

REALISATION OF LABIODENTAL FRICATIVES BY HAUSA LEARNERS OF ENGLISH AS A SECOND LANGUAGE: A SPEECH LEARNING MODEL PERSPECTIVE

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Abstract

This study investigates the realisation of English labiodental fricatives /f/ and /v/ by Hausa learners of English as a second language in selected senior secondary schools. The study adopts the Speech Learning Model (SLM), as proposed by James Emil Flege and further developed by Munro and Derwing (1995), to explain second-language speech acquisition and foreign-accent phenomena. The objectives of the study are to identify the pronunciation patterns of Hausa-speaking learners in producing English labiodental fricatives, determine the factors responsible for the observed pronunciation deviations, and examine the implications of these deviations for intelligibility and second-language learning. The study uses SS III students as the data source because they have undergone several years of formal English language instruction. Data were collected through oral reading tasks, word lists, and minimal-pair pronunciation exercises administered to 50 Hausa-speaking students selected from senior secondary schools. The findings reveal that Hausa-speaking learners experience difficulty in producing both /f/ and /v/. Many learners substitute /f/ with /p/ and /v/ with /b/. The study attributes these pronunciation difficulties to mother tongue interference, phonological differences between Hausa and English, and inadequate exposure to native-like English pronunciation. The paper concludes that pronunciation instruction should receive greater attention in English language

teaching in Nigerian secondary schools. Teachers should incorporate phonetic drills, listening exercises, and contrastive pronunciation activities to improve learners' spoken English proficiency.

Keywords: Hausa learners, English as a second language, labiodental fricatives, pronunciation, Speech Learning Model, phonology

Introduction

Language serves as one of the most important means of communication in human society. In multilingual societies such as Nigeria, English functions as the official language and medium of instruction in schools, while indigenous languages continue to dominate informal communication. Among the major Nigerian languages, Hausa occupies a significant position as a widely spoken language in Northern Nigeria and parts of West Africa. As a result, many Hausa speakers learn English as a second language.

The acquisition of English pronunciation by Hausa learners is often influenced by the phonological structure of Hausa. Such influence manifests in the production of certain English sounds that do not exist or function differently in Hausa phonology. One area where this influence is observable is in the pronunciation of English labiodental fricatives, particularly /f/ and /v/. These sounds pose varying degrees of difficulty for Hausa learners due to differences between the sound systems of Hausa and English.

Labiodental fricatives are consonant sounds produced by placing the lower lip against the upper teeth while allowing air to pass through a narrow opening, thereby creating friction. In English, the voiceless labiodental fricative /f/ occurs in words such as fan, fine, and leaf, while the voiced labiodental fricative /v/ occurs in words such as van, very, and leave. Hausa learners of English often substitute or mispronounce these sounds due to mother tongue interference.

The Speech Learning Model (SLM), developed by Flege and employed by Munro and Derwing (1995), provides a useful theoretical explanation of how second-language learners acquire and produce speech sounds. The model argues that second-language learners

perceive and produce target-language sounds in relation to sounds already present in their first-language phonetic inventory. Consequently, sounds that are like native language sounds may be difficult to distinguish and produce accurately.

This study, therefore, examines the realisation of English labiodental fricatives by Hausa learners of English as a second language using SS III students as participants. The study seeks to contribute to research on second-language phonology, pronunciation teaching, and English-language pedagogy in Nigeria.

Statement of the Problem

Pronunciation remains one of the major challenges facing learners of English as a second language in Nigeria. Despite years of exposure to English in formal education, many Hausa-speaking learners still have difficulty accurately articulating certain English consonant sounds. Among such sounds are the labiodental fricatives /f/ and /v/.

In many instances, Hausa learners substitute the voiceless labiodental fricative /f/ with the bilabial plosive /p/ and the voiced labiodental fricative /v/ with the voiced bilabial plosive /b/. For example, words such as fan may be pronounced as pan, while very may be realised as bery. Such substitutions affect intelligibility and may hinder effective communication.

The persistence of these pronunciation deviations raises questions about the extent to which first language interference influences English pronunciation among Hausa learners. It also raises concerns regarding the effectiveness of pronunciation teaching in Nigerian secondary schools.

Although several studies have examined pronunciation errors among Nigerian learners of English, limited attention has been paid specifically to the realisation of labiodental fricatives by Hausa-speaking

SS III students from the perspective of the Speech Learning Model. This gap necessitates the present study.

Aim and Objectives of the Study

The main aim of this study is to investigate the realisation of English labiodental fricatives by Hausa learners of English as a second language.

