FOR CONTINUING EDUCATION	<b>ORÍKÒ FUN ÈKÓ ALÈTÌLÈ</b>
CENTRE FOR ENTREPRENEURSHIP	<b>ORÍKÒ IKÓŞÈ IŞÈDOWÓ</b>
TEACHING AND RESEARCH FARM	<b>OKO IKÈKỌỌ ÀTI IŞEWADÌÍ</b>
FUTA BUSINESS DEVELOPMENT COMPANY	<b>ILÈ-IŞÈ ÌMÚDÀGBÀ OKÓWO FÚTÀ</b>
INTERNATIONAL STRATEGY OFFICE	<b>QÓFÌSÌ FUN ÌBAŞEPỌ PÈLÚ ÀWỌN ORÍLÈ-ÈDÈ MÌRÀN</b>
DIRECTORATE OF ESTABLISHMENT AND HUMAN RESOURCE	<b>ÈKA ÌGBÉKALÈ-ÀYÈ-ÒŞÌŞÈ ÀTI ÌMÓJÚTÓ ÀWỌN ÒŞÌŞÈ</b>
DIRECTORATE OF HEALTH SERVICES	<b>ÈKA ÌLERA-LỌRỌ</b>
DIRECTORATE OF WORKS	<b>ÈKA ÀWỌN IŞÈ-ÀKÀNŞÈ</b>
DIRECTORATE OF SPORTS	<b>ÈKA ERÉ ÌDÁRAYÁ</b>
DIRECTORATE OF PHYSICAL PLANNING	<b>ÈKA ÌFÈTÒSÌ AYÍKÁ</b>
DIRECTORATE OF ACADEMIC PLANNING	<b>ÈKA ÌFÈTÒSÌ ỌRỌ AJEMÁKADÁ</b>
DIRECTORATE OF CORPORATE COMMUNICATIONS	<b>ÈKA ÌGBÉRÒHÌN JÁDE</b>
DIRECTORATE OF INTERNAL AUDIT	<b>ÈKA ÌYÈWÉOWÓWÒ LÁBÈLÈ</b>
STUDENT AFFAIRS DIVISION	<b>ÈKA ỌRÀN ÀWỌN AKÈKỌÓ</b>
ACADEMIC AFFAIRS DIVISION	<b>ÈKA ỌRÀN AJEMÁKADÁ</b>
INDUSTRIAL TRAINING UNIT	<b>ÈKA ÈTÒ IKÓŞÈ ÒWÒ-IŞÈDÁ</b>
COUNCIL AFFAIRS DIVISION	<b>ÈKA ỌRÀN AJEMỌ ÌGBÌMỌ ÌŞÀKÓSO</b>
MANAGEMENT INFORMATION SYSTEMS UNIT	<b>ÈKA IŞÈLÀNÀ ÈTÒ ÌŞÀKÓSO</b>
LEGAL UNIT	<b>ÈKA ỌRÀN AJEMÓFIN</b>
SECURITY UNIT	<b>ÈKA ÌPÈSÈ ÀBỌ</b>

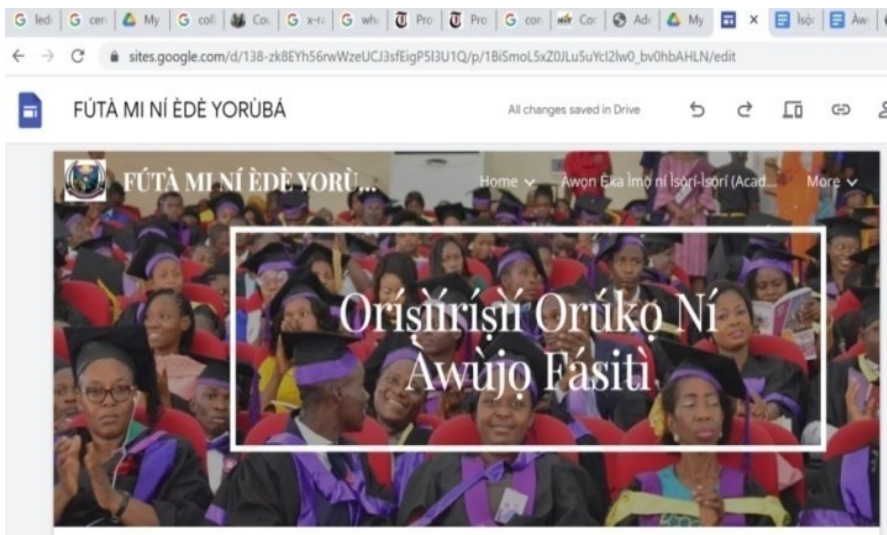


Figure 4: Screenshot of Oríṣíríṣíí Orúko Ní Àwùjọ Fásitì

Table 6.3: Oríṣíríṣíí Orúko Ní Àwùjọ Fásitì

DESIGNATIONS OF MEMBERS OF THE UNIVERSITY COMMUNITY	ORÍṢÍRÍṢÍÍ ORÚKO NÍ ÀWÙJỌ FÁSITÌ
VISITOR	ÀLEJÒ-ÈYE
DEPUTY VICE CHANCELLOR (ACADEMICS)	IGBÁKEJÌ ỌGÁ-ÀGBÀ, AMÓJÚTÓ ỌRÀN AJEMÁKADÁ
REGISTRAR	AKỌWÉ-ÀGBÀ (FÁSITÌ)
DEAN	OLÚDARÍ ÍSỌRÍ-ÌMỌ
ACADEMIC STAFF	ỌṢÍṢÉ AJEMÁKADÁ
NONACADEMIC STAFF	ỌṢÍṢÉ ALÁJEMÁKADÁ
SENIOR STAFF	ỌṢÍṢÉ AGBA
JUNIOR STAFF	ỌṢÍṢÉ ONÍPỌ KÉKERÉ
TECHNICAL STAFF	ỌṢÍṢÉ ONÍṢÉ-ỌWỌ
READER/ASSOCIATE PROFESSOR	ỌKAWÉ/ AMÚGBALÉGBÈÈ ỌJỌGBỌN

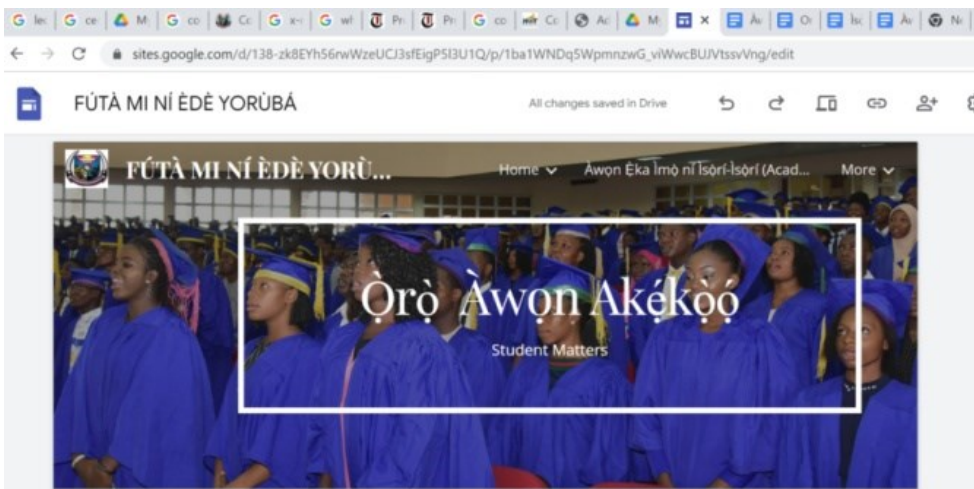
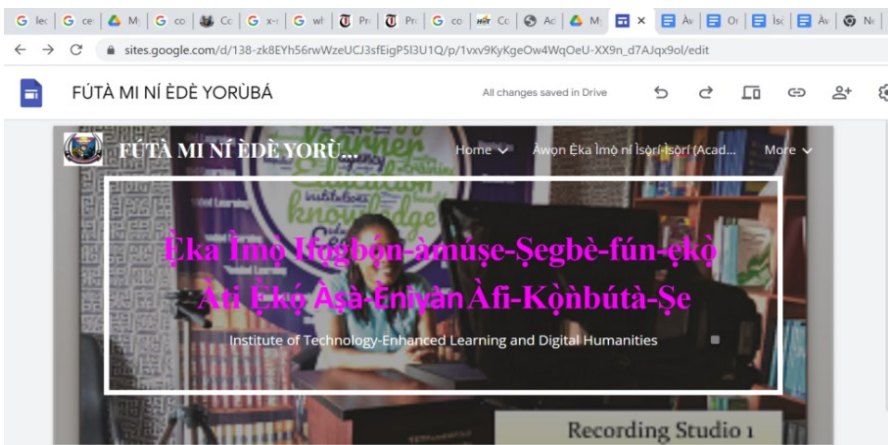


Figure 5: Screenshot of Ọ̀rọ̀ Àwọn Akékòọ̀

**Table 6.4: Ọ̀RỌ̀ ÀWỌN AKÉKỌ̀Ọ̀**

STUDENT-RELATED TERM	Ọ̀RỌ̀ ÀWỌN AKÉKỌ̀Ọ̀
STUDENT	AKÉKỌ̀Ọ̀
COURSE	ABALA ÈKỌ̀ / KỌ̀Ọ̀SÌ
COURSE UNIT SYSTEM	ABALA ÈKỌ̀ ONIWỌN
REGISTRATION	ÌFORUKỌ̀SILÈ
LATE REGISTRATION	ÌFORUKỌ̀SILÈ APÈLÈYÌN
LECTURE	ÌDÁNILÈKỌ̀Ọ̀
TUTORIAL	ÀKỌ̀YÈ
PRACTICAL	ÌKÈKỌ̀Ọ̀ AFOWỌ̀SÈ
DEFENCE	ÈTỌ̀ ÌJÈRÌÌ-TÌ APILÈKỌ̀
STUDENT'S PROJECT	ÌSÈ-ÀKANŞÈ AKÉKỌ̀Ọ̀
SIWES	ÈTỌ̀ ÌKỌ̀SÈ ÀWỌN AKÉKỌ̀Ọ̀
CLASSROOM	KÌLÀÀSÌ
LECTURE THEATRE	GBỌNGAN ÌDÁNILÈKỌ̀Ọ̀
WORKSHOP	YÀRÀ-ÌGBÈŞÈŞÈ
READING ROOM	YÀRÀ ÌKAWÈ
STUDIO	YÀRÀ-ÌŞỌ̀NÀ
LABORATORY	YÀRÀ-ÌKÈKỌ̀Ọ̀-SAYÈNSÌ /LÀÀBÙ
HALLS OF RESIDENCE	ÌLÈGBÈÈ ÀWỌN AKÉKỌ̀Ọ̀
EXAMINATION/TEST	ÌDÁNWỌ̀

