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MISPRONUNCIATION OF VOWELS AND TONES IN HAUSA DISYLLABIC WORDS BY YORUBA NATIVE SPEAKERS

SALE MAIKANTI

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MISPRONUNCIATION OF VOWELS AND TONES IN HAUSA DISYLLABIC WORDS BY YORÙBÁ NATIVE SPEAKERS

By

SALE MAIKANTI

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DEDICATION

This thesis is dedicated to my late parents

MISPRONUNCIATION OF VOWELS AND TONES IN HAUSA DISYLLABIC WORDS BY YORÙBÁ NATIVE SPEAKERS

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Hausa and Yorùbá are two different African languages with different sets of vowels, even though they share some common vowels, including tones. The phonemic distinction between the five (long) vowels, in addition to the two diphthongs of Hausa, seems to cause learning difficulties among the Yorùbá native speakers learning Hausa as a second language. Such challenge tends to cause substitution of vowels and tones in the first and second syllables when pronouncing disyllabic Hausa words by the Yorùbá speakers. This study aimed to address the following research questions: (i) Does a significant difference exist between the performance of elementary and advanced Yorùbá native speaker learners in the pronunciation of Hausa vowels and tones?; (ii) What are the Hausa vowels that were substituted in the first and second syllables by elementary and advanced Yorùbá native speaker learners of Hausa?; and (iii) What are the Hausa tones that were substituted in the first and second syllables by elementary and advanced Yorùbá native speaker learners of Hausa? Eighty-eight Yorùbá native speakers in elementary and advanced levels who were 18-years-old and above were recruited as participants using purposive sampling. The data was collected from the participants using different stimuli in carrier phrases, which were audio-recorded and transcribed for quantitative and qualitative analysis to provide insights into the study. Errors identified in the study were categorised based on patterns, and were explained within the framework of two theories: 'Error Analysis Model' by Corder (1967) and 'Revised Speech Learning Model' by Flege and Bohn (2020). The results of the elementary and advanced participants revealed that there was a significant difference in the pronunciation of vowels and tones in the first and second syllables. Generally, the advanced participants showed a significantly lower error rate in the pronunciation of Hausa vowels and tones compared with elementary participants. The research also discovered how Yorùbá native speaker learners of Hausa mispronounce some disyllabic Hausa words due to substitution. The study further identified a number of vowels and tones that were substituted, and the vowels they were substituted with, in the first and second syllables. The most frequent vowel substitutions across the elementary and advanced levels in the first and second syllables include /o/ → [o:], /a/ → [a:], and /u/ → [u:]. While the frequent tone substitutions across the two groups in the first syllable

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were from high to low, falling to high, and falling to low tones. In the second syllable, tones were substituted from low to high, high to low, and falling to high. To address mispronunciation problems among the Yorùbá native speakers, teachers of Hausa as a second language should focus more on the problematic sounds (vowels and tones), especially when teaching the elementary participants. Yorùbá native speakers learning Hausa should also be encouraged to learn how to produce the less difficult Hausa vowels and tones first, followed by the difficult ones in pronunciation both within and outside the classroom through regular practice. The study will assist the learners of Hausa as a second language to understand how to read, write, and speak fluently in Hausa. It will also add to the body of existing literature, particularly on Hausa L2 phonetics and phonology. The research serves as a guide for the Hausa language curriculum development in redesigning a new school curriculum focusing on correct pronunciation. Combining Corder's (1967) 'Error Analysis Model' and Flege and Bohn's (2020) 'Revised Speech Learning Model' which guided the present study and reflects the novelty of this study.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

SALAH SEBUTAN HURUF VOKAL DAN NADA DALAM KATA DWISUKU BAHASA HAUSA OLEH PENUTUR ASLI YORÙBÁ

Oleh

SALE MAIKANTI

Februari 2021

Pengerusi : **Profesor Madya Yap Ngee Thai, PhD**
Fakulti : **Bahasa Moden dan Komunikasi**

Bahasa Hausa dan Yorùbá merupakan dua bahasa Afrika yang berbeza dengan berlainan set huruf vokal walaupun kedua-duanya berkongsi beberapa huruf vokal dan nada yang sama. Perbezaan fonemik diantara 5 huruf vokal (panjang), disamping 2 diftong Bahasa Hausa menyukarkan penutur asli Yorùbá untuk belajar bahasa Hausa sebagai bahasa kedua. Penutur asli Yorùbá cenderung melalukan kesalahan disebabkan oleh penggantian huruf vokal dan nada tertentu pada suku kata pertama dan kedua ketika menuturkan kata dwisuku Bahasa Hausa. Kajian ini bertujuan untuk menjawab persoalan kajian seperti yang berikut: (i) Adakah terdapat perbezaan ketara prestasi di antara penutur asli Yorùbá di peringkat permulaan dan peringkat lanjutan dalam sebutan huruf vokal dan nada bahasa Hausa? (ii) Apakah huruf vokal bahasa Hausa yang digantikan pada suku kata pertama dan kedua oleh kedua-dua peringkat pelajar bahasa Hausa? (iii) Apakah nada bahasa Hausa yang digantikan pada suku kata pertama dan kedua oleh kedua-dua peringkat pelajar bahasa Hausa? Dengan menggunakan persampelan tujuan, sebanyak lapan puluh lapan penutur asli Yorùbá yang berumur 18 tahun dan ke atas dari peringkat permulaan dan peringkat lanjutan di pilih sebagai peserta kajian. Data dikumpulkan dari ransangan berbeza dalam frasa pembawa. Penghasilan huruf vokal oleh peserta dirakam dalam bentuk audio dan ditranskripsi untuk dianalisis secara kualitatif dan kuantitatif untuk mendapatkan pencerahan. Kesalahan yang dikenal pasti dikategorikan berdasarkan kepada pola dan dijelaskan mengikut dua kerangka teori iaitu: 'Model Analisis Kesilapan' Corder (1967) dan 'Model Pembelajaran Semakan Tuturan Flege dan Bohn (2020). Dapatan perbandingan prestasi peserta tahap 1 dan tahap 3 menunjukkan perbezaan ketara dalam sebutan huruf vokal dan nada pada suku kata pertama dan kedua. Secara amnya, peserta tahap 3 menunjukkan kadar kesalahan yang jauh lebih rendah dalam sebutan huruf vokal dan nada Hausa berbanding dengan peserta peringkat permulaan. Kajian turut mengenal pasti bagaimana penutur asli Yorùbá yang mempelajari bahasa Hausa menyalah sebut sesetengah kata dwisuku Hausa disebabkan oleh penggantian. Seterusnya, kajian ini mengenal pasti bilangan huruf vokal dan nada yang diganti, dan huruf vokal dan nada yang digantikan pada suku kata pertama dan kedua. Penggantian huruf vokal yang paling kerap di antara tahap 1 dan tahap 3 dalam suku kata pertama dan kedua adalah /o/ → [o:], /a/ → [a:], dan /u/ → [u:]. Manakala,

