

European Journal of English Language Studies

Volume 2, Issue 2, 97 - 106.

ISSN: 2770-9752 https://www.ejels.com/

Phonological Analysis of the English Consonants Articulations of Hausa Speakers of English: An Optimality Perspective

Abdulmalik Usman*ወ

Bauchi State University, NIGERIA

Received: September 21, 2022 • Revised: October 26, 2022 • Accepted: November 22, 2022

Abstract: The pronunciation patterns of most speakers of English as a second language are characterized by regional and ethnic phonological features of their native language. This study sought to examine the consonant articulation of Hausa speakers of English in broadcasting industry in Nigeria. The research was guided by Optimality Theory framework (OT). Participants were drawn from four electronic media in Bauchi State, Nigeria and data were elicited through production test and recording of news broadcasts live from the stations. The findings revealed that the participants ranked IDENTCONT as a high ranked constraints which allowed the importation of voiceless bilabial fricative $/\phi/$ from the phonemic inventory of Hausa language into English spoken by the subjects. The results further discovered that /p/ is substituted with/ $\phi/$ and $/\theta/$ is substituted with /t/, /d/ or /s/. Similarly, $/\delta/$ is realized as /d/ or /z/. /3/ is produced as /d3/ or /J. These deviations from RP were caused by phonological processes of spirantinzation/Frication, stopping and affrication.

Keywords: Consonants, constraints, English, Hausa speakers, optimality theory.

To cite this article: Usman, A. (2022). Phonological analysis of English consonant articulation of Hausa speakers of English: An optimality perspective. *European Journal of English Language Studies*, *2*(2), 97-106. https://doi.org/10.12973/ejels.2.2.97

Introduction

Phonology of English has been a great challenge to most speakers of English as a second language due to conflicting nature between phonemic representation and orthography (Schmied, 1991). This inconsistency is evident in the British English where the writing system is not a true reflection of the pronunciation. Even in the dictionaries use by the native speakers, a phonemic transcription of every word is provided as a guide to pronunciation (Simo Bobda, 1994). This hurdle is also inherited by the non-native speakers of English where speakers are associated with one problem or the other. The phenomena earlier labelled as an error, however, the trend has shifted and it is no longer labelled as error but rather a variety. Even though these processes of restructuring are sometimes interfere with communication (Smith, 1992). Although there is a dearth of literature on phonology of new Englishes (Simo Bobda, 2001), however, remarkable contributions were made by researchers (Bamgbose, 1998; Crystal, 1997; Kachru, 1984; Platt et al., 1984; Simo Bobda, 2000, 2001, 2003).

There have been studies on Nigerian phonology of English, but most of the studies focused on identifying and classifying the English spoken in Nigeria. The contact between English and Nigerian indigenous languages has produced new varieties that are markedly different from RP (Bamgbose, 1971). These Englishes spoken in Nigeria acquire the features of some Nigerian languages (Sunday, 2010; Udofot, 2003). Several efforts have been made by researchers in categorising these varieties (Banjo, 1996; Jibril, 1982; Jowitt, 1991), these researchers corroborate that there are acrolectal, mesolectal and basilectal varieties of English in Nigeria.

Jowitt (1991) classified English spoken in Nigeria based on ethnic marker. According to him, there are three major varieties of English in Nigeria. Namely: Hausa English, Igbo English and Yoruba English Similarly, Jibril (1986) classified English in Nigeria along regional lines. He added that there is Hausa English found in Northern Nigeria and Southern English in Southern Nigeria. It is against this background that the present study is positioned within the English spoken by Hausaists particularly broadcasters who are regarded as a model of standard pronunciation.

* Correspondence:



Abdulmalik Usman, Department of English and Literary Studies, Bauchi State University, Gadau, Nigeria. 🖂 ausmanb09@gmail.com

Literature Review

In recent years, research on phonology of newscasters is receiving scholarly attention. Hannisdal (2006) discuses some phonological variations amongst newsreaders on BBC, SKY NEWS and ITV in Britain. The research uses six phonological variables and discovers phonological variations in each. These include: CURE lowering ($/\upsilon = / > : /$). GOAT allophony ($= \upsilon > \upsilon = 0$) T-voicing (t > t), Smoothing (= u = v = 0) Yod coalescence (tj and dj>tf and dʒ) and R-sandhi (/r/ deletion in *word far away*). The research propound the existence of pronunciation variations amongst British broadcasters who are using RP accent.

In Nigeria, there are researches on the phonological features of broadcasters. Aladeyomi and Adetunde (2007) study segmental phonemes errors in the spoken English of Nigerian Television casters. They identify some errors being made by television broadcasters in Nigeria as a result of features of English that are distinct from Nigerian languages and environmental influence which affects their use of English different from its natural tenet and results in intelligibility lost. The study was not able to capture Hausa broadcasters of English who are the subjects of the present study. In addition, Soneye (2007) observes that the inconsistency between English orthography and phonetic symbols also influences the pronunciation patterns of newscasters of the Nigerian Television Authority. For instance, the voiced alveolar plosive /g/ is present in the phonemic inventories of all the three major languages in Nigeria but the majority of the newscasters produce it as voiced palato alveolar affricate /dʒ/ in the second syllable of a word, e.g. *gigantic.* The study focused mainly on spelling pronunciation phenomenon. The specific phonemes that are perceived to be difficult to Nigerian speakers of English were not covered by the research.