<b>STUDENT-RELATED TERM</b>	<b>ỌRỌ ÀWỌN AKÉKỌỌ</b>
COMPUTER-BASED EXAM.	ÌDÁNWỌ ÀFIKỌNBUTA- ŞE
PEN AND PAPER TEST	ÌDÁNWỌ ALÁFỌWỌKỌ
MULTIPLE CHOICE TEST	ÌDÁNWỌ ÈWO-NÌDAHUN
ESSAY-TYPE TEST	ÌDÁNWỌ ALÁRỌKỌ
ORAL EXAMINATION	ÌDÁNWỌ ALOHUN
CONTINUOUS ASSESSMENT	ÌGBÉLÉWỌN ÀTÌGBÀDÉGBÀ
EXAMINER	OLUDÁNWỌ
INTERNAL EXAMINER	OLUDÁNWỌ LÁBÈLÉ
EXTERNAL EXAMINER	OLUDÁNWỌ ATÒDEWÁ
CANDIDATE	OLUŞEDÁNWỌ
TERM PAPER	ÀPILEKỌ
SEMINAR	SEMÍNÁ
LONG ESSAY	ÌWÈ ÀŞEKÁGBÁ
THESIS/DISSERTATION	ÀPILEKỌ ÀBỌ IWADÌÌ
ONLINE LEARNING PLATFORM	GBÁGEDE ÌKÉKỌỌ LÓRÌ ÀSOPO
BLENDED LEARNING	ỌNÀ ÌKÉKỌỌ ALÁDÀLÚ
MOBILE LEARNING	ỌNÀ ÌKÉKỌỌ ALÁGBÈÉKÁ
VIRTUAL LEARNING ENVIRONMENT	ÀYÌKA ÌKÉKỌỌ ÀTOJÚ- INÚKỌ
FACE-TO-FACE	LOJÚ-KOROJÚ



**Figure 6: Screenshot of Èka Ìmò Ifọgbọ̀n-àmúṣe-Şegbè-fún-ẹkọ Àti Ẹkọ Àṣà-Ènìyàn Àfi-Kòṅbútà-Şe**

**Table 6.5: Èka Ìmò Ifọgbọ̀n-àmúṣe-Şegbè-fún-ẹkọ Àti Ẹkọ Àṣà-Ènìyàn Àfi-Kòṅbútà-Şe**

INSTITUTE OF TECHNOLOGY-ENHANCED LEARNING AND DIGITAL HUMANITIES	ÈKA-ÌMỌ ÌFI-ỌGBỌN-ÀMÚŞE ŞEGBÈ FÚN ẸKỌ ÀTI ẸKỌ ÀŞÀ-ÈNÌYÀN ÀFIKÒÑBÚTÀ-ŞE
GENERAL STUDIES UNIT	ÈKA-ÌMỌ GBOGBOGBÒ
GNS 101: USE OF ENGLISH I	ÌLÒ ÈDÈ-GÈẸSÌ I
GNS 102: USE OF ENGLISH II	ÌLÒ ÈDÈ-GÈẸSÌ II
GNS 103: INFORMATION LITERACY	MỌỌNKỌMỌỌNKÀ AJEMỌ IPÈPADÀ ỌRỌ
GNS 106: LOGIC AND PHILOSOPHY	ÌMỌ ÌJÌNLÈ-ÈRÒ ÀTI ÌRÒGÚN
GNS 201: MAN AND HIS ENVIRONMENT	ÈNÌYÀN ÀTI ÀYÍKÁ RẸ
GNS 203: NIGERIAN HISTORY AND CULTURE	ÌTÀN ÀTI ÀŞÀ NÀÌJÍRÌÀ

The website is a work in progress, and will be regularly updated.

## 10. CONCLUSION

My research endeavours in language engineering have been of three main kinds. The first aspect is terminology development. Here, I have developed over 2500 terms, some in the area of building technology and mathematics (numeration), and others in agriculture, religion and several FUTA-related terms. My desire has been to show that if it can be conceived, the Yoruba language can express it. The second is translation. I have investigated how the Yoruba worldview is captured in several translations of the Holy Bible, showing that newer translations tend to be more faithful to Yoruba idiom. I have also been involved in translating questionnaires in medicine and psychology as a way of supporting the research efforts of other researchers. I have been guided by the belief that language engineering is a development imperative. Languages must be developed to express modern-day concepts, so that those who have to or chose to access information in indigenous languages can do so with ease. A case in point is when someone asked me what the point of *Iwadi Google*, as the Yoruba language search engine is named, was. He said, “Why would anyone want to browse in Yoruba?” His question seems akin to “why would anyone watch a Yoruba play, read a Yoruba newspaper or listen to Yoruba radio?” Some access information in these modes because they choose to, even though they might have more ‘economic’ alternatives and some do because they have no other choice. Inability to use English well need not result in isolation from the global village. The SDGs have been translated to major Nigerian languages, but the question is, how many have read it in the local languages? Language engineering efforts are quite intense, and there is a profusion of terminological products.

The third aspect of my work is advocacy. In this regard, I have created the FUTA MI NI EDE YORUBA website to publicise some results of my terminology endeavours over the past 15 years. This is because, without accompanying advocacy, language engineering is a waste of time and effort. A case in point is when OSOPADEC commissioned the translation of their VISION, MISSION AND CORE VALUES into Yoruba and Ijaw in 2017. When I checked the website of OSOPADEC in 2022, I did not find the indigenous language versions. So, I called the consultant. He informed me that regrettably, they did not upload the indigenous language versions. In other words, even after terms have been created, users (who may have commissioned the terms) are reluctant to popularise them. We can take the

horse to the river, but we cannot force it to drink. That is why advocacy is of prime importance.

## 11. RECOMMENDATIONS

*Strategies for promoting the study of Nigerian languages must be devised.* These could include scholarships and bursaries, and other kinds of institutional support. The truth is that most indigenous language departments have a problem justifying the staff they have currently because the students are just not interested.

*A stakeholders' forum for the standardization of Yoruba numerals needs to be convened.* Crucial stakeholder segments include linguist-revisors, terminologists, Mathematics experts and other scientists, with the Mathematical Association of Nigeria and the National Mathematics Centre, Abuja should be invited as collaborators, not supervisors. Standardization is necessary because of the plurality of proposed revisions: Armstrong (1962), Oyelaran 1980, Fakinlede 2003 and may be more with a more localized circulation. Similar forums for the standardization of other Yoruba terms should be convened.

*Seminars should be organised to familiarise groups of influential users: teachers, educational planners, materials developers and publishers, journalists/broadcasters and sermon interpreters with the new system.* Afterwards, the new standardized numeral system should be introduced in primary and secondary schools. Soon after, *sáyéńsì ní èdè Yorùbá* programmes ('science in the Yoruba language') utilizing the new numeral system should be presented on radio and television for primary and secondary schools. These could include quizzes, debates and discussions. Textual materials in which the new numbers are used could also be uploaded to a *sáyéńsì ní èdè Yorùbá* website on the internet. Similar seminars for the standardization of other Yoruba terms should be held.

*Language boards should be established.* These can coordinate the efforts of different workers in the field, manage standardization efforts, and serve as a clearing house for terms. Although there are organizations working on terminology creation and language revitalization, many of them operate in isolation and occasionally have competing goals. Such language boards could be patterned after the Pan South African Language Board, (<https://www.pansalb.org/>), an organisation in South Africa established to

promote multilingualism, to develop the 11 official languages: Afrikaans; Sepedi; English; Southern Ndebele; Southern Sotho; Swazi; Tsonga; Tswana; Venda; Xhosa; Zulu, and to protect language rights in South Africa. The Board was established in Act 59 of 1995 by the Parliament of South Africa.

*Terminology development projects should involve subject-matter specialists and linguistics experts and other users.* Specialists are a very important resource bank in language documentation and terminology planning processes for any language. Words which may lose currency may, if useful for and used in technical communication, remain alive because they serve a purpose in specialised areas.

*Technological discourse must include more people i.e. become a popular technology revolution.* This would entail technology spillover from the higher and research institutions right into the ‘streets’. Next, the people, to be able to take part in the technological maintenance, must have technology in their own languages. As local craftspeople practise their trades, they are purveyors of language development and disseminators of neoterms in the indigenous languages.

*Entry qualifications into craft training programmes need to be revised and must be designed to be taught in the language of wider communication (LWC) of the locality in which the programme is based.* It should be possible for a mature student who either has a primary school leaving certificate or is a practitioner wishing to learn new skills/technologies to be admitted into such programmes without requiring a pass or credit in the English language. The languages of instruction will depend on the location. In Akure, it will be Yoruba, in Onitsha, Igbo and in Warri it is likely to be in Nigerian Pidgin or Naija, as it is known by the speakers.

*The capacity of the indigenous languages to express scientific content must be enhanced.* The core courses may not be problematic since semi-literate apprentices learn some versions of these trades from master practitioners. Technical terms are used and new terms are being developed by artisans. To develop the technical language for the theoretical courses, e.g. Technical Mathematics and Engineering Science, collaboration will be required between linguists and technology professionals. A method that has worked is that of the team that developed HIV and Ebola-related terminology. First,



researchers collected commonly used terms from a wide variety of sources in 10 states of Nigeria as well from online resources. Workshops were then held, first to train participants on lexical modernisation, then to generate equivalents for the source terms and finally, to evaluate and standardise the terms created, in conjunction with key stakeholders.

More importantly, to speed up the process of learning delivery, automated systems, including distance and e-learning have to be considered. These cannot work without the requisite terminology in appropriate indigenous languages. This is also related to making modern technology a part of indigenous cultures. People begin to own concepts when they can speak about them in their mother tongues.

*Special textbooks in the LWC need to be prepared.* These could begin as translations into the LWC of textbooks, manuals, workbooks and handouts currently in use. However, as expertise in the use of the indigenous languages for science and technology increases, the textbooks will be written in these languages. If what they have to say is important enough, they can be translated to foreign languages.

*'Pop tech' teachers need training or re-training in the use of Nigerian languages for science and technology.* A question may arise about the literacy of the resource persons on popular science training programmes in these languages of wider communication. Even if it were required that teachers on these programmes be speakers of the LWC, their literacy in the languages cannot be taken for granted. Therefore, these teachers must undergo training in using LWCs for teaching technical content.

## **12. ACKNOWLEDGEMENTS**

Madam Vice Chancellor, I am eternally grateful to God Almighty and the Father of my Lord Jesus Christ for the salvation of my soul. I was on my merry way to hell when grace rescued me in June of 1987. I thank God for the memory of Late Mr. Felix Olufemi Osobusola Kumolalo. My father taught me to read and surrounded me with books. I bless the memory of Late Mrs. Florence Mesihunola Iyabo Kumolalo, my mother, whose discipline and high standards ensured that her children strove for excellence. I bless the memory of Late Mrs. Victoria Bosede Sawe, mother-in-love and prayer partner; and Late Pa Reuben Olufemi Sawe, who treated me with unfailing courtesy and kindness since I became a member of his family, to the extent of cooking for me.

I am grateful to my teachers in secondary school, especially Rev. Sr. Patricia Ebegbulem, my English teacher in my graduating year. I am grateful to my teachers and professors at the University of Ilorin. Professor Efurosibina Adegbija taught us English and modelled Christ to us. Dr. Stephen H. Lubega supervised my undergraduate long essay and Dr. Kayode Omole supervised my Master's thesis. Russell Chambers demystified poetry by playing us the music of Stevie Wonder. Dr. Stephen H. Lubega supervised my undergraduate long essay and Dr. Kayode Omole supervised my Master's thesis. Dr. Francis Oyebade taught us basic linguistics courses; and Professor Oladele Awobuluyi struck holy terror in us; though we enjoyed his classes in Linguistics and Publishing. As things turned out, the wheels came full circle and Professor Oladele Awobuluyi supervised my PhD thesis. He taught me to write: pointed out my gaps in logic, and helped me to polish my style. He taught me to write: pointed out my gaps in logic, and helped me to polish my style.