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penggantian nada yang paling kerap di antara kedua-dua kumpulan tersebut adalah dari nada tinggi ke rendah, menurun ke menaik, dan menurun ke rendah pada suku kata pertama. Bagi suku kata kedua pula, nada digantikan dari rendah ke tinggi, tinggi ke rendah, dan menurun ke menaik. Untuk mengatasi masalah salah sebutan di kalangan penutur asli Yorùbá, guru bahasa Hausa perlu memberi tumpuan lebih kepada bunyi yang bermasalah (vokal dan nada), terutamanya ketika mengajar pelajar di peringkat permulaan. Penutur asli Yorùbá yang mempelajari bahasa Hausa juga perlu digalakkan mempelajari bagaimana menghasilkan vokal dan nada Hausa yang kurang sukar, diikuti oleh dengan yang sukar dalam sebutan di luar dan dalam bilik darjah melalui latihan yang kerap. Kajian ini akan membantu pelajar yang mempelajari bahasa Hausa sebagai bahasa kedua untuk memahami bagaimana membaca dan menulis dengan fasih di dalam bahasa Hausa. Kajian ini turut menyumbang kepada kepustakaan yang sedia ada, terutamanya dalam bidang fonetik dan fonologi bahasa Hausa L2. Kajian ini adalah sebagai panduan kepada pembangunan kurikulum bahasa Hausa dalam merancang semula kurikulum baru di sekolah dengan tumpuan kepada sebutan yang betul. Gabungan Model Analisis Kesalahan oleh Coder (1967) dan Model Pembelajaran Semakan Tuturan oleh Flege & Bohn (2020) yang membimbing kajian mencerminkan novelti kajian ini.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

Yap Ngee Thai, PhD
Associate Professor
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Chairperson)

Salina binti Husain, PhD
Senior Lecturer
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Member)

Yong Mei Fung, PhD
Associate Professor
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Member)

Jurgen Martin Burkhardt, PhD
Adjunct Senior Lecturer
Department of German Pathway Programme
Australian Matriculation Programme Sunway College, Malaysia
(Member)

Olúwadọrọ̀ Jacob Oludare, PhD
Senior Lecturer
Department of Linguistics and African Languages
University of Ibadan, Nigeria
(Member)

_____
ZALILAH MOHD SHARIFF, PhD
Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 14 October 2021

Declaration by Members of Supervisory Committee

This is to confirm that:
- The research conducted and the writing of this thesis was under our supervision;
- Supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

Signature: _____
Name of
Chairman of
Supervisory Committee: Associate Professor Yap Ngee Thai

Signature: _____
Name of
Member of
Supervisory Committee: Salina binti Husain

Signature: _____
Name of
Member of
Supervisory Committee: Associate Professor Yong Mei Fung

Signature: _____
Name of
External Member of
Supervisory Committee: Jurgen Martin Burkhardt

Signature: _____
Name of
External Member of
Supervisory Committee: Olúwadorò Jacob Oludare

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LIST OF ABBREVIATIONS

ABK	Federal College of Education, Osiele-Abeokuta, Ogun State
ACE	Adeyemi College of Education, Ondo, Ondo State
ATR	Advance Tongue Root
CAH/CA	Contrastive Analysis Hypothesis
CV1V1	Consonant First Vowel Vowel
CV1V2	Consonant First Vowel Second Vowel
CY	Central Yorùbá
EAM/EA	Error Analysis Model
F(T)	Falling Tone
FEM	Feminine Gender
FH(T)	Falling High Tone
FL	French Language
H(T)	High Tone
HE	Hausa-English
HH(T)	High High Tone
HL(T)	High Low Tone
IBM SPSS	Statistical Package for Social Sciences
IE	Igbo-English
IKR	Ekiti State College of Education, Ikere-Ekiti, Ekiti State
INFL	Inflection
IPA	International phonetic alphabet
L(T)	Low Tone
L1	First Language
L1 TONE	First Language Tone

L1 VOWEL	First Language Vowel
L2	Second Language
L2 TONE	Second Language Tone
L2 VOWEL	Second Language Vowel
LH(T)	Low High Tone
LL(T)	Low Low Tone
LL(T)	Low Low Tone
LPE	Learners' Performance Error
M(T)	Mid Tone
MASC	Masculine Gender
MH(T)	Mid High Tone
ML(T)	Mid Low Tone
MM(T)	Mid Mid Tone
NC	Consonant nasal sound
NCE	Nigerian Certificate in Education
NP	Noun Phrase
NWY	North-West Yorùbá
ORO	Kwara State College of Education, Oro, Kwara State
OV	Object Verb
OYO	Federal College of Education (Special), Oyo, Oyo State
PAM	Perceptual Assimilation Model
PAM (L2)	Perception Assimilation Model for Second Language
SEY	South-East Yorùbá
SLA	Second language acquisition
SLM	Speech Learning Model