Similarly, Akpan, et al. (2012) also identify the influence of mother tongue in the broadcasting industry in Nigeria. The researchers adopt the use of Communication Process Model which examines the relationships between encoder and decoder. The respondents who are mainly broadcasters in Enugu State Southern Nigeria reveal that Nigerian broadcasters are influenced by mother tongue interference in their broadcasting, particularly in sounds articulation which affect their pronunciation of some English words and suggests for intensive linguistic training in order to improve upon their proficiency. The study gives insight into the problems of broadcasters in southern Nigeria who use Igbo English variety, however, there was no linguistic theory in the research to account for the mother tongue transfer.

In a related study Emeka-Nwobia and Onu (2013) examines the phonological errors of broadcasters in Ebonyi State, neighbouring Enugu State, Southern Nigeria. In the research, newscasts were taped recorded and analysed using Phonemic Theory. It is discovered that the errors being committed by the newscasters are associated with substitutions of English phonemes with phonemes of the Igbo language. Similarly, Aladeyomi (2013) examines the pronunciation patterns of Nigerian television newscasters against the standard British pronunciation. He focuses on errors related to central vowels consonants, stress and intonation. The respondents transfer the features of their native language to English The study used of phonetic transcription of news telecasts that are taped recorded and the findings reveals some errors related to consonants, stress and intonation. However, the researcher adopts the use of convenient sampling in selecting the participants, and according to Awang (2012) convenient sampling is not appropriate for population inference and cannot be used for descriptive research simply because the researcher cannot say with confidence that the individuals are the representatives of the population.

Soneye and Oladunjoye (2015) opine that Yoruba broadcasters often delete one consonant in two consonant cluster coda to declusterize the cluster. Moreover, when there are three consonant cluster coda, one consonant is usually deleted to reduce the weight of the cluster. For instance [lts] is produced as [ts], [lpt] is realized as [pd] and [kts] is pronounced as [ts].

The introduction of Optimality Theory in the study of phonology has opened a new paradigm of research in linguistics. In Nigeria, only few studies were found to have been carried out within the OT. The studies that captured OT in the Nigerian phonology of English are on Phonotactics and Suprasegmental phonology Omachonu (2008) used Optimality Theory to analyze the stress marking of Igala speakers of English. The study revealed that the stress marking of Igala speakers of English is different from English. Similarly, Mbah and Waya (2014) states that Tiv speakers of English usually violate phonotactic rules by inserting epenthetic vowels to break up English consonant clusters. This is also similar to Yoruba speakers of English (Soneye & Oladunjoye, 2015) Sunday and Oyatokun (2016) used the Optimality Theory to analyze the stress patterns of Nigerian speakers of English. The constraints were ordered in British English and reordered in Nigerian English. OT as a recent phonological theory which allows for freedom of analysis would be more suitable to account for the realization of yod coalescence in the speech of Hausa broadcasters. It is a very common innovations in the phonology of Nigerian speakers of English used in acrolect (Oladipupo, 2015). This trend called yod coalescence marked the beginning of a new form of speech variation amongst educated speakers of English in Nigeria. In this regard, Usman (2020) discovered the realization of yod coalescence in the English spoken by Hausa broadcasters in Nigeria. 20 broadcasters from four broadcasting stations in Bauchi North-East Nigeria were selected as respondents. The study was guided by Optimality Theory (Prince & Smolensky, 1993) and data were collected through Production Test of list of potential coalescence words and tape recording of news broadcast live from the stations. The findings revealed that the majority of the respondents produced yod coalescence in the pronunciation. Similarly, Usman and Kagu (2021) investigated the patterns of English consonant clusters articulation of Nigerian broadcasters in the onset and coda

positions within the Optimality Theory framework. The outcomes indicated that the participants used vowel epenthesis in the onset and consonant deletion in the coda. The participants ranked Markedness constraints higher than Faithfulness constraints. The researchers suggested for further study into segmental phonology of Nigerian speakers of English within the ambit of Optimality Theory. Therefore, the present study is an attempt to further explore the application of OT in Nigerian phonology of English and identify relevant constraints to account for consonant articulation of Nigerian speakers of English.

Purpose of the Study

The purpose of the study is to identify and describe the articulation of selected RP consonant in the speech of Hausa newscasters.

Optimality Theory

There are several phonological theories such as generative phonology, natural phonology, metrical, auto segmental among others. These theories are ruled based formulated to account for appropriateness in articulations without adequate considerations for the variations that exist among speakers. This development motivated the researcher to adopt a phonological theory that would assist the researcher in analyzing English spoken by Nigerian broadcasters. The research adopted Optimality Theory, a phonological theory developed by Prince and Smolensky (1993) and McCarthy and Prince (1995). The theory is positioned within Markedness and Faithfulness constraints. Markedness constraints deal with deviations in speech while Faithfulness constraints look at the appropriateness of speech production. The emergence of OT as phonological theory is imbued by the fact that languages across the world are different in terms of structure hence the realization of language structure as a fundamental principle of defining and describing language. Chomsky and Halle (1968) revealed that languages encompass set of universal principles which are available in all human languages. The principles provide grammatical rules which guide the functions and operations of every language. In the grammar of every language, some properties are universal whereas others are language specific. OT also follows the idea of universal principles where it states that every language has an independent grammatical system which governs the operation of the language through some schematic rules.