The specific objectives are to:

1. identify the pronunciation patterns of English labiodental fricatives /f/ and /v/ among Hausa-speaking SS III students;
2. examine the influence of Hausa phonology on the pronunciation of English labiodental fricatives;
3. analyse the pronunciation deviations using the Speech Learning Model;
4. determine the implications of the observed pronunciation patterns for intelligibility and English language learning.

Significance of the Study

This study is significant in several ways. First, it contributes to the growing body of research on second-language phonology and pronunciation in Nigeria. Second, it provides insight into the specific pronunciation challenges encountered by Hausa learners of English.

The findings of the study will be useful to English-language teachers, curriculum developers, linguists, and researchers interested in second-language acquisition and phonetics. The study will also help teachers design effective pronunciation-teaching strategies to improve learners' spoken English.

Furthermore, the study contributes to theoretical discussions on the applicability of the Speech Learning Model to explaining pronunciation difficulties among second-language learners.

Scope of the Study

The study focuses on the realisation of English labiodental fricatives /f/ and /v/ by Hausa-speaking learners of English as a second

language. Participants are limited to SS III students from senior secondary schools. The study concentrates specifically on pronunciation patterns and does not examine other aspects of English phonology, such as stress, intonation, or vowel production.

Literature Review

This section provides a review of concepts and related literature. English as a Second Language in Nigeria English occupies an important position in Nigeria as the official language and medium of instruction in schools. According to Bamgbose, Banjo, and Thomas (1995), English serves as a unifying language among the country's numerous ethnic groups. However, the use of English in Nigeria has led to the emergence of different varieties influenced by indigenous languages.

Jowitt argues that Nigerian English reflects the sociolinguistic realities of Nigeria and exhibits phonological, lexical, and syntactic features shaped by local languages (Jowitt 47). Hausa learners of English, therefore, bring the phonological characteristics of Hausa into their English pronunciation.

Hausa Phonology and English Pronunciation

Hausa belongs to the Chadic branch of the Afro-Asiatic language family. The language possesses a relatively rich consonant inventory, including implosives, ejectives, and fricatives. However, some English consonants are either absent or realised differently in Hausa phonology.

According to Newman, Hausa has limited use of the voiced labiodental fricative /v/, especially in native vocabulary, while the voiceless labiodental fricative /f/ is more common (Newman 392). Consequently, Hausa speakers may experience difficulty distinguishing between English /f/ and /v/ and may substitute them with familiar bilabial sounds.

Scholars such as Udofot and Sani observe that Nigerian learners frequently substitute unfamiliar English sounds with the nearest equivalents available in their native languages. This phenomenon explains why Hausa learners may pronounce fan as pan and very as bery.

Labiodental Fricatives

Labiodental fricatives are produced through the interaction of the lower lip and upper teeth. In English phonology, /f/ is voiceless while /v/ is voiced. Roach explains that the major distinction between the two sounds lies in the vibration of the vocal cords during articulation (Roach 43).

The voiceless labiodental fricative /f/ occurs in initial, medial, and final positions in English words. Similarly, /v/ can occur in all word positions, although final /v/ is less common.

For second language learners, mastery of these sounds requires both articulatory control and perceptual discrimination.

Pronunciation and Intelligibility

Pronunciation plays a central role in intelligibility. Derwing and Munro define intelligibility as the degree to which a listener understands a speaker's utterance (Derwing and Munro 385). Pronunciation deviations may therefore affect the effectiveness of communication.

Research in second-language phonology suggests that learners' pronunciation difficulties are often linked to first-language transfer. Ellis notes that learners tend to rely on familiar phonological patterns when producing unfamiliar second language sounds (Ellis 98).

The Speech Learning Model

The theoretical framework for this study is the Speech Learning Model (SLM), developed by James Emil Flege and employed by Munro and Derwing (1995) in studies of second-language speech acquisition and foreign accent.

The Speech Learning Model proposes that second-language learners establish phonetic categories for target-language sounds based on their relationships to sounds in the native language. According to Flege, learners are more likely to experience difficulty with sounds perceived as similar to native language sounds than with completely new sounds.

Munro and Derwing employed the model to explain how foreign accents arise from differences in speech production and perception among second language learners. The model emphasises that age, exposure, input quality, and native language influence pronunciation acquisition.