SVO	Subject Verb Object
SYL	Syllable
T	Tone
TL	Target Language
TNS/ASP	Tense/aspect
V/Vol	Vowel
V1	First Vowel
V2	Second Vowel
VHS	Vowel Harmony System
YE	Yorùbá-English
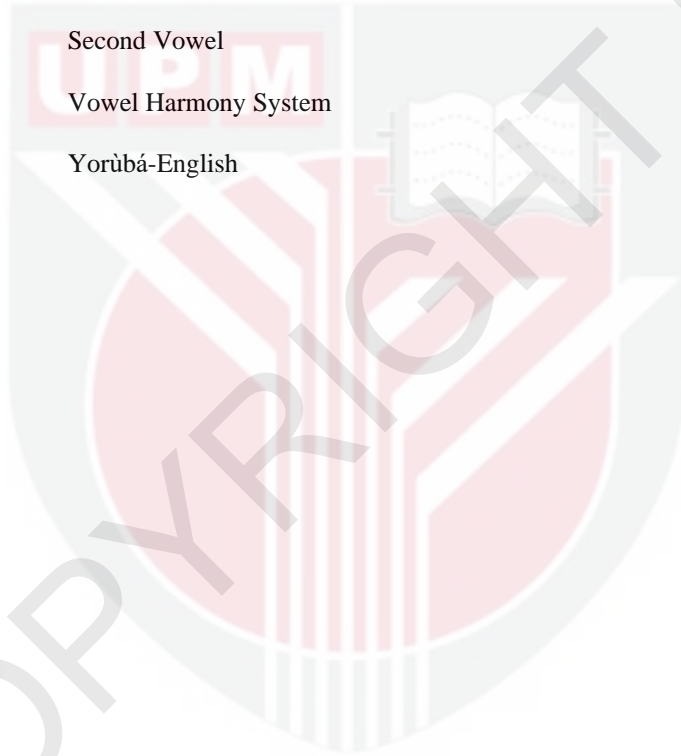
LIST OF PHONETIC SYMBOLS AND NOTATIONAL CONVENTIONS

´	High tone
`	Low tone
^	Falling tone
-	Mid tone
∨	Rising tone
−	Dash
Ẏ	Zero object/deletion
[ ]	Square brackets/Phonetic sound
/ /	Double slashes/Phonemic unit
< >	Chevrons/Orthographic unit
/	Slash or syllable break
+	Plus
~	Trema/nasality
.	Syllable break
→	Becomes/changes to
ʔ	Glottal stop sound
( )	Parenthesis
>	Greater than
<	Less than
=	Equals to
%	Percentage

CHAPTER 1

INTRODUCTION

1.1   Background of the study

In a multi-ethnic and multilingual society in Africa, learning a second language for communication is inevitable. Hausa, Igbo and Yorùbá, out of over 550 languages, were considered major languages in Nigeria, while the remaining ones were referred to as minor languages (Blench, 2019) in a population of over 190,000,000 people in the country (Department of Economic and Social Affairs United Nations, 2017). Among them, only a few of these languages were scientifically developed (Gordon, 2005). Most of these languages are neither codified nor have standard orthography. They exist only in the spoken form without texts covering their grammar, diction, and literature (Kammelu, 2014).

Hausa as a language is spoken by the Hausa native speakers in the north, while Igbo speakers speak the Igbo language in the east, whereas Yorùbá speakers speak the Yorùbá language in the southern parts of Nigeria as lingua franca (Greenberg, 1963). Language influence is due to the language contacts among the speakers of these major languages in Nigeria that have existed for centuries for the socio-economic activities. A number of socio-political, ethnic, and religious violence occurred in recent times in virtually every part of Nigeria. These affected the mutual relationship among people and the socio-economic development in the country. Usman (2002) and Ikuejube (2016) attest to the fact that Nigeria has experienced communal conflicts among ethnic and religious groups which cut across different regions in the country. Even though the numerous languages spoken in Nigeria alongside English as the official language assist in the area of cultural and linguistic unity in the country (Blench, 2014), the sociolinguistic nature of Nigeria with people from different cultural backgrounds living together necessitated learning a second language for mutual understanding.

The National Policy on Education [(NPE) 1977, 1981, 1998, and 2004] emphasises the need for every child to learn either Hausa, Igbo, or Yorùbá for national unity in Nigeria. Such language policy which encourages every child or youth in the country to learn one additional major language other than his or her mother tongue in the country, marked the beginning of teaching and learning Hausa, Igbo, and Yorùbá as a second language in schools. This implies that a Yorùbá child/youth is expected to learn how to read and write, at the same time speak Hausa or Igbo fluently and interact freely with the native speakers of the language.

The policy also expects a Hausa child/youth to learn how to read and write in Yorùbá or Igbo at the same time, and be able to speak either of the languages and interact freely with the native speakers of the language for mutual understanding and national cohesion. Similarly, an Igbo child/youth is expected to learn how to read and write, at the same time know how to speak Yorùbá or Hausa fluently. Iwara (2019) posits that when the

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majority of Nigerians can communicate with one another in their indigenous languages, much of the ethnic xenophobia, the fear of strangers from other parts of the country, would disappear. In addition, learning one of the three major Nigerian languages (Hausa, Igbo, and Yoruba) in Nigeria offers pedagogical and psychological advantages to the learners (Iwara, 2003).

Hausa as one of the three major languages in Nigeria is taught as an elective subject at junior secondary school level in South West Nigeria. It is also offered as a second language for the acquisition of Nigeria Certificate in Education (NCE) in some Colleges of Education in South West Nigeria. The language is taught in many universities in northern Nigeria as recommended by the National Policy on Education (2004). Areas covered in teaching and learning Hausa as a second language include language, literature, and culture (Nigeria Certificate in Education Minimum Standards for Languages, 2020).

To further encourage learning and understanding a second language in the country, the Nigerian Army in 2017 introduced a new language policy within the military formation. The officers and men of the Nigerian Army are also expected to learn one of the three major Nigerian languages, apart from their mother tongues. According to the policy, Mensah (2018) says that officers and soldiers are encouraged to be multilingual for better communication with the populace to enhance information gathering, and civil-military relations between the militaries when operating abroad. This would assist officers and soldiers in performing their duties professionally, especially when Yorùbá, Igbo, and Hausa languages are used during the Civil-Military activities.