It is on the basis of this fact that Prince and Smolensky (2004) advanced that all languages have specific set of hierarchical constraints that govern the structure of language and the acceptable grammatical structure is determined by least violations of the constraints. Unlike the previous phonological theories, OT proposes a clear mapping between underlying and surface structure. OT prepares a surface structure (McCarthy, 2002). Markedness and faithfulness constraints in OT explain the formal order of RP English pronunciation and the deviations demonstrated by the broadcasters in their speech. The Markedness constraints handle all forms of deviations and rearrangement whereas the Faithfulness constraints preserve input-output identity.

There are three mechanisms of OT: Generator, Constraints and Evaluator. The generator known as GEN generates inputs that can serve as potential candidates. The CON kwon as constraints identify relevant various phonological rules and functions that can be used to assess competing candidates The EVAL known as evaluator selects the optimal candidate base on zero or least violations of the constraints. In OT, the constraints are conflicting, to obey one constraint infers the violation of another but the optimal output is the one which suffers lowest violation. Therefore, the present study has identified relevant Markedness and Faithfulness constraints to account for the articulation of selected RP consonants in the English spoken by Hausa broadcasters.

Markedness Constraints

Table 1. Markedness Constraints

CONSTRAINTS	DESCRIPTIONS
*IDENT CONT	No feature continuant in the output (Sani, 2005).
*IDENT (V) LONG	Long vowel is not allowed in the speech of Hausa broadcasters (Newman, 2000).
*IDENT BACK	No feature vowel (back) in the output (Kager, 1999).
*COMPLEX ONSET	Onset is simple (Kager, 1999).
VOICED-CODA:	No coda voiced (Barlow, 2001).

Faithfulness Constraints

Table 2 Faithfulness Constraints

CONSTRAINTS	DESCRIPTIONS
IDENT CONT:	Feature continuant $/\phi/$ is required in the output (Sani, 2005).
REDUCE (V)	Vowel reduction must be required. (Kager, 1999)
IDENT-IO (F)	Output correspondents of an input [yF] segment are also [yF]. (Barlow, 2001).
DEP-IO:	Every segments in the output should have input correspondents (No insertion). (McCarthy & Prince, 1993).

Methodology

Research Design

In order to meet the purpose of the study, a descriptive survey research design was adopted. The design is a method of studying and describing a social phenomenon. This involves detailed description of a phenomenon in words and classify features to explain what is observed (Creswell, 2012; Noor, 2012). The choice of descriptive research model is premised upon its basic tenets of describing, explicating and interpreting contemporary life events, practise or phenomenon at a particular time and place.

Sampling Techniques

The research adopted purposive multistage sampling in which four out of six electronic media stations in Bauchi State were purposively selected. They are Radio Nigeria (Globe F.M), Bauchi Radio Corporation (BRC), Nigerian Television Authority Bauchi (NTA) and Bauchi State Television Authority (BATV). Only Albarka Radio and Ray Power Stations which are privately owned radio stations were not included in the research. From the four broadcasting stations selected, a total of 22 participants were randomly selected and the selection was done by the researcher with the aid of Managers/Directors News of the selected stations.

Data Collection and Analysis

The data were drawn by means of audio recording of the newscasters reading the texts in and news broadcast. The production test was conducted by the researcher with the aid of a research assistant. It took six months to record the data. This is because of the nature of their schedule of duty and to be able to capture varieties of news presentations. The bulletins recorded included News Line 5: 00 p.m. local time and World News 11. 00 a.m. local time. Others were News 7.00 p.m. and 7.30 p.m.

Recordings of news segments directly from broadcasting stations is also a useful and appropriate source of data used by the researcher because it provides standard sounds and speech production devoid of any sorts of noises and no part of the broadcast speech would be exempted (Hannisdal, 2006). Below is the schedule of news recording process.

Stations	News Broadcast	Number of Newscasters	Number of Bulletin Recorded	Duration
BRC	News Line	6	18	9 hours
GLOBE F.M.	World News	6	18	9 hours
BATV	News	6	18	9 hours
NTA	News	4	12	6 hours
Total	4	22	66	33 hours

Table 3 News Bulletin Recording Process

There are 22 newscasters from 4 different media stations as earlier noted. A total of 33 hours of news presentations were recorded. Out of the 33 hours, 9 hours of news presentations were recorded from 18 news bulletins presented by 6 newscasters in each of the 3 stations. Except at the NTA where we had 6 hours of news recordings from 12 bulletins presented by 4 newscasters. It should be noted that each newscaster was recorded for 1 hour 30 minutes from 3 different news presentations of 30 minutes each. These had resulted in arriving at 9 hours from 6 newscasters in each of the 3 stations and 6 hours from 4 newscasters at NTA

The data obtained from recordings were listened to and transcribed. The researcher also cleaned the data and selected the phonological feature that were relevant to the study. The researcher was specifically concerned with the specific words that contain specific consonants, Moreover, the data were coded and entered into OT tableau, an optimality software which was programmed on the basis of Markedness and Faithfulness constraints, analyzed and presented in tableau. Besides, test and retest method was used where analysis were carried out by two experts and results were consistent.