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Madam Vice Chancellor, I have really come a long way in FUTA. I joined the services of this University as Assistant Lecturer in 1990, was promoted to Lecturer II in 1998, and Lecturer I in 2001. I was appointed as Senior Lecturer in 2011, promoted to Reader in 2014 and Professor in 2017. In the course of these 33 years, I have had the opportunity of serving under ten Vice Chancellors (including Acting) Prof. A.A. Ilemobade (1987-1995), Prof. L.B. Kolawole (1995-1999), Prof. E.A. Adeyemi (Acting Jan. 2000-Sept. 2001), Prof. R.A. Ogunsusi (Acting Oct. 2001-Dec. 2001), Prof. P.O. Adeniyi (2002-2006), Prof. A.M. Balogun (2007-Feb. 2012), Prof. E.A. Fasakin (Acting Mar. 2012-May 2012), Prof. A.G. Daramola (2012-2017), Prof. J.A. Fuwape (2017-2022) and Prof. A.T. Oladiji (2022 to date)

God has sent several destiny helpers my way in FUTA: Mr. Ayo Ogunruku (Br'Ayo) who was instrumental to my appointment and Dr. Modupe Ajayi who is a beloved big sister. Prof. Abiola Aborisade has been my prayer partner (along with Prof. Fola- Adebayo) since 1992. Mr. Fred Akinladejo helped to word-process most of my earlier research before I became a digital literate. Egbon PS Olowolaju and Prof. Amao provided encouragement at critical points and Mr. Atejioye (*Baba Carto*) provided life-saving intervention when I fell ill on my way to Ado-Ekiti during the ill-fated PhD adventure.

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Over the period of nearly 33 years, I have had the opportunity to work in various committees of the University. In addition to the vice chancellors earlier mentioned, I interacted with and learned from members of the university management and community, including Prof. D.R. Ogunsemi (immediate past DVC, Academic), Prof. P.G. Oguntunde (immediate past DVC, Development), Prof. T. T. Amos (DVC, Academic) Prof. S. S. Oluyamo (DVC, Development), Mr. R.A. Arifalo (immediate past Registrar), Mr. C. O. Adeleye, University Registrar, Mr. J.A. Adeshoba (Bursar), Dr. Remi Abiolu (past Acting University Librarian) as well as Professors J.O. Borode, O. S. Osundahunsi, P.K. Oke, I.O. Aje, A.F. Lawal, M.O. Ashamo, A.F. Aiyesanmi, C. Arum, G.E. Onibi, S.R. Ogunduyile, B.O. Adewuyi, C.O. Ijagbemi, H.O. Ogunsuyi, O.T. Adebayo, O.O. Olubanjo, V.A.J. Adekunle, C.O. Akinbile, B.M. Olaleye, O.A. Fasoranbaku, K.K. Alaneme, Prof I. A. Amao, S.J. Kayode, AYB Anifowose, O.S. Ajayi, I. B. Kashim, Tunde Arayela, Debo Adeyewa and J.A.V. Olumurewa, and Dr. V.O. Ukwenya. I thank the previous deans of the School of Sciences: Professors L. B Kolawole (Dean when I was employed); S. A. Fashuyi, A. A. Oshodi, F. C. Adetuyi, K. O. Ipinmoroti, C. O. Adedire, I. A. Fuwape, Olubode Koriko, and A. F Aiyesanmi. Prof A. F. Aiyesanmi has been especially supportive of INTEDH since its creation. Prof. A. E. Oguntade has provided us help with our research activities, and Prof Dare Ajewole was instrumental in providing us guidance while we were trying to get INTEDH approved. Messers J.O. Esho, G.O. Ajayi, O.S. Adebayo and I. A Fafila are appreciated for their help at various times.

In the course of my editorial activities in the University to produce *Giant Strides*, as the University Annual Report is named, and *End of Tenure Reports* I have worked with several outstanding teams. The composition always changes but the team has at various times included Prof. Ayo Kolawole, Prof. Emmanuel Okogbue (*Egin*) Mr. D. S. Kolawole (*Uncle DS*), Dr. Onwu Inya, Mr. Adegbenro Adebajo (*Oba-ni-Jesu*) and the Directorate of Corporate Communications and Protocol whose staff we co-opt, and secretaries Mr. Olukayode Adetokunbo and Mr. Akinniyi Akinyode. I have also worked with Mrs. Oluchi Okere (*Lolo*) on some committees, and found

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I served the FUTA Academic Staff Cooperative Multipurpose Society between 2008 and 2018, first as Vice President, then as Acting President, and later as substantive President. I worked with Drs. F. I Alao, D.J. Arotupin, DT Oloruntoba, BOT Ifesan, VAJ Adekunle, and Mr. Ife Balogun, as they then were. Later, I served with Prof. VAJ Adekunle as Ex-Officio Member. We had excellent members of staff including Dupe Akinsiku, Toyin Akinola, Olawale Ajayi, Titi Olayioye, Tosin Mayungbe and Olumuyiwa Ilori.

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To the Lord Jesus Christ, Lover of my soul and Keeper of my feet, I say:

Èyin ni Ọba ògo, Ọba ògo, Ọba ògo;  
Aláàánú Olùfẹ́, Ológo didán olóore-òfẹ́, Ọba ògo.  
Ọlówọ gbogboro, Àrírọ-àlá, Ọba ògo.  
Èyí tí yòò farahàn ní igbà tirẹ, Ọba ògo.  
Èni tí í ẹ̀ Ọlùbùkún àti Alágbára kan ẹ̀so ńáà, Ọba ògo.  
Ọba àwọn ọba àti Olúwa àwọn Olúwa, Ọba ògo.



Ẹnikan ọ̀so ọ́ tí ó jẹ àìkú, tí ń gbé inú ìmọ̀lẹ̀ tí a kò lè súnmọ̀, Ọ̀ba ògo.

Ẹni tí ẹ̀niyàn kan kò rí rí, tí a kò sì lè rí: Ọ̀ba ògo.

Ẹni tí ọ́lá àti agbára tíí láé ń ẹ̀ tirẹ̀, Ọ̀ba ògo.

Ẹyin ni Ọ̀ba ògo, Ọ̀ba ògo, Ọ̀ba ògo.

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## References

- Aborisade P. A. & **Olubode Sawe, F.O.** 1999. 'Which Materials? An Approach to the Teaching of Reading in an EST-SL Situation'. *Journal of Communication and Language Arts*. 1 (1) 71 -84
- Aborisade, P. A & **Olubode-Sawe, F. O.** 2011. 'Reshaping English Language Teachers' Competences in Learning Technologies.' *English Language Teaching Today*, 8. 20-30)
- Aguilar, C. & Acosta O. (2020) A critical review of the current state of natural language processing in Mexico and Chile. In Pinarbasi F. & Taskiran M. N. (eds) *Natural language processing for global and local business*. Hershey PA: IGI Global Business Science Reference (an imprint of IGI Global)
- Ajayi, B. R & **Olubode-Sawe, F O.** 2014. Students' perception of the relationship between internet use and academic achievement,' *Idia Journal of Mass Communication*, 1, 109 – 127.
- Akinwonmi, A. 2018. *Development of a Prosodic Text-to-Speech System for the Yorùbá Language Using Unit Selection Method*. PhD Dissertation, Federal University of Technology, Akure
- Amfani, A. H., & Ibrahim, G. (eds) 2017. *English-Hausa glossary of HIV, AIDS and ebola related terms*. Ibadan: University Press PLC.
- Antia, B. & Ianna, B. 2016. Theorising terminology development: Frames from language acquisition and the philosophy of science. *Language Matters*, 47:1, 61-83, DOI: 10.1080/10228195.2015.1120768
- Antia, B. E. 2000. *Terminology and language planning: An alternative framework of practice and discourse*. Amsterdam: John Benjamins
- Armstrong, R G. 1962. *Yoruba Numerals*. London: Oxford University Press (for the Nigerian Institute of Social and Economic Research).

- Arohunmolase, O. 1985. *Agbeyewo Idagbasoke ede ati akoto Yoruba lati odun 1800 si 1985*. Ibadan: Onibonoje.
- Asahiah, F. O., Odejobi, O. A, Adagunodo, E. R., & **Olubode-Sawe F.** 2017. Tone Mark Restoration in Standard Yorùbá Text: A Proposal. *Infocomp Journal of Computer Science*, 16(1-2), 8-19. Published by Departamento de Ciencia da Computacao, Universidade Federal de Lavras, Brasil. Available online at <http://www.dcc.ufla.br/infocomp/index.php/INFOCOMP/article/view/529>
- Awobuluyi, O 1994. 'The Development of Modern Yoruba'. In István Fodor & Claude Hagège (eds.), *Language Reform VI: History and Future*. Hamburg: Helmut Buske Verlag. 25 - 42.
- Awobuluyi, O. 2018, March 1. Preserving the Yoruba language. *The Nation*.
- Awobuluyi, O 2019, March 22. Time to modernise Nigerian languages. *The Nation*. <https://thenationonlineng.net/time-to-modernise-nigerian-languages/>
- Awoyale, Y. 2008. *The LDC Corpus Catalog (Global Yoruba lexical database v.1.0)*. Web<http://www.language-archives.org/item/oai.www.ldc.upenn.edu:LDC2008L03>
- Brown, T. L. 2003. *Making truth: Metaphor in science*. Urbana-Champaign: University of Illinois Press.
- Cabré Castellví M. T. 2003. Theories of terminology: Their description, prescription and explanation. *Terminology* 9(2):163-199
- Cooper, R. L. 1989. *Language planning and social change*. Cambridge: Cambridge University Press.
- Egbé Àtéléwó. <https://atelewo.org>
- Egbokhare, F. 2004. Language and politics in Nigeria. In Owolabi, K & A Dasylva. (eds.) *Forms and functions of English and indigenous languages in Nigeria* (pp. 507-522). Ibadan: Group Publishers.
- Eleshin, A. 2023. *Towards Harmonising Lexical Innovation in Yorùbá Media*. Unpublished doctoral dissertation, University of Lagos.
- Fagbolu, O. 2015. *Development of a Web-enabled Digital Yoruba Phrasebook*. PhD Dissertation, Federal University of Technology, Akure
- Fagun, M. O. 2005. *Bibèlì Mímó Atóka àti Ìwé Deutero-Kànoníkà (Àpókřifà) pelu òrò Jesu ni pupa* (Holy Bible with Concordance, and the Deuterocanonical Books, with the words of Jesus in red) Translated from the *Jerusalem Bible*. Ibadan: St Paul's