While there is motivation provided to learn Hausa as a second language, learners of Hausa as a second language, especially the Yorùbá speakers, in most cases face challenges in achieving the native-like competence in pronunciation due to the substitution of certain sounds (vowels and tones), which consequently leads to intelligibility breakdown. The fact that learning is generally characterised by errors, a message may not be easily conveyed to the listeners without correct pronunciation, especially when the structure and rules of the second language are violated due to language differences (Ata, 2015). Flege, Bohn, and Jang (1997) and Flege, MacKay, and Meador (1999) observe that most individuals learning a second language (L2) after a certain number of years will be speaking it with a detectable foreign accent, which affects their pronunciation. Thus, learning Hausa by the Yorùbá native speakers may be somehow difficult without learning the basic rudiments, such as vowels and tones of the target language.

Akintoye (2020) attributes the root cause of pronunciation problems by Nigerians to the widespread view that teaching pronunciation is not important. As a result, while some teachers prefer to teach the grammar, writing, and literature courses, learners therefore prefer composition and comprehension (p. 268). One of the major distinctions in the pronunciation of words in a language is highly determined by how vowels are produced and tones are assigned differently in a language (Archibald, 1993; Ata, 2015; Cox, 2006; Deterding, 1997, 2003; Ferragne & Pellegrino, 2010; Hillenbrand, Getty, Clark, &

Wheeler, 1995; Koerich, 2002; Mutonya, 2008; Pillai, Mohd, Knowles, & Tang, 2010; Sharbawi, 2006).

As vowels form the foundation of speech sounds in a language, tones are regarded as an important phonological aspect of tonal languages which affect the meaning of lexical as well as grammatical words in a language (Shehu & Njidda, 2016). Most of the tone languages are traced back to the African continent; an area considered the largest concentration of tonal languages in the world (Taylor, 1923; Yip, 2002; Yusuf, 2007).

In standard Hausa, there are five pairs of monophthongs which comprise five short vowel phonemes: /i/ [i], /e/ [e], /a/ [a], /o/ [o], /u/ [u]; five long vowel phonemes: /i:/[i:], /e:/[e:], /a:/[a:], /o:/[o:], /u:/[u:], and two diphthong phonemes: /ai/[ai] and /au/[au] (Sani, 2005, 2007). Standard Yorùbá, on the other hand, has seven oral vowel phonemes: /i/[i], /e/[e], /ẹ/[ɛ], /a/[a], /o/[o], /ọ/[ɔ], /u/[u], and five nasal vowel phonemes: <in>[ĩ], <ẹn>[ɛ̃], <an>[ã], <ọn>[ɔ̃], <un>[ũ] (Arokoyo, 2012; Eme & Uba, 2016). The two languages (Hausa and Yorùbá) share five (5) oral monophthongs phones: [i], [e], [a], [o], and [u]. While Yorùbá has two more vowels: [ɛ] and [ɔ] that are not found in Hausa, Hausa also has two diphthongs: [ai] and [au] that do not exist in Yorùbá. Moreover, Hausa has a phonemic distinction between the short and long vowels, whereas vowel length differences are only phonetic in Yorùbá. The latter language has, on the other hand, five nasal vowel phonemes, such as <in>[ĩ], <ẹn>[ɛ̃], <an>[ã], <ọn>[ɔ̃], <un>[ũ], which Hausa does not have.

Hausa and Yorùbá share high-low tone, but differ in Hausa falling (^) tone as well as Yorùbá Mid (-) tone (Bello, 2017; Fagge, 2012; Sani, 2005; Ola, 1995). The differences between Hausa and Yorùbá vowel phonemes and tones have been observed to cause learning difficulties, especially for the Yorùbá speakers learning Hausa as a second language. Meanwhile, every syllable in Hausa takes either high, low, or falling tone. Every Yorùbá syllable also takes a high, low, or mid-tone. For consistency, all the three tones in Hausa (high, low, and falling) were marked on each syllable for easy understanding during illustration. Besides, all the examples used in Yorùbá were also tone-marked based on each syllable, except for mid-tone which would continue to remain unmarked.

As second language (L2) learning is associated with errors both in written and oral expressions, some vowels and tones of disyllabic Hausa words tend to be substituted with other vowels and tones, either at the word-medial or word-final positions by the Yorùbá native speakers. Such vowel and tone replacements affect Hausa words not only lexically, but also grammatically. Maiunguwa (2015) adds that the majority of the learners are not comfortable whenever they are misunderstood due to errors in their pronunciations. This is because pronunciation has been regarded as one of the major indices to determine how much L2 learners know about the target language. It also determines the level of acceptance of L2 learners by the L1 native speakers, particularly in their ability to produce the target sounds accurately as well as use the correct tones. Munro and Derwing (1995) believe that, the more similar in pronunciation to that of a

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native speaker, the more likely a native speaker will label the speech as comprehensive and intelligible.

The Yorùbá native speakers' inability to correctly pronounce some Hausa words despite the government's efforts to encourage learning Hausa as a second language was considered a challenge (Gital, 1998). Such learning challenge has pedagogical implications to the teachers, language experts, as well as other stakeholders in the education sector in Nigeria (Iwara, 2008; Koleoso, 2000; Oyetade, 2015). Koleoso (2000) attributed some of these learning challenges to the learners' intellectual ability, motivation, and emotional development of the learners among others (p.18).

It is against this background that this study examined the Hausa vowels and tones in the pronunciation of disyllabic Hausa words in the first and second syllables to identify the errors committed by the Yorùbá native speakers in their pronunciations. The scope of this study was an investigation of standard Hausa vowels and tones produced by the Yorùbá native speakers. Issues related to Hausa consonants and semi-vowels are not within the scope of the present study. The dialects of Hausa were also not relevant to the study since learners of the language were all Yorùbá native speakers. However, Yorùbá dialects could play a role due to the influence of the learners' mother tongue.

1.2   Statement of the problem

Hausa and Yorùbá attest to the three phonological components: consonants, vowels, and tones, which make up words in the two languages (Akinlabi, 2004; Oládiípò, Àjàdí, Túnjí, Rotimi, & Olúbòdé-Sàwé, 2017; Sani, 2005), yet the Yorùbá-Hausa learners tend to make mistakes in pronouncing some Hausa words. With the provision of an enabling law (National Policy on Education, 1977, 1981, 1998, 2004) towards the teaching and learning of second languages in schools, the poor performance of students in Hausa pronunciation is not encouraging (Muhammed, 2001; Satatima, 2018). According to Ibrahim (2000), Hausa learners find it difficult to speak and write in Hausa. Since this category of learners finds it difficult to communicate effectively among themselves in schools, marketplaces, as well as other social gatherings to express their thoughts and ideas, it would also be a challenge for them to become good teachers in the primary and secondary schools as envisaged in the Nigeria Certificate in Education Minimum Standards for Languages (2020).