Findings

In Optimality Theory, the phonological process is conceptualized in terms of a set of universal constraints. The study adopts a Correspondence Theory (McCarthy & Prince, 1995) where the input and the output are in correspondence relation with each other. The assumption is that the underlying element (input) is the RP English word which corresponds with the surface element (output) and it should have the same feature specification as their corresponding input (RP English) forms.

Input $/p i n / \longrightarrow$ Output $[\phi i n]$ IDENT ^{CONT}>> IDENT-IO (F). Table 4 OT Evaluation of spirantinzation of word initial /p/ in the RP English word pin

Input /p I n/	IDENT CONT	IDENT-IO (F)	
a. [p 1 n]	*!		
b. ☞[ф ɪ n]		*	

The constraints ranking in the tableau are IDENT ^{CONT}>> IDENT-IO (F). Candidate (a) appears as RP output and it prefers obstruent /p/ in the output. This contradicts a higher ranked constraint IDENT ^{CONT} which requires the realization of a continuant / ϕ / in the output and it obeys a lower ranked constraint IDENT-IO (F). Hausa broadcasters output agrees with the higher ranked constraint IDENT ^{CONT} and disobey a lower ranked constraint IDENT-IO (F) which states that output correspondents of an input [γ F] segment are also [γ F].

Input / h ə υ p/ — → Output [h ο φ]

Table 5 OT Evaluation of spirantinzation of word final sound /p/ in the RP English word hope

Input / h ə ʊ p /	IDENT CONT	REDUCE	IDENT-IO (F)	
a. ☞[h o φ]			*	
b. [h ə ʊ p]	* <u> </u>	*!	*	
c. [h ə ʊ f]		*!	*	

The tableau shows that candidate (a) output captures IDENT^{CONT} and REDUCE (V) which are ranked higher than IDENT-IO (F). It appears that the candidate does not agree with IDENT-IO (F). RP production on the other hand, violates two higher ranked constraints IDENT^{CONT} which requires the realization of a feature continuant in the output and REDUCE (V) which requires the reduction of diphthong in the output. It is, therefore, disqualified. Candidate (c) is also a loser because of violation of a higher ranked constraint REDUCE (V) and lower ranked constraint IDENT-IO (F) which states that every feature segment in the output must have a replica of same value in the input.

Input /
$$\theta$$
 r i: / \longrightarrow Output [t I r I]

*IDENTCONT >>*COMPLEXONSET >> *IDENT (V) LONG>> DEP-IO

Table 6 OT Evaluation of stopping of the word initial sound $/\theta$ / in the RP English word three

Input/θri:/	*IDENT ^{CONT}	*COMPLEX ^{ONSET}	*IDENT(V) ^{long}	DEP –IO	
a. [θ r i:]	*!	*	*		
b. [s r i:]	*!	*!	*	*	
c. ☞[tırı]				*	

The constraints ranking for the realization of the word three is *IDENT^{CONT} *COMPLEX^{ONSET} >> *IDENT (V) ^{LONG} DEP–IO. Candidate (a) is the RP output and it is deficient because of fatal violations of *IDENT ^{CONT} which forbids the occurrence of voiceless dental fricative /θ/ in Hausa (Sani, 2005), *COMPLEX^{ONSET} which prohibits the appearance of consonant cluster at the onset (Kager, 1999) and *IDENT (V) ^{LONG} which is also prohibited in Hausa English. Similarly, Candidate (b) also fails to adhere to *COMPLEX^{ONSET}, *IDENT^{CONT} and *IDENT (V) ^{LONG} vowel and it is therefore labelled as a loser. Candidate (c) is the output of the majority of the Hausa broadcasters and it is the optimal output. It violates only one lower ranked constraint DEP-IO which prohibits insertion of a segment in the output.

Input 'w ι θ/ → Output [w ι t]

*IDENT CONT >> VOICED-CODA

Table 7 OT Evaluation of stopping of the word final sound $/\theta$ / in the RP English word with

Input / w ι θ/	*IDENT CONT	* VOICED-CODA	
a. ☞ [wɪt]			
b. [w ɪ d]		*i	
c. [w 1 s]	*!		
d. [w 1 θ]	*!		

Hausa English output in item (a) is the optimal output. It is faithful to the two constraints. The constraints are ranked as *IDENT CONT >> VOICED-CODA. Candidate (b) disobeys *VOICED-CODA which disallows the occurrence of a voiced consonant in coda. Candidate (c) violates *IDENT^{CONT} a higher ranked constraint which prohibits the occurrence of voiceless interdental plosive $/\theta/$ in Hausa and candidate (d) is RP also fails to be faithful to a higher ranked constraint *IDENT ^{CONT}. Therefore, candidate (b), (c) and (d) are the losers.

Input / ð ə / — → Output [d e]

*IDENT CONT >> IDENT BACK

Table 8 OT Evaluation of stopping of the word initial sound $/\delta/$ in the RP English word the

Input / ð ə /	*IDENT CONT	*IDENT BACK	
a. ð ə	* <u> </u>	*!	
b. ☞ d e			
c. z e	*!		