- Fakinlede, K. J. 2003. *Yorùbá Modern Practical Dictionary (Yoruba – English/ English – Yoruba)*. New York: Hippocrene Books Incorporated.
- Faltis, C. (2015). Language advocacy in teacher education and schooling. In M. Bigelow & J. Enns-Kananen (eds.), *The Routledge handbook of educational linguistics* (pp. 65–78). London: Routledge
- Fasold, Ralph. 1984. *Sociolinguistics of society*. Oxford & Cambridge, MA: Basil Blackwell
- Flubacher, M. C. & Busch, B. 2022. Language advocacy in times of securitization and neoliberalization: The *Network Language Rights*. *Lang Policy* **21**, 545–560 <https://doi.org/10.1007/s10993-022-09617-4>
- Garfield, E. 1986. The metaphor-science connection. *Essays of an Information Scientist*, 9 (42) 316-324
- Hill, J. 2002. “Expert rhetorics” in advocacy for endangered languages. *Journal of Linguistic Anthropology*, 12(2), 119–133
- Igboanusi, H. 2006 Is Igbo an endangered language? *Multilingua*25(4), pp. 443-452. <https://doi.org/10.1515/MULTI.2006.023>
- Igboanusi, H., & Mbah, B. M (eds.) 2017. *English-Igbo glossary of HIV, AIDS and ebola-related terms*. Ibadan: University Press PLC
- Isola, A. 2013, 20 March. *Ki ni a fẹ́ máa fi èdè Yorùbá ẹ̀?* (What really do we want with the Yorùbá language?) Convocation Lecture, Adekunle Ajasin University, Akungba-Akoko
- Kuju, M. 1999 . Hausa gobbles up languages. *Northern Nigeria in Perspective*,3(1), 31-33.
- Komolafe O. E. 2021. *An Appraisal of Yoruba Terminologies for Crop Production among Yorùbá Rural Farmers in Selected States in South-West Nigeria*. Unpublished doctoral dissertation, Ekiti State University, Ado-Ekiti.
- Massamba, D. 1987. ‘The impact of politics in language development in Tanzania’ *Kiswahili* **54**(1-2): 180-191.
- Microsoft Corporation 2008. *Microsoft language interface pack: Yorùbá glossary*.
- Microsoft Corporation (n.d) *Yorùbá style guide*. Retrieved 5 March 2018 from <https://www.microsoft.com/download/yor-nga-styleguide.Microsoft.pdf>. Last modified February 2011.
- National Bureau of Statistics. 2010. Report of the National Literacy Survey, June 2010. Media & Marketing Communications Company Group

- Nigerian Educational Research and Development Council. 1991. *Quadrilingual glossary of legislative terms*. Lagos: NERDC.
- Ọdẹtayo, J.A. 1993. *Ìwé ìtúmò ọ̀rọ̀ ìmò ẹ̀dá-àrìgbéwòn (Yorùbá dictionary of engineering physics)* Lagos: University of Lagos Press
- Òfin Ìsàkóso Orilẹ̀-Edè Nàìjíríà ti Ọ̀dún 1999*
- Olubode Sawe, F.O.** 1997. Teacher Responses to the Problem of Large Classes: Student Reactions. *English Language Teaching Today* 1(1) 42 -53.
- Olubode Sawe, F.O.** 2003. Metaphor: the imaginative function in scientific discourse.’ *English Language Teaching Today* 2 (1) 29-34.
- Olubode Sawe, F. O.** 2005. Evaluating media-based ELT resources: a review of Grammar 3D.’ *Journal of Research in Science and Management*. 3 (1) 105-111.
- Olubode-Sawe, F. O.** 2009. ‘Interpreting Yoruba proverbs: Some hearer strategies’. *California Linguistic Notes*. Volume XXXIV No 2. 1-17. Available online at <https://english.fullerton.edu/publications/clnArchives/pdf/sawe-YorubaProv.pdf>
- Olubode-Sawe, F. O.** 2010a. Digital communication in indigenous languages’. In Taiwo, Rotimi (ed.) *Handbook of Research on discourse behavior and digital communication: Language structures and social interaction*, Volume II. Hershey, PA: IGI Global. 568-577
- Olubode-Sawe, F. O.** 2010b. “Language development in the local building industry: some linguistic and curriculum implications”. In Ndimele, O-M, (ed.) *Language policy, planning and management in Nigeria: A Festschrift for Ben O. Elugbe*. Port Harcourt: The Linguistic Association of Nigeria with M&J Grand Orbit Communication Ltd. 379-392.
- Olubode-Sawe, F. O.** 2010c. ‘Yoruba Numerals: A review and a new view’. In Francis Oyebade & T Olumuyiwa (eds.) *New Findings in the study of Nigerian languages and literatures: A festschrift in honour of Oládélé Awobùlúyì*. Akure: Montem Paperbacks. 41-59.
- Olúbòdẹ̀-Ẹ̀sawẹ̀, F.O.** 2010d. *Devising a Yorùbá vocabulary for building construction*. Unpublished doctoral dissertation. AdekunleAjasin University, Akungba-Akoko, Nigeria.
- Olubode-Sawe, F.O.** 2012. ‘Some semiotic principles in Yoruba scriptural translation.’ In Ndimele, O (ed.) *Language, Literature and Communication in a Dynamic World: a Festschrift for Chinyere*

*Ohiri-Anichie*. Port Harcourt: The Linguistic Association of Nigeria with M&J Grand Orbit Communication Ltd. 381-393

**Olubode-Sawe, F.O.** 2013a. Claim and refutation: Conversations in a context of linguistic and medical pluralism. In Adegbite, Wale, Ayo Ogunsiji & Oye Taiwo (eds) *Linguistics and the glocalization of African languages for sustainable development: A festschrift in honour of Professor Kola Owolabi*. Ibadan: Universal Akada Publishers. 237-257

**Olubode-Sawe, F O** 2013b. Strategies of composition in Yoruba plant nomenclature. In Ndimele, O-M, L. C. Yuka & J. F. Ilori (eds) *Issues in contemporary African linguistics: A festschrift in honour of Oládélé Awóbùlúyì*. Port Harcourt: The Linguistic Association of Nigeria with M&J Grand Orbit Communication Ltd. 237-257.

**Olubode-Sawe, Funmi** (2013c) 'Sources of complexity in the Yoruba numeral system'. *Scottish Journal of Arts, Social Sciences and Scientific Studies*, 13 (2), 210-223. Available online at [http://scottishjournal.co.uk/paper/SJASS\\_Vol.13\\_No.2.pdf](http://scottishjournal.co.uk/paper/SJASS_Vol.13_No.2.pdf)

**Olubode-Sawe, F. O.** 2014. Negotiating politeness in SMS text messages of Yoruba-English bilinguals. In Chilwa I., Ifukor, P and R. Taiwo, (eds.) *Pragmatics of Nigerian English in digital discourse*. LINCOM Studies in Pragmatics 26: Munich: LINCOM GmbH, p 45-55.

**Olubode-Sawe, F. O.** 2015. Term Creation Methods in Yoruba Scriptural Translation. In Ola-Orie, O, J F Ilori & C. Yuka, *Current research in African linguistics: Papers in honor of Oladele Awobuluyi*. London: Cambridge Scholars Publishing. 85-113.

**Olúbòdé-Sàwè, F. O.** 2018, 21 February. FÚTÀ mi ní Èdè Yorùbá' (My FUTA in Yorùbá Language) [PPT] 2018 Mother Language Day Celebrations, The Federal University of Technology, Akure, Nigeria

**Olubode-Sawe, F. O.** 2018. Characterizing conflict and resolution: Naming and transitivity in news reports of the Agatu-Fulani crisis. In Unuabonah Foluke O, Kehinde A. Ayoola & Adeyemi Adegoju (eds.) *Explorations in critical discourse and new media studies. Essays in honour of Rotimi Taiwo*. Glienicke: Galda Verlag.

**Olúbòdé-Sàwè Funmi O.** 2019a. Language advocacy and engineering: Promoting the interest of terminology users through activism. First Biennial Conference of the Nigerian Academy of Letters, Obafemi Awolowo University, Ile-Ife, 12 to 15 June 2019

**Olubode-Sawe, F O.** 2019b. Language economics and globalization: Arresting devaluation through protectionist marketing. In Schmied,

- Josef, Oloruntoba-Oju, Taiwo & 'Demola Jolayemi (eds). *Pragmatics, linguistics, language and literature: Essays in honour of Professor Efurosibina Adegbija*. Gottingen: Cuvillier Verlag. 27 – 34
- Olubode-Sawe, F.O.** 2020. Characterizing conflict in pictures: A multimodal analysis of reports of the Agatu-Fulani crisis. *Journal of the Linguistic Association of Nigeria*, 23(1), 1-15
- Olubode-Sawe, F. O. & Inya, O.** 2016. Metaphors in medical terminology and implications for terminology development. In Taiwo, O & Yuka, L C., (eds), *New findings in West African languages*. Ibadan: West African Linguistic Society. 325 -337
- Omojola, M. 2001. Introduction to the 2nd edition of *Bibéli Mímó Atóka àti Ìwé Deutero-Kànoníkà (Àpókrifà) pèlu orò Jesu ni pupa*. Ibadan: St Paul's
- Owolabi, K. 2006. *Nigeria's native language modernization in specialized domains for national development: A linguist's approach*. Inaugural lecture. Ibadan: University of Ibadan.
- Owolabi, K. 2007. *Ó tó gèé, omọ Odùduwà, ogun isàmúlò èdè Yorùbá ní ibikibi, ní ipòkípò àti ní àyèkayè di jìjà wáyí*. 2007 International Mother Language Day Presentation. Ibadan: Universal Akada Books.
- Owólábí, K. 2021. Centre for Yorùbá Language Engineering maiden international celebration of Yorùbá civilisation: Exhibition of books on Yorùbá, General Information. Mimeo
- Oyelaran, O. O. 1980. Introduction to "Yoruba". In *A Glossary of Technical Terminology for Primary Schools in Nigeria*. Lagos: Federal Ministry of Education. 207-221.
- Pavel, S,D Nolet & C Leonhardt 2001. *Handbook of terminology*. Text in English & French. Gatineau, Quebec: Translation Bureau. Retrieved February 7, 2007 from [http://www.translationbureau.gc.ca/pwgsc\\_internet/fr/publications/gratuit\\_free/man\\_termino/toc\\_e.htm](http://www.translationbureau.gc.ca/pwgsc_internet/fr/publications/gratuit_free/man_termino/toc_e.htm)
- Sony Ericsson (n.d) *Yoruba language guidelines and principles*. Retrieved 17 May 2019 [https://www.sonymobile.termwiki.com/images/LanguagePrinciples\\_YO%20style%20guide%20sony%20erikson.pdf](https://www.sonymobile.termwiki.com/images/LanguagePrinciples_YO%20style%20guide%20sony%20erikson.pdf)
- Tamuno, T. 2004. Ayo Banjo at 70: Beyond the frontier of language. In K. Owolabi & A. Dasylya (eds.), *Forms and functions of English and indigenous languages in Nigeria* (pp. 36-48). Ibadan: Group Publishers.

UNESCO. 2005. *Guidelines for terminology policies: formulating and implementing terminology policy in language communities*. Paris: UNESCO

Vandaele, S. and Lubin, L. (2005) Approche cognitive de la traduction dans les langues de spécialité: vers une systematisation de la description de la conceptualisation métaphorique. *Meta: Translators' Journal*, 50 (2), 415-431.

Yoruba (yo) Gitbook. <https://mozilla-110n.github.io/styleguides/yo/>

YorubaName.com <http://yorubaname.com/about-us>

Yoruba Science and Technology Encyclopedia. Available at [Yorubascipedia.wikidot.com](http://Yorubascipedia.wikidot.com). Last updated 21 January 2019.

Yusuff, L. A. 2008. *Lexical morphology in Yorùbá language engineering*. Unpublished doctoral dissertation. University of Lagos, Akoka, Nigeria

Yusuff, L. A., Adetunji, A., & Odoje, C. (eds.) (2017) *English-Yorùbá glossary of HIV, AIDS and ebola-related terms*. Ibadan: University Press PLC.