Extant literature on second language learning (e.g., Ahmad & Botne, 1992; Cowan & Schuh, 1976; Furniss, 1991; Hodge & Umaru, 1963; Jaggar, 1992, 1996; Kraft & Kirk-Greene, 1973; Kraft & Kraft, 1973; Maikanti, 2003; Maikanti, Shu'aibu, & Uba, 2013; and Skinner, 1972) have focused more on Hausa alphabets, greeting system, counting system, and names of body parts, yet, none of such works has addressed the problem of mispronunciation. In addition, even though some of these studies (e.g., Ibrahim, 2000; and Shu'aibu, 2018) compared Hausa with Yorùbá on gender formation as well as the influence of Hausa on the acquisition and proficiency of Yorùbá; the focus was not on

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mispronunciation of Hausa words by the Yorùbá speakers learning Hausa, hence the need for this study.

Despite the fact that Hausa and Yorùbá share some vowels and tones in their sound inventories (Arokoyo, 2012; Ata, 2015; Awe, 2013; Sani, 2005), the structures of Hausa and Yorùbá are entirely different. Such structural differences in the two languages seem to be one of the reasons why Yorùbá speakers tend to substitute some vowel sounds with other vowels, such as /a:/ → [a], /o:/ → [o] as well as replacing some tones with other tones, especially from falling tone to high tone (F → H), or from the falling tone to the low tone (F → L), that are familiar to them in their mother tongue. The fact that Adegbite and Akindele (1999) as well as Olubode-Sawe (2010) discovered the replacement of English /i:/ with [i] by Yorùbá, Olusola (2015) disclosed how the English /u:/ was replaced with the Yorùbá /ɔ/, none of these study linked the substitution with phonotactics constraints and vowel harmony for critical discussion. Hence, the need for the present study to focus on such gap. In doing so, it will develop and improve the learners' communicative competence in terms of learning Hausa as a second language.

Other studies within sociolinguistics and phonological domains (e.g., Adegbite & Akindele, 1999; Ekpe, 2010; Keshavarz & Khamis, 2017; Munokan, 1973; Opoola, 2002; Patrick, Sui, Didam, & Gyang, 2013; Satatima, 2018; Shu'aibu, 2018; and Waya, 2001) argue that second language learning is mostly influenced by the first language, and this leads to the substitution of certain sounds in communication. While previous studies (e.g., Corder, 1967; and Ilòrí, 2010) link the difficulties faced by the second language learners to the differences between the L1 and L2 based on their phonemic inventories (Abubakar, 2001; Newman, 2000; Sani, 2005), the present study tries to associate such learning challenges to the phonological processes, such as vowel harmony as well as phonotactic restrictions within and across bound morphemes. With such research gap, the study will provide an insight into the possible causes of mispronunciation among the Yorùbá speakers learning Hausa.

A considerable number of research were conducted to describe and compare issues related to Hausa learning (e.g., Abubakar, 2014; Ata, 2015; Abubakar, Maikanti, & Ago, 2014; Keshavarz & Khamis, 2017; Mahmoud, 2017; Maiunguwa, 2015; Malah & Rashid, 2015; Mohammed, 2011; and Salisu & Grema, 2018) as well as Yorùbá learning (e.g., Adekunle, 2014; Akínkùgbé, 1978; Arokoyo, 2012; Adejubee & Kammelu, 2010; Babarinde, 2017; Eme & Uba, 2016; Igboanusi, 2006; Ilòrí, 2010; Ojo, 2004; and Olusola, 2015). To date, except Ibrahim (2000) who compared Hausa with Yorùbá in terms of gender usage, investigating issues relating to mispronunciation of Hausa vowels and tones by the Yorùbá native speakers received less attention.

Most studies on Hausa (e.g., Abubakar, 1999; Baba, 1998; Fagge, 2012; Jaggar, 2001; Leben, 1970; Newman, 1995, 2000; and Sani, 2005) mainly focus on Hausa L1 grammar and phonology, paying less attention to comparative studies relating to Hausa-Yorùbá L2 learning. The fact that second language learning is mostly influenced by the difference in the sound inventory between the Hausa and Yorùbá, coupled with the fact that the phonotactic constraints, especially with the existence of partial vowel harmony standard Yorùbá, but absence in Hausa as well as the differences in phonological

processes in the two languages justify the reason why there is the need to carry out the present study. There is a need to fill the existing gap. In addition, many studies (e.g., Hao, 2012; Leung, 2008; Qin & Mok, 2013; So, 2010; So & Best, 2010; Tao & Guo, 2008; Wang, Jongman, & Sereno, 2003; Wong, Schwartz, & Jenkins, 2005; Wu, Munro, & Wang, 2014; Zhang, 2007; and Yang, 2018) focus on the perception of speech sounds, rather than studies on their production. Other studies on perception and productions of Hausa (e.g., Abdullahi, 2018; Ata, 2015; and Maiunguwa, 2015) indicate that perception outperformed production. Research that centre on production alone, particularly on Hausa vowels and tones concerning the pronunciation of Hausa words by the Yorùbá native speakers, are not readily available as reference material for the purpose of teaching and learning as well as research and documentation.

Besides the study on second language phonology which is regarded as one of the less investigated areas in recent times (Diettes & Johanna, 2014; Thomson & Derwing, 2015; Abdullahi, 2018), the learning of new sounds, particularly vowels and tones, is considered one of the most difficult tasks for L2 learners to achieve within the shortest possible time (Sani, 2005). Since research on Yorùbá native speakers learning Hausa vowels and tones seems to be scarce, there is a need to examine the production of Hausa vowels and tones in the pronunciation of disyllabic Hausa words by Yorùbá L2 speakers learning Hausa.