The constraints ranking in tableau is presented as *IDENT ^{CONT} >> IDENT ^{BACK}. Candidate (a) is the RP output and it captures a continuant and a back vowel which seriously violate the constraints in the tableau. *IDENT ^{CONT} forbids the occurrence of voiced interdental fricative /ð/ in Hausa (Sani, 2005) and *IDENT ^{BACK} prohibits the realization of a schwa vowel in Hausa (Newman, 2000). Candidate (b) is considered as an output Hausa broadcasters and it obeys all the constraints, Candidate (c) disobeys *IDENT^{CONT} and satisfies *IDENT ^{BACK} which prevents it from emerging as the optimal output.

Input /b r i: ð ı ŋ/ → Output [b ı r ı d ı ŋ]

*IDENT^{CONT} >>*COMPLEX^{ONS} >>*IDENT (V) ^{LONG>>} DEP-IO

Table 9 OT Evaluation of stopping of the word medial sound /ð/ in the RP English word breathing

Input /b r i;ð 1 ŋ/	*IDENT ^{CONT}	*COMPLEX ^{ONS}	*IDENT(V) ^{long}	DEP-IO
a. [b r i: ð ɪ ŋ]	*!	*!	*!	
b.☞ [bırıdıŋ]				*

The two candidates (a) and (b) appear with different constraints ranking. The RP output prefers feature continuant, consonants cluster and long vowel. These made the candidate to be faithful to Faithfulness constraint, the output of the Hausa broadcasters on the other hand considers the Markedness constraints and disregard the Faithfulness constraint.

Input / k l ə ∪ ʒ ə/ → Output [k ∪ l o dʒ o]

IDENT^{CONT} >> IDENT^{BACK} >> DEP-IO

Table 10 OT Evaluation of affrication of the word medial sound /3/ in the RP English word closure

Input / k l ə ʊ ʒə/	*IDENT ^{CONT}	*IDENT ^{BACK}	DEP-IO	
a. 🖙 [k ʊ l o dʒ o]			*	
b. [k l ə ʊ ʒ ə]	*!	*		
c.[kʊlo∫o]	*!		*	

Hausa English output obeys the higher ranked constraints, and violate DEP –IO, a constraint that hinders insertion in the output. On the contrary, RP output disagrees with *IDENT ^{CONT}, a constraint that forbids the realization of a continuant /3/ in Hausa (Sani, 2005), and *IDENT^{BACK} that disallows schwa vowel to appear in Hausa (Newman, 2000). Candidate (c) also incurs a serious violation of *IDENT ^{CONT} and DEP -IO.

Input /g æ r ɑ: ʒ/ — Output [g a r e dʒ]

*IDENT CONT >> *IDENT LOW >> *IDENT (V) LONG

Table 11 OT Evaluation of affrication of the word initial sound /3/ in the RP English word genre

Input /g æ r a: ʒ/	*IDENT CONT	*IDENT LOW	*IDENT (V) ^{long}	
a. g æ r ɑ: ʒ	*!	*!	*	
b. 🖙 g a r e dʒ				

The candidate in tem (a) prefers the use of feature continuant, low and long vowel. These linguistic features contradicts the high rank constraints. *IDENT ^{CONT} bars the appearance of a continuant /ʒ/ in Hausa (Sani, 2005) and *IDENT^{LOW} disallows the realization of low vowel /æ/ in Hausa (Newman, 2000). It also violates *IDENT (V) ^{LONG} which is not allowed in the speech of Hausa broadcasters. The speech of Hausa broadcasters agree with all the constraints.

Discussions

The findings have shown that /p/ is usually substituted with / ϕ /, a non-English phoneme imported from Hausa into Hausa English by the respondents. Moreover, / θ / is substituted with /t/, /d/ or /s/. Similarly, / δ / is realized as /d/ or /z/. /ʒ/ is produced as /dʒ/ or /ʃ/. It should be noted that, previous studies on Nigerian speakers of English have shown that the Hausa speakers of English often substitute voiceless bilabial plosive /p/ with labiodental fricative voiceless /f/ in their speeches (Ekundayo et al., 2012; Jibril, 1982; Newman, 2000; Patrick et al. 2013). However, the present study argues that the respondents do not substitute bilabial plosive /p/ with labiodental fricative /f/ rather bilabial fricative / ϕ / which is orthographically represented as 'F'. The justification for the difference in the finding with previous researches is because of the dynamic nature of human language where language speakers are likely to change in their pronunciation over a period of time (Hannisdal, 2006). This indicates a kind of paradigm shift from labiodental fricative /f/ to bilabial fricative // ϕ / which shows some level of improvement in their articulation. Certainly, the finding provides a valuable insight into the Nigerian phonology of English.

Generally, the trend of consonant substitutions (stopping) in spoken English is not peculiar to Hausa speakers. Studies have shown that most of the non-native speakers of English have difficulties in articulating interdental fricative sounds $[\theta]$ and $[\delta]$, instead they use alveolar plosives [t] and [d]. These features have stood out as major characteristics of new Englishes around the world (Kachru, 1982). These features are also pronounced in Caribbean English where interdental fricative sounds are usually substituted with [t] and [d] (Olajide & Olaniyi, 2013). Similarly, it is also reported that the above features manifest in Asian English (Deterding & Poedjosoedarmo, 1998). In West Africa, the situation is the same while alveolar fricatives [s] and [z] are used in East Africa English (Spencer, 1971). Though in Kenya, some speakers of English also use alveolar plosive [d] in a word like three.