## APPENDIX I

### A: Yoruba – English Glossary/ Atúmò Ọ̀rọ̀: Yorùbá-Èdè Gẹ̀ẹ̀sì)

Abbreviation/ Symbol	Referent	Àgékúró/ Àrokò	Ìtumò
(adj)	Adjective	abbl.	àti bèè bèè lọ
(n)	Noun	ag	Àgékúró
Ng	Nigerian usage	(aj)	Àpẹ̀júwe
(np)	noun phrase	(apìṣ)	àpòlà ìṣe
®	Registered trademark	(apor)	àpòlà orúko
(v)	Verb	ay	Àyálò
(vp)	verb phrase	b.a.	bí àpẹ̀re
		gb	ní èdè
			gbogbogbòò
		(iṣ)	ọ̀rọ̀ ìṣe
		(or)	ọ̀rọ̀ orúko
		Ng	Ní ipèdè Nàìjíríà

<i>òrò ìperí</i>	<b>òrò adógbá ní èdè Gègèsi</b>
<i>ààbò-àtòyíká (apor)</i>	sub-circuit (n)
<i>abarakan (or)</i>	homogenous (adj)
<i>abaralíle (or)</i>	solid (n)
<i>abaralíle-láàbò (or)</i>	semi-solid (n, adj)
<i>àbàtì ihun (apor)</i>	structural failure (np)
<i>abipátíwàwà (or)</i>	fibrous (adj)
<i>abo(or)</i>	female (n, adj)
<i>abódé (aj)</i>	standard (adj)
<i>abo-igi (apor)</i>	Softwood
<i>abójútó (or)</i>	supervisor (n)
<i>àbójútó (or)</i>	supervision (n)
<i>àbòyábò (or)</i>	mechanical protection (np)
<i>àbùdí (or)</i>	filler (n)
<i>àbùdí-ẹ̀ş́ (apor)</i>	fillet (n)
<i>àbùdí-ẹ̀ş́ onígún (apor)</i>	angle fillet (np)
<i>abúgbàù (or)</i>	explosive (n)
<i>àbùkù (or)</i>	defect (n)
<i>àbùkù àdánidá (apor)</i>	natural defect (np)
<i>àbùkù àtòwódá (apor)</i>	artificial defect (np)
<i>àbùlà (or)</i>	thinner (n)
<i>àbùlé (or)</i>	gauge (n) <sup>2</sup>
<i>adùgèrè (or)</i>	sloping (adj)
<i>aşéğò (or)</i>	plastic (adj)
<i>aşéğò (or)</i>	plastic (n)
<i>aşémikù (or)</i>	trap (n)
<i>aşémikù afarajo-P</i>	tubular trap with P outlet
<i>aşémikù akábi-S</i>	tubular trap with S outlet
<i>aşémikù onígò</i>	bottle trap
<i>àşíbojú (or)</i>	overlay (n)
<i>aşú (or)</i>	opaque (adj)
<i>àwékalè<sup>ag</sup>(or)&lt;àw (òrán</i>	plan (n)
<i>àgb)ékalè</i>	
<i>àwékalè àlàkalè (apor)</i>	layout plan (np)
<i>àwékalè ifamisilé (apor)</i>	plumbing plan (np)
<i>àwékalè ikólé (apor)</i>	building plan (np)



<i>àwékalè ilè-ilé (apor)</i>	floor plan (np)
<i>àwékalè ipèsè-òjijí (apor)</i>	electrical plan
<i>àwékalè isòlélójò (apor)</i>	site plan (np)
<i>àwékalè onijòhẹn (apor)</i>	approved plan
<i>àwọn așojú ijoba (apor)</i>	statutory personnel (np)
<i>èdídí (or)</i>	sealant
<i>èdídí-gbéró (apor)</i>	truss (n)
<i>èdú (or)</i>	carbon (n)
<i>èédú (or)</i>	coal (n)
<i>èédú-igi (or)</i>	charcoal (n)
<i>egun (or)</i>	core (n)
<i>èdídí (or)</i>	sealant
<i>èdídí-gbéró (apor)</i>	truss (n)
<i>èdú (or)</i>	carbon (n)
<i>èdó (or)</i>	elasticity (n)
<i>egèrin</i>	rectangle (n)
<i>egèta (or)</i>	triangle
<i>ègbé (or)</i>	profile (n)
<i>ègbé kólékólé (apor)</i>	building society (np)
<i>ègbéjódá (aj)</i>	uniform (adj.)
<i>gbàgede (or)</i>	forecourt (n)
<i>gbáșe fún (apıș)</i>	charge (v)
<i>gbé kalè (apıș)</i>	lay
<i>gbé ró (ıș) /sagbéró fun (apıș)</i>	support (v)
<i>iráragbàsí (or)</i>	tolerance (n)
<i>iráragbérù (or)</i>	bearing capacity (np)
<i>ıșàn (or)</i>	current (n)
<i>ıșàn àșàngbà (apor)</i>	alternating current (np)
<i>ıșàn tààrà (apor)</i>	direct current (np)
<i>ıșèbora (or)</i>	insulation (n)
<i>ıșèéfúnpò (or)</i>	compressibility (n)
<i>ıșèégò (or)</i>	plasticity (n)
<i>ıșègégé (or)</i>	proportion (n)
<i>ıșò (or)</i>	base (n)
<i>ıșòdakın (or)</i>	reinforcement (n) <sup>1</sup>
<i>ıșojúwò (or)</i>	perspective (n)
<i>ıtè ifále (apor)</i>	tensile stress (np)
<i>ıtè ifúnnpò (apor)</i>	compressive stress (np)
<i>ojú-ıșopò (apor)</i>	joint (n) <sup>2</sup>
<i>ojú-ıșopò apaléra (apor)</i>	lap joint
<i>ojú-jjìò (apor)</i>	leak (n)

## B: PROPOSED REVISED DECIMAL SYSTEM FOR YORUBA

	<b>Cardinal</b>	<b>Long</b>	<b>Adjectival</b>	<b>Ordinal</b>
0	Òdo			
1	òkan	Oókan	Kan	Ìkínní
2	Èji	Eéji	Méji	Ìkèji
3	èta	eéta	méta	ikéta
4	èrin	eérin	mérin	ikérin
5	àrùn-ún	aárùn-ún	márùn-ún	ikarùn-ún
6	èfà	eéfà	méfà	ikéfà
7	Èje	Eéje	Méje	Ìkéje
8	èjo	eéjo	méjo	ikéjo
9	èsan	eésàn-án	mésàn-án	ikésàn-án
10	èwa	eéwáá	méwáá	ikéwáá
11	òkànléwáá	oókànléwáá	mókànléwáá	ìkòkànléwáá
14	èjìlécwáá	eéjìnlécwáá	mèjìnlécwáá	ìkèjìnlécwáá
16	èfàlécwáá	eéfàlécwáá	méfàlécwáá	ìkèfàlécwáá
20	èwáji	eéwáá méji	méwááji	ìkèwááji
28	èjòlécwááji	eéjòlécwááméji	méjòlécwááji	ìkèjòlécwááji
30	èwáta	eéwáá méta	méwááta	ìkèwááta
40	èwárin	eéwáá mérin	méwáárin	ìkèwáárin
47	èjèlécwáárin	eéjèlécwáámérin	méjèlécwáárin	ìkèjèlécwáárin
50	èwárùn-ún	eéwáá márùn-ún	méwááárùn-ún	ìkèwááárùn-ún
60	èwáfà	eéwáá méfà	méwááfà	ìkèwááfà
70	èwáje	eéwáá méje	méwááje	ìkèwááje
80	èwájo	eéwáá méjo	méwáájo	ìkèwáájo
90	èwásàn-án	eéwáá mèsàn-án	méwáásàn-án	ìkèwáásàn-án
100	òrúnkan		òrúnkan	òrúnkan
1,000	egbèrún kan		egbèrún kan	egbèrún kan
10,000	egbèrúnwáá		egbèrúnwáá	egbèrúnwáá
1,000,000	egbinrín kan		egbinrín kan	egbinrín kan
			egbinrín	egbinrín
10,000,000	egbinrín méwáá		méwáá	méwáá
1,000,000,000	egbùrú kan		egbùrú kan	egbùrú kan

**D: ÀWỌN ÒNKÀ ÌDÍWỌN**  
(Some Units of Measurement)

English term	Abbreviation	ọrọ iperi	àgékúró
Millimetre	Mm	milímítà/milímità	Mm
Centimetre	Cm	sẹntímítà/sẹntímità	Sm
square centimetre	cm <sup>2</sup>	súkúá sẹntímità	sm <sup>2</sup>
Metre	M	Mítà	M
Kilometre	Km	kilómítà/kilómità	Km
square metre	m <sup>2</sup>	súkúá mità	m <sup>2</sup>
Are	A	Árì	A
Acre	-	Eékà	-
Hectare	Ha	hékítàrì	Ha
square kilometre	km <sup>2</sup>	súkúá kilómítà / súkúá kilómità	km <sup>2</sup>
Milligram	Mg	Milígíráàmù	Mg
Kilogram	Kg	kilógíráàmù/kilo	Kg
Tonne	-	tòṅù	-
Millilitre	ml	milílítà /milílità	ml
Litre	L	Lítà	L
Inch	In	ínṅṣì	In
Foot	Ft	Fítì	Ft
Yard	Yd	Yáàdì	Yd
Mile	-	mẹ̀ṣẹ̀lì	-
Gallon	Gal	gálòṅù	Gal

**APPENDIX II: YORUBA NATURAL LANGUAGE PROCESSING**

**BIBLIOGRAPHY**

- Abiola, O. B., Adetunmbi, A. O., & Oguntimilehin, A. (2013). A computational model of English to Yorùbá Noun-phrases Translation System. *FUTA Journal of Research in Sciences, 1*, 34-43.
- Abiola, O. B., Adetunmbi, A. O., & Oguntimilehin, A. (2015). A review of the various approaches for text to text machine translations. *International Journal of Computer Applications, 120* (18).
- Abiola, O. B., Adetunmbi, A. O., & Oguntimilehin, A. (2015). Using hybrid approach for English-to-Yorùbá text to text machine translation system

- (proposed). *International Journal of Computer Science and Mobile Computing*, 4 (8), 308-313.
- Abiola, O. B., Adetunmbi, A. O., Fasiku, A. I., & Olatunji, K. A. (2014). A web-based English to Yoruba noun-phrases machine translation system. *International Journal of English and Literature*, 5(3), 71-78.
- Adegbola, T. (2016). Indigenising Human Language Technology for National Development. *The African World in Dialogue: An Appeal to Action!*, 152.
- Adegbola, T. (2016, April). Pattern-based unsupervised induction of Yorùbá Morphology. In *Proceedings of the 25th International Conference Companion on World Wide Web* (pp. 599-604). International World Wide Web Conferences Steering Committee.
- Adegbola, T., & Odilinye, L. U. (2012). Quantifying the effect of corpus size on the quality of automatic diacritization of Yorùbá texts. In *Spoken Language Technologies for Under-Resourced Languages*.
- Adelaja, A. A. (2016). Nasal biometrics and nasofacial proportion in Hausas and Yorubas using Akinlolu-Raji image-processing algorithm. *CHRISMED Journal of Health and Research*. 3. 112. 10.4103/2348-3334.177640.
- Adeoye, O.B. (2012). A Web-Based English to Yoruba Noun-Phrases Machine Translation System, M.Tech Thesis, Federal University of Technology, Àkúre, Nigeria.
- Adetunmbi, O. A., Obe, O. O., & Iyanda, J. N. (2016). Development of Standard Yorùbá speech-to-text system using HTK. *International Journal of Speech Technology*, 19(4), 929-944.
- Adeyemo, O. O., & Idowu, A. (2015). Development and integration of Text to Speech Usability Interface for Visually Impaired Users in Yoruba language. *African Journal of Computing & ICT*, 8(1), 87-94.
- Afolabi, A & Omidiora, E. & Arulogun, T. (2013). Development of text to speech system for yoruba language. *Innovative Systems Design and Engineering*. 4. 1-7.
- Afolabi, A. O., & Wahab, A. J. (2013). Implementation of Yoruba text-to-speech E-learning system. *International Journal of Engineering Research and Technology*, 2(11), 1055-1064.
- Agbeyangi, A. O., Eludiora, S. I., & Adenekan, D. I. (2015). English to Yorùbá Machine Translation System using rule-based approach. *Journal of Multidisciplinary Engineering Science and Technology*, 2(8), 2275-2280.