The fact that the production of Hausa vowels and tones are characterised by errors in second language learning (Ibrahim, 2000; Shu'aibu, 2018), the Yorùbá native speakers learning Hausa as a second language tend to commit errors in pronunciation of vowels and tones, especially in the first and second syllables. Meanwhile, even though the error committed in second language learning affect the meaning of lexical and grammatical words in a language (Crystal, 2008; Haruna, 2008), such errors also serve as evidence of how a language is learned as well as the techniques being employed in the discovery of new languages (Corder, 1967). To address such research gaps, this study was designed to investigate how mispronunciation of Hausa vowels and tones affect the understanding of Hausa by the Yorùbá native speakers. When the study is completed, it can assist in the area of teaching and learning Hausa as a second language, not only in Yorùbá land, but also in Igbo land as well as other countries where Hausa is studied as a second language.

1.3   Objectives of the study

The present study has the aim of achieving the following objectives:

1) To examine the production of Hausa vowels and tones in the pronunciation of disyllabic Hausa words by Yorùbá native speaker learners.

   a) To find out if there are significant differences between the performance of elementary and advanced Yorùbá native speaker learners in the pronunciation of Hausa vowels in the first and second syllables.

b) To identify if significant differences exist between the performance of elementary and advanced Yorùbá native speaker learners in the pronunciation of Hausa tones in the first and second syllables.

2) To ascertain the vowels of disyllabic Hausa words substituted and the ones substituted with, especially in the first and second syllables by the Yorùbá native speaker learners of Hausa.

3) To identify the tones of disyllabic Hausa words substituted and the on substituted with, especially in the first and second syllables by the Yorùbá native speaker learners of Hausa.

These objectives were needed to find out and address mispronunciation problems faced by the Yorùbá native speaker learners of Hausa in the area of vowels and tones, particularly the elementary and advanced students who were learning Hausa as a second language.

1.4 Research questions

The study was channelled to answer the following research questions:

1) To what extent have Yorùbá native speakers, learners of Hausa, produced the vowels and tones accurately in the disyllabic Hausa words?

a) Does a significant difference exist between the performance of elementary and advanced Yorùbá native speakers in the pronunciation of Hausa vowels?

b) Does a significant difference exist between the performance of elementary an advanced Yorùbá native speakers in the pronunciation of Hausa tones?

2) What are the Hausa vowels that were substituted in the first and second syllables by elementary and advanced Yorùbá native speakers, learners of Hausa?

3) What are the Hausa tones that were substituted in the first and second syllable by elementary and advanced Yorùbá native speakers, learners of Hausa?

These research questions were needed to find out the natural development between the two groups in terms of second language learning, and specifically to improve the learning of Hausa vowels and tones in schools. The focus was on sounds that were problematic to the beginners who were in the elementary group, and sounds that were also difficult for the advanced group.

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1.5   Research hypotheses

Some errors seem to occur due to structural differences between Hausa and Yorùbá, especially as Yorùbá does not have long monophthongs and diphthongs. Besides, high-tone initial vowel, especially for nouns in Yorùbá, is also prohibited (Akinlabi, 2007). This is in addition to the falling-tone initial syllable which does not occur in Yorùbá. Such factors explain why the researcher expects the Yorùbá-Hausa learners to make errors, especially in pronouncing some disyllabic Hausa words. Based on the difficulties in identifying and producing the Hausa vowels and tones by the learners, the performance of elementary and advanced learners seemed not the same in the production of Hausa vowels and tones. In light of that, the following hypotheses were formulated and tested, which include the following:

H₁: There is a significant difference in the production of Hausa vowels in the first syllable between the elementary and advanced Yorùbá native speaker learners of Hausa.

H₂: There is a significant difference in the production of Hausa vowels in the second syllable between the elementary and advanced Yorùbá native speaker learners of Hausa.

H₃: There is a significant difference in the production of Hausa tones in the first syllable between the elementary and advanced Yorùbá native speaker learners of Hausa.

H₄: There is a significant difference in the production of Hausa tones in the second syllable between the elementary and advanced Yorùbá native speaker learners of Hausa.

1.6   Theoretical framework of the study

Different theories for second language learning have been developed over the years. Among them are, but not limited to, 'Contrastive Analysis Hypothesis' (CAH) by Lado (1957), 'Error Analysis Model' (EAM) by Corder (1967), 'Perceptual Assimilation Model' (PAM) by Best (1994, 1995), 'Speech Learning Model' (SLM) by Flege (1995), 'Perceptual Assimilation Model of Second Language' (PAM-L2) by Best and Tyler (2007), and 'Revised Speech Learning Model' (SLM-r) by Flege and Bohn (2020). Many of the theories predicted the challenges that learners of second language encounter in terms of perception and production of L2 sounds.

'Contrastive Analysis Hypothesis' (CAH) influenced by behaviourism predicted that the difference between first and second language is the source of errors committed in second language learning. Since the Contrastive Analysis Hypothesis involves the comparison of linguistic systems of two different languages in the area of phonetics, phonology, morphology, and syntax, it also identified their similarities and differences. 'Contrastive Analysis Hypothesis' was said to have some shortcomings, and it was replaced with the 'Error Analysis Model'. Among the reasons why error analysis replaced contrastive

analysis was because 'Contrastive Analysis Hypothesis' did not set out to predict L2 learners' errors; rather, it aims to discover and describe different kinds of errors in an effort to understand how learners process the second language.

However, despite the fact that the Error Analysis Model argued that Contrastive Analysis Hypothesis had some limitations and that most of the errors committed by the second language learners could not be accounted for, it was agreed that most errors committed by the second language learners have a link to mother tongue influence. Accordingly, the Contrastive Analysis Hypothesis (CAH) is still regarded as a component of the Error Analysis Model in terms of predicting errors in second language learning (Ammar, 2016; Olúwadọrọ̀, 2016).

The Error Analysis Model focuses on the types and causes of errors committed in terms of learners' proficiency in speaking, listening, writing, and reading. It also discusses learners' pronunciation in the area of vocabulary, omission, and insertion. Accordingly, errors have been classified according to phonological or syntactic patterns, whereby sounds were added or substituted when learning a second language.