The findings also correlate significantly with studies conducted in Nigeria. Scholars have persuasively identified elements of restructuring of phonemes in the English spoken in Nigeria by importing some phonological feature of native languages (Bamgbose (1971, 1998; Banjo, 1979, 1996). This has resulted in phonological variations in English spoken in Nigeria (Brann, 2006; Jibril, 1979). Similarly, the finding is consistent with Opanachi (2013) who postulates that interdental fricatives sounds [θ] and [δ] are problematic to most of the Igala speakers of English in Nigeria, instead they use alveolar plosives [t] and [d] as alternatives.

The results also agree with the findings of Emeka-Nwobia and Onu (2013) who reports that interdental fricative sounds $[\theta]$ and $[\delta]$ are difficult to articulate by Igbo broadcasters of English in Ebonyi Broadcasting Corporation in Nigeria. The broadcasters use [t] and [d] as Hausa broadcaster do in their news renditions. These similarities of the findings are as a result of common linguistic features that are found in African languages. Certain English phoneme like dental sounds are not present in most of the African languages.

The findings are consistent with Adedimeji (2007) who reports that Nigerian speakers of English are identified in their articulations of certain segmental phonemes. //is used for /ʒ/ or /tʃ/ and the situation is similar to what is obtained in the speech of Hausa broadcasters because they are part of the Nigerian speakers of English. Similarly, the study also shows support to Emeka-Nwobia and Onu (2013) who claims that the Igbo broadcasters of English in Ebonyi Broadcasting Corporation South-East Nigeria often use /// in place of /ʒ/ as Hausa speakers do. Though the Hausa broadcasters use /// and /dʒ/ as substitute for /ʒ/. The similarities in the results of the two studies are associated with the respondents of the studies. The respondents of the studies are similar in terms of nationality as Nigerians and they are similar in terms of professionalism as broadcasters. The findings also justified the application of OT in the English spoken in Nigeria. Usman (2020) discovered the realization of yod coalescence in the English spoken by Hausa broadcasters in Nigeria through the use of Optimality Theory. Besides, Usman and Kagu (2021) also investigated the patterns of English consonant clusters articulation of Nigerian broadcasters in the onset and coda positions within the Optimality Theory framework. The participants ranked Markedness constraints higher than Faithfulness constraints. The constraints ranking used by the participants is similar to the ranking used in the present study. The similarities are associated with the similarities in the use of Optimality Theory framework.

Conclusion

The researcher has carried out investigations on consonant articulation of the subjects and it is concluded that there is the use of spirantinzation frication in their articulations where /p/ is realized as $[\Phi]$. This process has produced semantic alteration and accent marker. For instance, the word pin /pɪn/ is realized as fin $[\Phi I n]$, this process shows alteration of meaning whereas the word police /p ə l i: s/ is realized $[\Phi o I I s]$ that indicates accent marker which shows the identity of the speaker (cf. p. 74). Therefore, these changes violate the rule of RP English and mark the speech of Hausa broadcasters of English different from RP. Similarly, the interdental / θ / and / δ / are also substituted with /t/, /s/, /d/ and /z/. / θ / is realized as [t] or [s]. This process has produced semantic alteration and accent marker. Examples, thank / θ æŋk/ becomes tank [t a n k], think / θ I ŋ k/ is realized as sink [s I n k], these are semantic alteration. On the other hand, when Thursday / θ 3: z d e I/ is realized as [de], it indicates accent marker whereas when those / δ ə υ z/ is altered to [d o s], it shows semantic alteration. Moreover, / $_3$ / becomes [dʒ] which shows semantic alteration and accent marker.

Similarly, when leisure /l e 3 ə/ is realized as ledger [l e d3 o], it indicates semantic alteration while pleasure /p l e 3 ə/ is realized as filejo [[ϕ 1 l e d3 o] it shows accent marker (cf. p. 126). In view of the above we conclude that the majority of the respondents do not use RP. They handle consonants phonemes in an unusual way like allophones while they are phonemes.

Having realized the importance of training and exposure to RP phonemes in achieving appropriate pronunciation and the position occupied by media as a model of standard pronunciation for ESL learners in Nigeria, the study recommends a number of drills and exercises that would improve the pronunciation patterns of ESL learners. The exercises should be based on the appropriate articulation of English sounds that would expose the learners to the phonetic symbols in an organized form. This would pave the way in improving their proficiency level.

The drills and exercises should begin with the description of articulation of each phoneme (consonant and vowels). It should be accompanied by illustrative examples of words that contain the sound being taught and each word should be placed in sentences for better understanding. Emphasis should be made on phonemes that do not exist in Nigerian languages, particularly Hausa. Comparisons and contrasts have to be made on pairs of sounds which share similar articulatory features.

Recommendations

The present study only examines four set of consonants that are perceived to be difficult to Hausa speakers of English. The labiodental fricatives [f] and [v] are also unregistered segment in Hausa, however, the study has not been able to identify the problems associated with the articulation of [f] and [v] in the speech of the respondents. Further study is suggested on articulation of these two phonemes in the speech of Hausa broadcasters. There are criticisms that OT lacks adequate constraints necessary to handle the segmental features of phonology, particularly vowels (Idsardi, 2000). Further research is recommended on the vowels articulation of Hausa speakers of English within the Optimality Theory framework.