- Agbeyangi, A. O., Odiete, J. O., Lawal, T. A., & Olorunlomeye, A. B. (2016) Morphological Analysis of Standard Yorùbá Nouns . *American Journal of Engineering Research*, 5(6), pp-08-12
- Ahmed, A. and Seong, D. (2006). Sign Writing on Mobile phones for the Deaf , *Proceedings of the 3rd International Conference on Mobile Technology, Applications and Systems-Mobility*, Bangkok, 25-27 October, pp. 28.
- Ajao, J. F., Olawuyi, D. O., & Odejobi, O. O. (2018). Yoruba Handwritten Character Recognition using Freeman Chain Code and K-Nearest Neighbor Classifier. *Jurnal Teknologidan Sistem Komputer*, 6(4), 129-134.
- Àkànbí, L. A., & Odéjóbí, O. À. (2011). Automatic recognition of oral vowels in tone language: Experiments with fuzzy logic and neural network models. *Applied Soft Computing*, 11(1), 1467-1480.
- Akinlolu O. A. (2013). Development of Text to Speech System for Yoruba Language.
- Akintola, A., & Ibiyemi, T. (2017). Machine to Man Communication in Yoruba Language. *Annals of Computer Science Series*, 15(2).
- Akinwonmi, A. (2018) Development of a Prosodic Text-to-Speech System for the Yorùbá Language Using Unit Selection Method. PhD Dissertation, Federal University of Technology, Akure
- Akinwonmi, A. E., & Alese, B. K. (2013, December). A prosodic Text-to-Speech system for Yorùbá language. In *Proceedings of the 8th International Conference for Internet Technology and Secured Transactions (ICITST-2013)* (pp. 630-635).
- Aládé, S. M. (2015). A Model for Animation of Yorùbá Folktale Narratives. *African Journal of Computing & ICT*, 8(3).
- Aladesote I., Olaseni O. E., Adetunmbi A. O. & Akinbohun F. (2011). A Computational Model Of Yoruba Morphology Lexical Analyzer. *International Journal of Computational Linguistics (IJCL)* 2 (2): 2011- 37
- Aoga, J. O., Dagba, T. K., & Fanou, C. C. (2016). Integration of Yoruba language into Mary TTS. *International Journal of Speech Technology*, 19(1), 151-158. 10.1007/s10772-016-9334-8.
- Asahiah, F.O. (2014). Development of a Standard Yorùbá digital text automatic diacritic restoration system. Ph.D thesis, Obafemi Awolowo University Ilé-Ife, Nigeria
- Asahiah, F. O., Odejobi, O. A., & Adagunodo, E. R. (2017). Restoring tone-marks in standard Yorùbá electronic text: improved model. *Computer Science*, 18.

- Asahiah, F. O., Odejobi, O. A., Adagunodo, E. R., & Olubode-Sawe, F. F. (2017). Tone Mark Restoration in Standard Yoruba Text: A Proposal. *INFOCOMP*, 16(1-2), 8-19.
- Asubiaro, T., Adegbola, T., Mercer, R., & Ajiferuke, I. (2018). A word-level language identification strategy for resource-scarce languages. *Proceedings of the Association for Information Science and Technology*, 55(1), 19-28.
- Atanda, A. W. F., Yusof, S. A. M., & Hariharan, M. (2013). Yoruba automatic speech recognition: A review. *Proceedings of Rural ICT Development (RICTD) International Conference 1(1)* pp. 116-121.
- Awofolu, O. M. M. (2002). The making of a Yoruba-English machine translator, *Journal of Computing Sciences*. 17 (6),
- Awoyale, Y. (2008). The LDC Corpus Catalog (Global Yoruba Lexical Database v.1.0). <http://www.language-archives.org/item/oai:www ldc.upenn.edu:LDC2008L03>.
- Ayogu, I. I., Adetunmbi, A. O., Ojokoh, B. A., & Oluwadare, S. A. (2017, October). A comparative study of hidden Markov model and conditional random fields on a Yoruba part-of-speech tagging task. In *Proceedings of 2017 International Conference on Computing Networking and Informatics (ICCN)* (pp. 1-6).IEEE.
- De Pauw, G., & de Schryver, G. M. (2009). African language technology: The data-driven perspective. In *Proceedings of the Second Colloquium on Lesser Used Languages and Computer Linguistics* (pp. 79-96). European Academy.
- De Pauw, G., Wagacha, P. W., & De Schryver, G. M. (2007). Automatic diacritic restoration for resource-scarce languages. In *Proceedings of the International Conference on Text, Speech and Dialogue* (pp. 170-179).Springer, Berlin, Heidelberg.
- Eludiora, S.I. (2014). *Development of English to Yoruba Machine Translation System*, Ph.D thesis, ObafemiAwolowo University, Ile-Ife, Nigeria.
- Eludiora, S. I., & Ayemonisan, O. R. (2018). Computational Morphological Analysis of Yoruba Language Words. *Int. Journal of AI* 7(1) 11-18
- Eludiora, S. I., Agbeyangi, A. O., & Fatunsin, A. (2015). Development of an English-to-Yoruba Machine Translation System for Yoruba Verbs' Tone Changing. *International Journal Computer Application*, 129(10), 12-17.
- Eludiora, S. I., Agbeyangi, A. O., & Ojediran, D. I. (2015). Word-sense disambiguation in English to Yoruba machine translation system. *Journal*

*of Multidisciplinary Engineering Science and Technology*, 2(7), 1814-1819.

- Eludiora, S., & Elufidodo, G. (2016). Development of a Verb Group Machine Translation System. *International Journal of Computer Applications*, 975, 8887.
- Enikuomihin A. O. (2015). A computerized identification system for verb sorting and arrangement in a natural language: A case study of the Nigerian Yoruba language *European Journal of Computer Science and Information Technology*, 3, (1), pp.43-52,
- Enikuomihin, O.A. & Adewumi, O.O. (2018). A stochastic collocation algorithm method for processing the Yoruba language using the data context approach based on text, lexicon, and grammar. *Pacific Journal of Science and Technology*. 19(1):175-181.
- Fagbolu, O. (2015) Development of a Web-enabled Digital Yoruba Phrasebook'. PhD Dissertation, Federal University of Technology, Akure
- Fagbolu O., Ojoawo A., Ajibade K. & Alese, B. (2015). Digital Yorùbá corpus. *International Journal of Innovative Science, Engineering and Technology*, 2 (8), [www.ijiset.com](http://www.ijiset.com)
- Folajimi, Y. O., & Omonayin, I. (2012). Using statistical machine translation (SMT) as a language translation tool for understanding Yoruba language.
- Ibikunle F. & Katende J. Recognition of Nigerian major languages using neural networks. *Journal of Computer Networks* 1, 2 (2013): 32-37. doi: 10.12691/jcn-1-2-3.
- Kumolalo, F. O., Adagunodo, E. R., and Odejobi, O. A. (2010). Development of a syllabicator for Yorùbá language. In *Proceedings of OAU TekConf*, September 5-8, 2010, pages 47–51, OAU, Ilé-Ife, Nigeria.
- Ninan, O. D., & Odéjobí, O. A. (2013). Theoretical issues in the computational modelling of Yorùbá narratives. In *Proceedings of the 2013 Workshop on Computational Models of Narrative*. Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik.
- Obalalu, B. S., Ibhara, F. T. & Fagbolu O. O. (2015) Natural Language Processing of English Language to Yoruba Language. In *Proceedings of 1st International Conference on Applied Information Technology*, Abeokuta. October 7-9, 2015
- Odejobi A. O. (2007). A Quantitative Model of Yorùbá Speech Intonation Using Stem-ML, *INFOCOMP Journal of Computer Science*, 6,(3), pp. 47–55, 2007.
- Odejobi A. O. (2011). Design of a Text markup System for Design of a Text markup System for Yorùbá Text-to-Speech Synthesis Applications. Conference on

- Human Language Technology for Development, Alexandria, Egypt, 2-5 may, 2011.
- Odejobi A. O. and Beaumont J. A. (2004), A Computational Model of Intonation for Yorùbá Text-to-Speech Synthesis: Design and Analysis. Text, Speech and Dialogue. Lecture Notes in Computer Science, 2004, Volume 3206/2004, 409-416, DOI: 0.1007/978-3-540-30120-2\_52
- Odejobi O. A., Wong, S. H. S., & Beaumont, A. J. (2007).A fuzzy decision tree-based duration model for Standard Yoruba text-to-speech synthesis. *Computer Speech & Language*, 21(2), 325-349.
- Odéjobí, O. A. (2008). Recognition of Tones in Yoruba Speech: experiments with Artificial Neural Network, *Studies in Computational Intelligence* 83, 23-47
- Odejobi, O. A., & Beaumont, T. (2003, June).Web-based intelligent computer-assisted language learning system for Yoruba (YiCALL).In International Association for Development of the Information Society (IADS) e-conference (pp. 3-6).
- Odéjobí, O. A., Beaumont, A. J., & Wong, S. H. S. (2006). Intonation contour realisation for standard Yoruba text-to-speech synthesis: A fuzzy computational approach. *Computer Speech & Language*, 20(4), 563-588.
- Odéjobí, O. A., Wong, S. H. S., & Beaumont, A. J. (2008). A modular holistic approach to prosody modelling for Standard Yorùbá speech synthesis. *Computer Speech & Language*, 22(1), 39-68.
- Odetunji O. A., (2006): "A Quantitative Model of Yorùbá Speech Intonation Using Stem Proceedings from Conference on Human Language Technology for Development, Alexandria, Egypt. Dutoit T. and Leich H., (1993): *Text Speech communication Journal* vol.13 No 15 pp. 435
- Ogwu, E. J., Talib, M., &Odejobi, O. A. (2006).Text-to-speech processing using African language as case study. *Journal of Discrete Mathematical Sciences and Cryptography*, 9(2), 365-382.
- Oladele, Matthias &Temilola, Adepoju&Omidiora, Elijah &ASobowale, A & A Olatoke, O. (2017). An Offline Yorùbá Handwritten Character Recognition System Using Support Vector Machine.
- Oladosu, J. B., &Emuoyibofarhe, J. O. (2012). A Yoruba—English Language Translator for Doctor—Patient Mobile Chat Application. *International Journal of Computers and Applications*, 34(3), 149-156.