Similarly, errors can be measured based on their level of interference in the message, which can either be global errors (which make an utterance difficult to understand) or local errors (which makes an utterance easy to understand). If, for instance, a Yorùbá speaker pronounces [nó:mò:] instead of [ná:mà:] (meat), or [nú:má:] instead of [nó:má:] (farming), the /a: – a:/ changing to /o: - o:/ , and the /o: - a:/ also changing to /u: – a:/, these could be considered phonological adaptation. This is in addition to vowel raising between the short /o/ vs /u/. Dialectal variation could also be responsible for such errors. Since the Error Analysis Model deals with learners' production of sounds, Olúwadọrọ̀ (2016; 2017) observes that both Contrastive Analysis Hypothesis and Error Analysis Model agreed that errors committed by second language learners are due to the influence of the mother tongue.

The 'Perception Assimilation Model' and 'Revised Speech Learning Model' (SLM-r) investigated the production of native and non-native sounds, and therefore, revealed how native sounds are perceived by the learners. However, despite the fact that the major focus of 'SLM-r' is on immigrants when learning the second language under natural settings, the model is still relevant to the present study, especially as it discusses issues relating to how and why errors are committed due to mispronunciation of vowels and tones in second language learning.

According to 'SLM-r', second language learners have more problems, particularly with sounds that are shared between two languages (first and second), while the unshared or new sounds are easy for the learners to produce. In this regard, the problematic L2 sounds are substituted with the L1 sound as perceived by the learners. The 'SLM-r' also focuses on the differences between individual learners, with special attention to creating a better understanding of how phonetic systems of individuals are reorganised over the life span.

In response to the phonetic input received when learning a new sound, 'SLM-r' argues that when learners discover phonetic differences between L1 and L2, a new phonetic category is formed for the L2 sounds. This is because L2 learners can create new phonetic categories on their own. However, the newly formed phonetic categories for some L2 sounds produced by the learners will probably not be the same with those in L1, and forming a phonetic category for L2 sounds also depends on the accuracy of L1 categories at the time when L2 learning begins (Flege & Bohn, 2020).

In this study, the predictions of 'EAM' and 'SLM-r' concerning mispronunciation of Hausa vowels and tones by the Yorùbá native speakers were explored. This is because the two models best explained the errors committed by the Yorùbá native speakers when learning Hausa in the area of pronunciation. While 'EAM' focuses on errors committed by Yorùbá native speakers when pronouncing the shared Hausa vowel phonemes both in the first and second syllables, the 'SLM-r' accounted for the mispronunciation of the unshared vowels between Hausa and Yorùbá in the first and second syllables. In most cases, the pronunciation of sounds that meets the standard variety of the target language are considered perfect and accurate, while pronunciations that do not meet the standard are regarded as incorrect and difficult for the learners, thereby affecting their intelligibility.

Even though some of the theories mentioned in this study are related to second language learning, 'EAM' and 'SLM-r' appeared to be the best option for the present research because they have the capacity to predict the errors committed by the Yorùbá native speaker learners with respect to pronunciation of vowels and tones in the first and second syllables, especially when learning Hausa as a second language. The predictions of the two different models were all reflected in the present study, especially in the areas where the production of target language sounds were either easy or difficult for the second language learners.
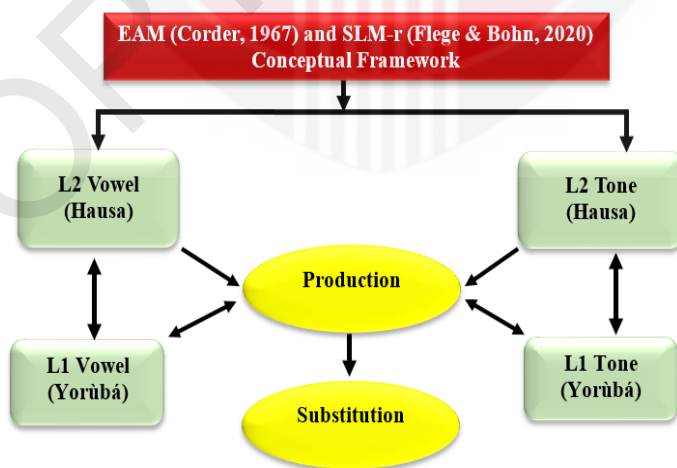
Figure 1.1: Conceptual framework
(Maikanti, 2021)

The above conceptual framework explained how second language (L2) sounds were influenced by the first language (L1) in terms of sound pronunciation. When Hausa vowels and tones were produced without the interference of Yorùbá as learners' mother tongue, such sounds could be free from substitution. They would be produced with a certain degree of accuracy. However, when Hausa sounds were produced with the influence of learners' mother tongue (Yorùbá), such sounds were substituted and resulted in mispronunciation.

1.7   Significance of the study

This study contributed to the area of teaching and learning of Hausa phonetics and phonology, particularly in issues relating to vowels and tones. With the acute shortage of reading materials in the study of Hausa as a second language, the research serves as a reference material to L2 teachers and learners. Teachers and learners of Hausa would have materials to use in the classroom when teaching Hausa vowels and tones. In areas where materials are available, the study will add to the body of existing literature, particularly in the area of linguistics and second language learning. Similarly, the research will also assist the Hausa language curriculum developers to redesign a new school curriculum by focusing more on vowels and tones to minimise problems of mispronunciation in second language learning, particularly in Hausa language learning.

The findings of the study could assist Yorùbá native speakers to easily identify and correct the mispronunciation they make when learning Hausa. It can significantly assist the Yorùbá native speakers to understand how to read and write in Hausa and speak the language fluently for inter-personal relation and socio-economic development in the society. The methodology used in this study could assist researchers in carrying out studies in other related African languages, such as in the area of syntax, morphology, and semantics, which may not necessarily be in Hausa.

Since understanding additional language promotes unity, the study will strengthen the relationship between the native speakers of Hausa and native speakers of Yorùbá for socio-economic growth. Understanding Hausa language by Yorùbá native speakers and vice versa will assist the speakers in the area of socio-cultural integration, peaceful co-existence, and meaningful inter-ethnic communication between the two ethnic groups in Nigeria.

In the area of security, the study could assist officers and men from the security forces in Nigeria to communicate effectively in terms of information gathering, and discharge their duties professionally. At the end of the study, the findings would be disseminated and made available to the public for both teachers of Hausa at primary, secondary, and tertiary levels. Copies of the findings would also be made available to school administrators for them to access and improve on the teaching and learning of Hausa as a second language.