Limitations

The research is on the investigation of English consonant articulations of Hausa Speakers of English, particularly broadcasters. It is limited to only set of consonants that are perceived to be difficult to Hausa speakers of English.

References

- Adedimeji, M. A. (2007, September 8-21). *The linguistic features of Nigerian English and their implications for 21st Century English pedagogy* [Paper Presentation]. 24th Annual Conference of the Nigeria English Studies Association, University of Uyo, Akwa Ibom State, Nigeria.
- Akpan, S. C., Anorue, L. I., Obayi, P. M., & Etu, M. (2012). The Influence of mother tongue in the broadcasting industry in Nigeria. *An International Journal of Language, Literature and Gender Studies Bahir Dar, Ethiopia,* 1(3), 48-68. https://cutt.ly/eM2XtQ4
- Aladeyomi, S. A. (2013). Prevalence of standard British model of oral English in Nigeria: A case study of Nigerian television newscasters. *Online Journal of Education Research*, 2(3), 50-56.
- Aladeyomi, S. A., & Adetunde, A. K. (2007). Errors of segmental phonemes in the spoken English of Nigerian television casters. *The Social Sciences Medwell Journals, 2*(3), 302-306. <u>https://cutt.ly/3M2Z6XC</u>
- Awang, Z. (2012). *Research methodology and data analysis* (2nd ed.). University Technology MARA press.
- Bamgbose, A. (1971). The English language in Nigeria. In J. Spencer (Eds), *The English language in west Africa* (pp. 35 48). Longman Group Ltd.
- Bamgbose, A. (1998). Torn between the norms: Innovations in World Englishes. *World Englishes*, *17*(1), 1-14. Blacknell Publishers. <u>https://doi.org/10.1111/1467-971X.00078</u>
- Banjo, A. (1979). Toward a definition of standard Nigerian spoken English. In *Proceedings of Congress of Linguistic Society of Africa Occidentials* (pp. 24-28). Abidjan. University d' Abidjan.
- Banjo, A. C. (1996). Making a virtue of necessity: An overview of the English language in Nigeria. Ibadan University Press.
- Barlow, J. A. (2001). Optimality theory and the assessment and treatment of phonological disorders, *Journal of American Speech-Language-Hearing Association, 32*(4), 242-256. <u>https://doi.org/10.1044/0161-1461(2001/022)</u>
- Brann, C. M. B. (2006). The de-lectable field of socio-linguistic variety differentiation. In C. M. B. Brann (Ed.), *Language in education & society: An anthology of selected writings of C.M.B. Brann (1975-2005)* (pp. 63-66). Fab Education Books
- Chomsky, N., & Halle, M. (1968). The sounds patterns of English. Harper and Row.
- Creswell, J. W. (2012). *Educational research: Planning. conducting and evaluating qualitative and quantitative research* (4th ed). Pearson Education.

Crystal, D. (1997). English as a global language. Cambridge University Press.

Deterding, D. H., & Poedjosoedarmo, G. R. (1998). The sounds of English. Singapore Pearson Education South Asia.