- Oloruntoyin, S.F. (2014). Development of Yorùbá Language Text-to-Speech Learning System. *International Journal of Scholarly Research 2 (1)*, pp 19-36 Source at: <http://onlinejournals.oscij.com>
- Orife, I. (2018). Attentive sequence-to-sequence learning for diacritic restoration of Yorùbá Language Text. arXiv preprint arXiv:1804.00832.
- Oyekanmi, E. O., Oluwadare, S. A., & Alese, B. K. (2013). Intelligent system learning and understanding of Yorùbá language. *International Journal of Computer and Information Technology*, 2(5), 993-997.
- Oyelere, A. (2016). Rule Based Parts of Speech Tagging of Yorùbá Simple Sentences. GRIN Verlag.
- Oyenuga, S. (2007). Learning Yorùbá Web Available at [www.YorùbáForKidsAbroad.com](http://www.YorùbáForKidsAbroad.com)
- Oyenuga, S. and Oyenuga, T. (2007). Learn Yorùbá in 27 days, Canada, Saskatoon, Gaptel Innovative Solutions Inc
- Oyewumi Jimoh, Kudirat & Morufat Adepoju, Temilola & A. Sobowale, Aladejobi & A. Ayilara, Oluwatobi. (2018). Offline Gesture Recognition System for Yorùbá Numeral Counting. *Asian Journal of Research in Computer Science*. 1-11. 10.9734/ajrcos/2018/v1i424753.
- Oyinloye, O. A., & Odejobi, O. A. (2015). Issues in Computational System for Morphological Analysis of Standard Yorùbá (SY) Verbs. In *Proceedings of the World Congress on Engineering (Vol. 1)*.
- Sèmiyou, A., Aoga, J., & Igue, M. A. (2013). Part-of-speech tagging of Yorùbá standard, language of Niger-Congo family. *Research Journal of Computer and Information Technology Sciences*, 1, 2.

## **APPENDIX III: INSTITUTIONS WITH COURSES IN NIGERIAN LANGUAGES**

### **Institutions with courses in Hausa**

1. Ahmadu Bello University, Zaria, Kaduna State
2. Al-Qalam University, Katsina, Katsina State
3. Bauchi State University, Gadau, Bauchi State
4. Bayero University, Kano, Kano State – Bayero
5. College of Education, Akwanga (Affl To Ahmadu Bello Univ, Zaria)
6. College of Education, Azare (Affiliated To University of Maiduguri, Borno State)
7. College of Education, Waka-Biu, Borno State (Affiliated to University of Maiduguri)
8. Federal College of Education (Tech), Gusau, Zamfara State (Affiliated to ABU Zaria),
9. Federal College of Education, Katsina (Affiliated to Bayero University, Kano State)
10. Federal College of Education, Zaria, Kaduna State (Affiliated to ABU, Zaria)
11. Federal University, Dutsin-Ma, Katsina State
12. Federal University, Gusau, Zamfara State
13. Federal University, Kashere, Gombe State
14. Isa Kaita College of Education, Dutsinma, Katsina State (Affl Abu Zaria)
- 
15. Jigawa State College of Education, Gumel (Affiliated To Bayero University, Kano)
16. Kaduna State University, Kaduna, Kaduna State
17. Nasarawa State University, Keffi, Nasarawa State
18. Niger State College of Education, Minna (Affiliated to Ahmadu Bello University, Zaria)
19. Nigerian Army University, Biu, Borno State
20. Nigerian Police Academy, Wudil, Kano State
21. Shehu Shagari College of Education, Sokoto (Affiliated to UDU, Sokoto)
22. Sule Lamido University, Kafin Hausa, Jigawa State
23. Taraba State University, Jalingo, Taraba State
24. Umar Suleiman College of Education, Gashua(Affiliated to University of Maiduguri)

25. Umaru Musa Yaradua University, Katsina, Katsina State
26. University of Ilorin, Ilorin,
27. University of Maiduguri, Maiduguri
28. Usmanu Danfodio University, Sokoto
29. Yobe State University, Damaturu,
30. Yusuf Maitama Sule University, Kano

### **Institutions with courses in Igbo**

1. Abia State University, Uturu, Abia State
2. Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State
3. Ebonyi State University, Abakaliki, Ebonyi State
4. Enugu State College of Education (Technical), Enugu (Affiliated to Nnamdi Azikiwe University, Awka)
5. Nigerian Army University, Biu
6. Nigerian Police Academy, Wudil
7. Nnamdi Azikiwe University, Awka
8. Nwafor Orizu College of Education, Nsugbe. (Affiliated to University of Nigeria, Nsukka)
9. University of Ibadan, Ibadan
10. University of Ilorin, Ilorin
11. University of Lagos, Akoka
12. University of Nigeria Nsukka

### **Institutions with courses in Yoruba/Education and Yoruba**

1. Adekunle Ajasin University, Akungba-Akoko, Ondo State –
2. Adeyemi College of Education, Ondo State. (Affiliated to OAU, Ile-Ife)
3. Ekiti State University, Ado-Ekiti, Ekiti State –
4. Emmanuel Alayande College of Education, Oyo. (Affiliated to Ekiti State University)
5. Fountain University, Osogbo, Osun State
6. Kwara State College of Education, (Technical), Lafiagi (Affiliated to ABU, Zaria)
7. Lagos State University, Ojo, Lagos State
8. Michael Otedola College of Primary Educ. Epe, Lagos (Affiliated to University Of Ibadan)
9. Obafemi Awolowo University, Ile-Ife, Osun State
10. Olabisi Onabanjo University, Ago-Iwoye, Ogun State

11. Osun State College of Education, Ila-Orangun (Affiliated to Ekiti State Uni, Ado Ekiti)
12. Osun State College of Education, Ilesa, Osun State. (Affiliated to University of Ibadan)
13. Tai Solarin University of Education, Ijagun, Ogun State
14. University of Ibadan, Ibadan, Oyo State
15. University of Ilorin, Ilorin, Kwara State
16. University of Lagos, Lagos State

**Institutions with courses in Efik-Ibibio**

1. University of Uyo

**Institutions with courses in Education and Edo Language**

1. University of Benin

**Institutions with courses in Fulfulde / English & Fulfulde / Arabic**

1. Federal College of Education Yola
2. Federal College of Education, Kano

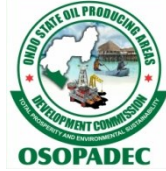
**Institutions with courses in Social Studies / Tiv**

1. College of Education, Katsina-ala (KAT-ALA)
2. Lessel College of Education (LESSELCOE)

**Institutions with courses in Linguistics and Kanuri**

1. University of Maiduguri

## Appendix IV



### ONDO STATE OIL PRODUCING AREAS DEVELOPMENT COMMISSION

ENGLISH	YORUBÁ	IJAW
<b>ONDO STATE OIL PRODUCING AREAS DEVELOPMENT COMMISSION</b>	<b>ÀJỌ AŞÀMÓJÚTÓ ÌDÀGBÀSÓKÈ ÀWỌN AGBÈGBÈ ELÉPOLÈ NÍ ÌPÍNÌÈ ÒNÐÓ</b>	<b>ONDO PÈĚKIRI PULO NANA IYỌMA TÈĚMỌ UKPUTU</b>
<b>VISION</b> To be the most proactive and responsive interventionist agency that satisfies stakeholders' aspirations with excellence in service delivery	<b>ÌRAN WA</b> Láti jẹ ibi-iṣẹ atètèmúṣẹṣe àti ayárafèsì jùlọ, tí ó n tẹ àwọn eni-òrán-kàn lórùn, tí ó sì tayo ni ninu iṣẹ ifiṣeránwọ	<b>ORORO</b> Ukputuni, saramọ tọru duwo, iyọ miọ, emi akimi ebimọ bai oḍumimi aye miyẹn paamọ.
<b>MISSION</b> To transform the lives of the people and ensure total prosperity through intervention programmes in the oil producing areas of Ondo State	<b>IṢÈ-ÌRANṢÈ WA</b> Láti tún ayé àwọn èniyàn wa ṣe, kí a sì mú iṣerere jálẹjáko àti idàgbàsókè alálotọ bá àwọn agbègbè elépolè ni Ìpínlẹ Ònḍó, nipa ṣíṣe àgbékalẹ àwọn ètò amáyéderùn.	<b>TON BIRA</b> Tiye kimiabu akpọma tẹlẹmọ bai pulo amiyan maọ beleumu paamọko pulo nana iyọma kọmọ piri
<b>CORE VALUES</b>	<b>ÀWỌN AŞÀ TÍ A YÀN L'ÁÁYÒ</b>	<b>ATIYÈ PIRI EMI AYE</b>
<b>Compassion and Commitment</b> Showing genuine compassion and absolute commitment to the socio-economic welfare and security of the people of the oil producing areas and other stakeholders	<b>Ìfẹ̀ oṃonikeji pẹ̀lú Ifokànsin</b> Fifi ifẹ̀ oṃonikeji àti iṣiṣékára mú kí idàgbàsókè bá orọ-ajẹ àti àjùmọgbé-láwùjọ àwọn agbègbè elépolè Ìpínlẹ̀ Ònḍó; kí àwọn èniyàn wa àti àwọn agbèterù yòókù sì máa gbé ní àiléwu.	<b>Enini kọri bai miyẹn aye oju tuwa</b> Kọkọba atọrutuwa puloayọma agamini abu, toi bai tubo amiyan oturu o, mọ dii bafio igurugu amiyan bundun miyẹn paghaama bira tiyẹmọ piri
<b>Education and Empowerment</b> Facilitating the provision of qualitative education and sustainable empowerment programmes, especially for youths, women and other vulnerable groups	<b>Ètò Èkọ̀ àti Ìṣonidakin</b> Ṣiṣe ètò fún ipèsè ètò-èkọ̀ to mú'ná dóko, pẹ̀lú àwọn ètò aṣonidakin tó l'álotọ̀, ní pàtáki, fún àwọn ọ̀dọ̀, àwọn obinrin àti àwọn miiran tó nilò iranwọ	<b>Miyẹn fun kin bai gida timima bira</b> OSOPADEC ukputumi miyẹn kọkọbai fun kin bira miyanni kala posi, iyoro abu bai birabomọ bii akputu miyẹn gida bira seke atiyẹmọ piri emi e

ENGLISH	YORUBÁ	IJAW
<p><b>Ethics-Consciousness</b> Conducting our business with the fear of God and holding ourselves accountable to the people we serve</p>	<p><b>Ìwà Ọmọlúàbí</b> Şişe işe wa pèlú ibèrù Olórún àti fifi òtító bá àwọn tí a n şişe sin, tí a sì máa jíyìn fun, lò</p>	<p><b>Kokoba aga</b> Miyenmini iye se, esin tuwako Tamarau piri bai kilikili ko koritei damase gbaako kimiabuma piri nimi</p>
<p><b>Teamwork</b> Promoting a spirit of mutual cooperation and coordination among staff and the people by obtaining feedback, in the interest of all stakeholders</p>	<p><b>Àjùmòşişépò</b> Mímú kí èmí ifowosowopò àti ifetòşişépò wà lááárín àwọn oşişe àti àwọn èniyàn wa, nipa fifi àyè gba isòrò àti ifèsì, fún ànfàní gbogbo àwọn àgbàterù wa.</p>	<p><b>Gbolei kori dama</b> Kimiabuma pepi beleu muma bira duwoni, juju kokomo, kenì o timiwei, firi kori, bai, miyen ayeko juju piri nimi</p>
<p><b>Ecological Responsibility</b> Using natural capital in a resource-efficient and sustainable manner, as trustees of present and future generations</p>	<p><b>Ìbòwò fún Àyíká</b> Lilo àwọn orò àbáláyé ní àyíká l'ónà to sán jùlò, ti yóó sì ní àlòtò; gégé bí àlámòójútó ogún àwọn iran òní àti àrómodómò wón</p>	<p><b>Kiri bulebu ebi aye</b> Kiribulebu ebi ayema kokomo, tuo bomini abuma pepi ebi koroma birake tiye komo piri emi e</p>
<p><b>Community Focus</b> Creating opportunities for full participation of the people of the oil producing areas in decisions that concern them and ensuring that projects are responsive/adapted to their needs</p>	<p><b>'Onínkan Làá Jé Ó Şe É'</b> Fifi àyè gba àjùmòşişépò àwọn èniyàn agbègbè elépolè Ìpínlè Ohndó, kí wón l'ènu orò nínú ohun tí ó kàn wón, kí a sì rí i pé gbogbo işe-àkànşe ni ó bá àìní wón padé</p>	<p><b>Ama ikiyo leimo aye</b> Fomu paamoko, opiriwei timi, ama, miyen bii iyese oju tuwawei timimo miyen bafio damamaani odumini naima kori miyen opiri</p>