1.8   Definitions of key terms

Vowel

Roach cited in Osisanwo (2012), defining vowel as a sound in which there is no obstruction to the flow of air as it passes from the larynx to the lips. Sani (2005) considers vowel as a speech sound that is different from consonants. It is a sound whose articulation does not involve obstruction of airflow, but essentially vibration of the vocal cords (p. 20). A vowel is a sound articulated without a complete closure in the mouth or a degree of narrowing which would produce audible friction; the air escapes evenly over the centre of the tongue (Crystal, 2008). If air escapes through the mouth, the vowel is said to be oral; if some air is simultaneously released through the nose, the vowel is nasal. In this study, a vowel is referred to as sound where production does not involve obstruction of free airflow by organs of speech. The phonetic features of vowel depend on the position of the tongue and lips, especially during production, and vowels could be either short or long.

Tone

Crystal (2008) considers tone as the distinctive pitch level of a syllable. In the study of intonation, a sequence of tones constitutes a contour or tone unit. Sani (2005; 2007) regards tone as a pitch of voice in which each syllable of a word is uttered naturally to convey a proper meaning of the word to the listener. The tone can be either high, low, or falling in Hausa as well as high, low, and mid-tone in the case of Yorùbá (Yusuf, 2007).

Production of vowels

In linguistics, production is a process in which speech sounds are uttered in a language using the necessary production mechanism, such as organs of speech. It is also a process of planning and executing the act of speech in a language (Crystal, 2008). Production of vowels relates to how vowels in a particular language are produced while taking into account the position of the tongue, position of the lips as well as the state of the glottis. In Hausa, for instance, while some vowels are short, some are considered long because of the duration it takes in their production. Consider the pronunciation of the following Hausa words whereby vowels, such as /a/ was alternated with [a:], and /o/ was also alternated with [o:] by Hausa speakers:

Table 1.1: Examples of possible mispronounced Hausa vowels

	Word	Gloss	Word	Gloss
i)	kàré:	dog	kà:ré:	defend/protect
ii)	Sá:bó	personal name	sá:bó:	new
iii)	Kó:kò	name of town	kó:kò:	either
iv)	Bà:ƙó	personal name	bà:ƙó:	a stranger/visitor

(Sani, 2005)

The above four words have their meanings altered due to change of vowels either in the first or second syllable, especially from short to long which led to mispronunciation.

Placement of tones

The placement of tone involves the assigning of tone to vowel based on high-low or falling tone in a syllable especially for Hausa, and high-low or mid tone in the case of Yorùbá. Consider the mispronunciation of the following Hausa and Yorùbá words due to difference in tones. Hausa examples are as follows:

Table 1. 1 Examples of possible mispronounced Hausa tones

	Word	Tone	Gloss	Word	Tone	Gloss
i)	kàré:	LH	dog	kárè:	HL	to break
ii)	cíkí	HH	inside	cíkì:	HL	stomach
iii)	gàdá:	LH	antelope	gádà:	HL	bridge
iv)	zà:ná:	LH	draw/outline/sketch	zá:ná:	HH	coarse grass

(Abubakar, 2001; Sani, 2005)

The examples above are Hausa words that also had their meanings changed due to substitution of tones.

Substitution

This is a process of sound replacement. It is also a procedure whereby a particular sound replaces another sound in the same environment. The replacement could either be a consonant with another consonant, a vowel with another vowel, or a tone with another tone. Alabi (2007) considers substitution as a major type of phonological language interference caused by language contact phenomenon. This shows how target sounds are replaced with the equivalent sounds readily available in the learner's mother tongue to make his learning easier.

Mispronunciation

This refers to the wrong pronunciation of a word or group of words due to the replacement of a vowel or a consonant sound in a language. Wrong pronunciation in most cases changes the meaning of lexical words involved. In second language learning, once the pronunciation does not conform to the first language rules, it is regarded as a mispronunciation.

Deletion

Deletion or elision is part of syllable structure processes whereby a sound (vowel or consonant) or a segment of connected speech disappears in a rapid speech. Jones (2003) considered vowel elision as the loss or disappearance of the vowel after plosive sounds.

1.9 Organisation of the thesis

This research has five (5) chapters. Chapter 1 contains the background to the study, justification of the study, statement of the problem, objectives of the study, research questions, and research hypotheses. Other issues discussed in the chapter include theoretical framework of the study, significance of the research as well as definitions of key terms. Chapter 2 focuses on the linguistic situation in Nigeria as well as a review of the related literature for this study. Chapter 3 covers research design: sampling/ inclusion procedures, research instrumentation, and data collection procedure. Data analysis and discussion of results were done in chapter 4, while chapter 5 which is the last chapter, focuses on the summary of key findings, conclusion, and suggestions for further research.

1.10 Summary

This chapter discussed the background to the study, statement of the problem, research objectives, research questions, research hypothesis, and significance of the research as well as theories that are relevant to the study.

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BIODATA OF STUDENT

Mr. Sale Maikanti is a Chief Lecturer in the Department of Hausa, Adeyemi College of Education, Ondo, Ondo-State Nigeria. He has been teaching Hausa as a second language since 1998 in the Institution. He was born on 5/10/1968 in Wushishi town, Wushishi Local Government Area of Niger State, Nigeria. He had his B.A. in 1997, M.A. in 2013 from Usmanu Danfodio University, Sokoto, and Postgraduate Diploma in Education (PGDE) from Obafemi Awolowo University, Ile-Ife in 2005 all in Nigeria. He obtained a Diploma Certificate in Computer in year 2006 from Bismod Computer, Lagos and currently pursuing his PhD in Applied Comparative Linguistics in University Putra, Malaysia (UPM). His research interest includes phonetics and phonology as well as second language learning.

LIST OF PUBLICATION

Maikanti, S., Jurgen, M. B., Yap, N. T., Salina, B. H., & Oluwadoro, J. O. (2019). "Hausa vowels and pronunciation by Yorùbá native speakers learning Hausa". *Opción.* 35 (23), 1464–1478. (SCOPUS Indexed).

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