- Ekundayo, S. B., Longe, V. U., & Teilanyo, D. I. (2012). The development of English phonological rules and dynamics as intraference: Examples from educated Nigerian English usage. *Journal of the Nigeria English Studies Association*, *15*(1), 74-95.
- Emeka-Nwobia, N. U., & Onu, M. (2013). Errors of Nigerian radio newscasters: A phonological analysis. *Global Journal of Applied Management and Social Sciences, 4,* 164 171.
- Hannisdal, B. R. (2006). Variability and change in Received Pronunciation: A study of six phonological variables in the speech of television newsreaders [Unpublished doctoral dissertation]. University of Bergen.
- Idsardi, W. J. (2000). Clarifying opacity. *The Linguistic Review*, 17(2-4), 337-350. <u>https://doi.org/10.1515/tlir.2000.17.2-4.337</u>
- Jibril, M. M. (1979). Regional variation in Nigerians spoken English. In E. Ubahakwe (Ed.). *Varieties and functions of English in Nigeria* (pp. 43-53). A. U. P
- Jibril, M. M. (1982). *Phonological variation in Nigerian spoken English* [Unpublished doctoral dissertation]. University of Lancaster.
- Jibril, M. M. (1986). Phonological variation in Nigerian English. In E. Ubahakwe, (Eds.). *Varieties and functions of English in Nigeria* (pp. 43-53). Ibadan African University Press.
- Jowitt, D. (1991). Nigerian English usage: An introduction. Longman Nigeria.
- Kachru, B. (1982). Models for non-native Englishes. In B. B. Kachru (Eds). *The other tongue: English across cultures* (pp. 31-57). Pergamon Press.
- Kachru, B. B. (1984). World Englishes and the teaching of English to non-native speakers: Contexts, attitudes, and concerns. *TESOL Newsletter*, 18(5), 25-26.
- Kager, R. (1999). Optimality theory. Cambridge University Press. https://doi.org/10.1017/CB09780511812408r
- Mbah, E. E., & Waya, D. T. (2014). A constraint based study of the Tiv learners of English phonotactics. *Innovare Journal* of Social Sciences, 2(2), 10-16.
- McCarthy, J. (2002). A thematic guide to optimality theory. Cambridge. http://doi.org/10.1017/S0952675703004494
- McCarthy, J., & Prince, A. (1993). *Prosodic morphology: Constraint interaction and satisfaction*. University of Massachusetts and Rutgers University. <u>https://doi.org/10.7282/T3B856GM</u>
- McCarthy, J., & Prince, A. (1995). Faithfulness and reduplicative identity. In J. N. Beckman, L. W. Dickey & S. Urbanczyk (Eds.), *Paper in optimality theory* (pp. 249-384). The University of Massachusets.
- Newman, P. (2000). *The Hausa language: An encyclopedic reference grammar*. Yale University Press. https://doi.org/10.1017/S0041977X0162024X
- Noor, N. M. (2012). Writing research proposal and thesis guidelines. And examples. University Technology MARA Press.
- Oladipupo, O. R. (2015). Social differentiation of inter-word yod coalescence in spoken Nigerian English. *Covenant Journal of Language Studies, 3*(1), 18 -34.
- Olajide, S. B., & Olaniyi, O. K. (2013). Educated Nigerian English phonology as core of a regional "RP". *International Journal of Humanities and Social Science*, *3*(14), 277 285.
- Omachonu, G. S. (2008). Comparative optimality theory analysis of primary stress assignment in standard British and Nigerian English. *Journal of Language & Translation*, 9(1), 92-112. <u>https://doi.org/10.22425/jul.2008.9.1.91</u>
- Opanachi, D. (2013). Phonological problems of Igala learners of the English Language as L2 *Journal of Igbo Language & Linguistics, 6,* 67-72.
- Patrick, J. M., Sui, M., Didan, B., & Gyang, T. S. (2013). Mother-tongue interference on English language pronunciation of senior primary school pupils in Nigeria: Implications for pedagogy. *Language in India*, *13* (8), 281 298.
- Platt, J., Weber, H., & Ho, M. L. (1984). The new Englishes. Routledge and Kegan Paul.
- Prince, A., & Smolensky, P. (1993). Optimality theory: Constraint interaction in generative grammar. Blackwell.
- Prince, A., & Smolensky, P. (2004). *Optimality theory: Constraint interaction in generative grammar*. Blackwell. https://doi.org/10.1002/9780470759400
- Sani, M. A. Z. (2005). An introductory phonology of Hausa. Triumph Publishing and Company LTD.

Schmied, J. (1991). English in Africa: An introduction. Longman.

Simo Bobda, A. (1994). Aspects of Cameroon English phonology. European Academic Publishers, Bern.

- Simo Bobda, A. (2000). "Comparing some phonological features across African accents English. *English Studies, 81*(3), 249-266. <u>https://doi.org/10.1076/0013-838X(200005)81:3;1-M;FT249</u>
- Simo Bobda, A. (2001). English in the sub-Saharan Linguistic landscape: Beginning of Millennium observations. *Aglia*, 119(4), 579-595. <u>https://doi.org/10.1515/ANGL.2001.579</u>
- Simo Bobda, A. (2003). The formation of regional and national features of African English pronunciation. *English World-Wide, 24*(1), 17-42. <u>https://doi.org/10.1075/eww.24.1.03sim</u>
- Smith, L. E. (1992). Spread of English and issues of intelligibility. In B. B. Kachru (Eds.), *The other tongue*. University of Illinois Press.
- Soneye, T. (2007). Phonological sensitivity of selected NTA newscasters to sound-spelling discrepancy in English and its implications for oral English teaching in Nigeria. *Marang: Journal of Language and Literature*, 17(1), 29-42 http://doi.org/10.4314/marang.v17i1.39308
- Soneye, T., & Oladunjoye, F. J. (2015). Syllable phonotactics in educated Nigerian spoken English. *Konin Language Studies,* 3(3), 255-269.
- Spencer, J. (1971). The English language in West Africa. Longman.
- Sunday, A. B., & Oyatokun, O. O. (2016). Optimality theoretical analysis of word-stress in educated Nigerian English. *Journal of Theoretical Linguistics*, *13*(1), 87 106. <u>https://cutt.ly/MM2Zh0W</u>
- Sunday, A. B. (2010). Phrasal stress in Nigerian English. Papers in English and Linguistics, 11, 234–253.
- Udofot, I. M. (2003). Varieties of spoken Nigerian English. In S. Awonusi & E. A. Babalola, (Eds.), *The domestication of English in Nigeria* (pp. 93–113). University of Lagos Press.
- Usman, A. (2020) Optimality account of yod coalescence in the English spoken by Hausa broadcasters in Nigeria. In M. A.Mu'azu, S. U. Bulakarima, M. Munkaila, A Shetiima & M. Fannami (Eds.), *Language, Literature, History and Pedagogy* (pp. 224 246). Scholars Press.
- Usman, A., & Kagu, A. A. (2021). An optimality theory-based approach into the phonotactic constraints of English spoken by broadcasters in Nigeria. *European Journal of English Language Studies*, 1(1), 37-43. <u>https://doi.org/10.12973/ejels.11.37</u>