**ASPECTS OF LANGUAGE ADVOCACY**  
**APPENDIX V: Research Support (Translation of Research Instruments)**

**A: English version: Hospital Anxiety and Depression Scale (HADS)**

**Tick the box beside the reply that is closest to how you have been feeling in the past week.**

**Don't take too long over your replies: your immediate is best.**

<b>D</b>	<b>A</b>		<b>D</b>	<b>A</b>	
		<b>I feel anxious or 'wound up':</b>			<b>I feel as if something is drawing me back:</b>
	3	Most of the time	3		Nearly all the time
	2	A lot of the time	2		Very often
	1	From time to time, occasionally	1		Sometimes
	0	Not at all	0		Not at all
		<b>I still enjoy the things I used to enjoy before:</b>			<b>I get afraid, with a disturbed feeling in the stomach:</b>
0		Definitely as much as I used to	0		Not at all
1		Not as much as I used to	1		Occasionally
2		Only a little	2		Quite Often
3		Hardly at all	3		Very Often
		<b>I sometimes get afraid as if something bad is going to happen:</b>			<b>I don't care how I look:</b>
	3	Very definitely and quite badly	3		I don't care at all
	2	Yes, but not too badly	2		I don't take as much care as I should
	1	A little, but it doesn't worry me	1		I sometimes don't take much care
	0	Not at all	0		I take just as much care as I used to
		<b>I find some things funny and I can laugh:</b>			<b>I feel restless because I have to be on the move:</b>
0		As much as I did before		3	Very much indeed
1		Not quite so much now		2	Quite a lot
2		Definitely not so much now		1	Not very much
3		Not at all		0	Not at all
		<b>Worrying thoughts go through my mind:</b>			<b>I look forward with enjoyment to things:</b>
	3	Most of the time	0		As much as I did before
	2	A lot of the time	1		A little less than I used to
	1	From time to time, but not too often	2		Much less than I used to
	0	Only occasionally	3		Hardly at all

		<b>I feel cheerful:</b>			<b>I get sudden feelings of overpowering anxiety and fear:</b>
3		Not at all		3	Most of the time
2		Not often		2	A lot of the time
1		Sometimes		1	Not very often
0		Most of the time		0	Not at all
		<b>I can sit at ease and feel relaxed:</b>			<b>I can enjoy a good book or radio or TV program:</b>
	0	Definitely	0		Often
	1	Usually	1		Sometimes
	2	Not Often	2		Not often
	3	Not at all	3		Not usually

Please check you have answered all the questions.

Scoring:

Total score: Depression (D) \_\_\_\_\_ Anxiety (A)

0-7 = Normal

8-10 = Borderline abnormal (borderline case)

11-21 = Abnormal (case)



## ÈDÀ YORÙBÁ

### B: Hospital Anxiety and Depression Scale (HADS)

#### ÒSÙWỌN ILÉ-ÌWỌSÀN FUN WÍWỌN IPÁYÀ ATI ÌRÈWÈSÌ

Fi àmì (✓) sí ègbé gbólólhùnti ó súnmọ bí ó ti n ń ẹ se o ní ọṣẹ tíó kọjá.

Má ronú ju kí o tó dáhùn; ohunti o bá kọkọ wá sí ọ lókàn ni kí o kọ.

D	A		D	A	
		<b>O ń ẹ se mi bii pé ara ni mí tàbí pé ọkàn mi kò balẹ:</b>			<b>O ń ẹ se mi bii pe nńkan n fámí sẹhìn</b>
3		Ó fẹrẹ di gbogbo igbà	3		Ó fẹrẹ di gbogboigbà
2		Ní ọpọ igbà	2		Ní ọpọ igbà
1		Látigbadégbà, lẹ̀k̀k̀ọ̀kan	1		Lẹ̀k̀k̀ọ̀kan
0		Rára o, eléyí kò ẹ̀lẹ̀ rára	0		Rára o, eléyí kò ẹ̀lẹ̀ rára
		<b>Mo ọ́ má a ńgbádùn àwọn ohun tí mo n ńgbádùn tẹ̀lẹ̀:</b>			<b>Èrù máa n bàmí, bi kúlúso ní ikùn mi</b>
0		Bẹ̀ni, bi mo ti n ńgbádùn wọn tẹ̀lẹ̀.	0		Eléyí kò ẹ̀lẹ̀ rára
1		Bẹ̀ni, sùgbón igbádùn náà kò tó titẹ̀lẹ̀.	1		Lẹ̀k̀k̀ọ̀kan
2		Ìwọ̀nba igbádùn ni mó n rí ní nínú wọn báyí	2		Ní ọpọ igbà
3		Rára o, n kò gbádùn wọn mó.	3		Ó fẹrẹ di gbogbo igbà
		<b>Èrù máa n bà mí, bii pé nńkan burúku fẹ ẹ̀lẹ̀:</b>			<b>N kò bikítà fún bí mo ẹ se rí</b>
3		Bẹ̀ni, àyà mi tilẹ̀ máa n jáni	3		Bẹ̀ni, n kò bikítà rára
2		Bẹ̀ni, sùgbón kò burú jù	2		N kò tójú ara mi bí ó tiye
1		Èrù máa n bàmí díẹ̀, sùgbón n kò tilẹ̀ fọkàn sí i.	1		Ó dàbí bii pe n kò tójú ara mi tó
0		Eléyí kò ẹ̀lẹ̀ rára	0		Mò ẹ̀n n tójú ara mi bí ti àtẹ̀yinwá
		<b>Àwọn iṣẹ̀lẹ̀ mírán tàbí ọ̀rọ̀ ẹ̀fẹ̀ máa n pa mí lẹ̀rín-ín</b>			<b>Ara mi kò lẹ̀lẹ̀ nítorí n kò dúró lójú kan</b>
0		Bẹ̀ni , bí ti àtẹ̀yinwá	3		Ó fẹrẹ di gbogbo igbà
1		Bẹ̀ni, sùgbón kò tó ti àtẹ̀yinwá	2		Ní ọpọ igbà
2		Ohun-ẹ̀rín kò pọ̀ lórọ̀ mi mó	1		Kíi ẹ se ní ọpọ igbà
3		Kò sóhun tó n pa mí lẹ̀rín-ín mó	0		Eléyí kò ẹ̀lẹ̀ rára
		<b>Mo máa n ẹ ńyàn lókàn mi</b>			<b>Mo máa n fayọ fojú sọ̀nà</b>
3		Ó fẹrẹ di gbogbo igbà	0		Bẹ̀ni , bí ti àtẹ̀yinwá
2		Ní ọpọ igbà	1		Bẹ̀ni, sùgbón kò pọ̀ tó ti àtẹ̀yinwá
1		Látigbadéigbà sùgbón kí i ẹ se lémolémo	2		Kò tó ti àtẹ̀yinwá rára
0		Lẹ̀k̀k̀ọ̀kan	3		Kò sí ohun tí mò n fayọ fojú sọ̀nà sí
		<b>Mo máa n tújúkà:</b>			<b>Àyà mi máa n jálójijì</b>
3		Èmi kíi tújú ká rára	3		Ìjáyà ọ̀jijì fẹrẹ di gbogbo igbà

2	Èmi kíí tujú ká ní òpò ìgbà		2	Ìjayà òjìjì yíí ñşelè ní òpò ìgbà
1	Mo máa n tujú ká lèèkòòkan		1	Ìjayà òjìjì yíí kíí sába şelè
0	Mo máa n tujú ká ní òpò ìgbà		0	Ìjayà òjìjì yíí kíí şelè rará
	<b>Mo lèjókòò, kí n sif'arabalè</b>			<b>Mo lè gbádùn kika iwé tàbí ètò ori redió tàbí tẹlifişàn</b>
0	Mo lè jókòò, kí n sif'arabalè dáadáa	0		Ní òpò ìgbà
1	Mo lè sába jókòò, kí n sif'arabalè	1		Lèèkòòkan
2	Ìfarabalè yíí kíí sába şelè	2		Eléyíí kíí sába şelè
3	Ìfarabalèyíí kíí şelè rará	3		Eléyíí kíí şelè rará

Jòwó, yè é wò, kí o ríí pé gbogbo ibèèrè ni o ti dáhùn.

Scoring:

Total score:

**ÌRÈWÈŞÌ** Depression (D) \_\_\_\_\_ **IPÁYA** Anxiety (A) \_\_\_\_\_

0-7 = Ó şe **Déédéé** (Normal)

8-10 = **Kòşeku-kòşeyè** (Ó fèrèè di àişedéédéé) Borderline abnormal (borderline case)

11-21 = Ó jé **Àişedéédéé** (Abnormal case)

## Appendix VI: Advertising

English	Word for word copy	Stylistically Appropriate copy
<p>Rotana Now in Nigeria Correct Milk; Correct Price Rotana: Real value for the family</p>	<p>Rotana.... Ó ti dé sí Naijiria báyii, Ojúlówó mílìkì; Iye owó tó pé ọ. Rotana: Ó dára fún gbogbo ẹbí</p>	<p>Rotana wọ lú o Ojúlówó mílìkì tí kò wọnwó Rotana... Ó dára fún gbogbo ẹbí re</p>

English Version	Èdà Yorùbá

SOURCE: HiConcepts Communications, Lagos, Nigeria

## RESEARCH GRANTS, AWARDS AND PATENTS

- a. Travel Grants for FUTA Blended Learning Research Group for dissemination of FUTA BLRG work at E-learning Africa (2010, 2012, 2013)
- b. ₦14,990,000 Nigeria Communication Commission Grant to FUTA Speech and Language Research Group for Development of a Bi-Directional, Multilingual Speech-to-Speech Translation System for Mobile Communication: with Team Leader Professor A. O. Adetunmbi and 16 others, June 2019.
- c. ₦41,293,500 TETFund National Research Fund Intervention for A Pedagogical Adaptive Model and Framework of Blended Learning for Higher Education Institutions for Employability in Nigeria, with Team Leader Professor P. A. Aborisade, and 6 others, December 2019.
- d. ₦1,346,430.00 TETFund Institution-based Research Fund for Teachers’ Digital Learning Technology Competencies for Blended-Learning Pedagogy in Resource-Challenged Contexts: A FUTA Needs Analysis
- e. ₦2,000,000.00 TETFund Institution-based Research Fund for “Designing and implementing a high quality training course for Open and Distance Facilitators and e-tutors in FUTA” with Team Leader Dr. F M. Oguntade and four others.
- f. ₦23,809,337.5 TETFund National Research Fund Intervention for Effects of Information Technology-Assisted Process-Product Approach to Essay Writing Toolkits on Learning Outcomes of Secondary School Students as Principal Investigator with six others.

# Patent for Learning Activity Design Toolkit

283906



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# Patent for Teachmate

283932



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**Given this** 1 April, 2023

  
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