In the present study, Hausa learners may perceive English /f/ and /v/ as sufficiently similar to the Hausa bilabial sounds /p/ and /b/, leading to substitution errors during speech production. The Speech Learning Model is particularly relevant because it provides an explanatory framework for understanding how Hausa phonological structures influence English pronunciation.

Theoretical Framework

This study adopts the Speech Learning Model (SLM) as its theoretical framework. The model was proposed by Flege and later applied by Munro and Derwing (1995) in studies of second-language speech learning.

The central assumption of the model is that second-language speech sounds are learned through interaction between first-language phonetic categories and target-language input. The model argues that learners classify second-language sounds according to perceived similarities to native-language sounds.

Where learners perceive a second language sound as identical or very similar to a native language sound, they may fail to establish a

separate phonetic category for the target sound. As a result, pronunciation deviations occur.

The relevance of the model to this study lies in its explanation of how Hausa learners substitute English /f/ with /p/ and /v/ with /b/. Since Hausa phonology does not fully distinguish English labiodental fricatives as English does, learners may rely on familiar native-language articulatory patterns.

The Speech Learning Model therefore provides an appropriate framework for analysing pronunciation patterns among Hausa-speaking learners of English.

Methodology

The study adopts a descriptive survey design that uses both qualitative and quantitative approaches. The design is suitable because it enables the researcher to observe, describe, and analyse learners.

Population of the Study

The study population comprises Hausa-speaking SS III students in selected senior secondary schools.

Sample and Sampling Technique

A sample of fifty SS III students was selected through purposive sampling. The participants were chosen because they are native speakers of Hausa and have studied English for several years within the Nigerian educational system.

Instruments for Data Collection

The instruments used for data collection include:

1. word lists containing English words with /f/ and /v/;
2. minimal pair exercises such as fan/van, fine/vine, and safe/save;
3. oral reading list of words;
4. audio recording devices.

Procedure for Data Collection

Participants were asked to read the prepared word lists and passages aloud. Their pronunciations were recorded for phonetic analysis.

Method of Data Analysis

The recorded data were analysed using auditory phonetic analysis and simple percentage calculations. Pronunciation patterns were transcribed using the International Phonetic Alphabet (IPA).

Data Presentation and Analysis

The data presented below show the cumulative pronunciation patterns of Hausa-speaking SS III students in producing English words containing the labiodental fricatives /f/ and /v/. The analysis focuses on both correct and incorrect realisations of the target sounds.

Table 1: Respondents’ Cumulative Pronunciation of Words Containing Labiodental Fricatives

S/N	Word	RP	Incorrect Pronunciation	Correct Pronunciation
1.	orphan	/ˈɔːfən/	/ˈɔpən/	/ˈɔːfən/
2.	of	/ɒv/	/ɒp/	/ɒv/
3.	phase	/feɪz/	/pes/	/feɪz/
4.	very	/ˈvɛri/	/beri/	/ˈvɛri/
5.	photo	/ˈfəʊ.təʊ/	/ˈpoto/	/ˈfəʊ.təʊ/
6.	five	/faɪv/	/paib/	/faɪv/
7.	fat	/fæt/	/pat/	/fæt/
8.	van	/væn/	/ban/	/væn/
9.	physic	/ˈfɪzɪk/	/pɪzɪk/	/ˈfɪzɪk/
10.	verb	/vɜːb/	/bab/	/vɜːb/

Analysis of the Data

The analysis of the data reveals that Hausa-speaking learners of English experience considerable difficulty articulating the English

labiodental fricatives /f/ and /v/. The respondents frequently substituted the voiceless labiodental fricative /f/ with the voiceless bilabial plosive /p/, while the voiced labiodental fricative /v/ was commonly substituted with the voiced bilabial plosive /b/.

Words such as orphan, photo, fat, and physic were realised as opan, poto, pat, and pizik respectively. These substitutions indicate that the learners replaced the labiodental fricative /f/ with the bilabial plosive /p/. Similarly, words containing /v/ such as very, van, and verb were realised as beri, ban, and bab. This pattern demonstrates the substitution of /v/for/b/.

The pronunciation of the word five as paib further illustrates the simultaneous substitution of /f/for/p/ and /v/for/b/ within the same lexical item. Such pronunciation patterns clearly reflect the influence of Hausa phonology on the learners’ production of English sounds.

The percentage of mispronunciation was calculated using the formula: Number of mispronunciations by respondents × 100 ÷ Total number of respondents. For example: 60 × 100 ÷ 70 = 86% This calculation was used to determine the cumulative frequency and percentage of mispronunciation of labiodental fricatives among the respondents.

Table 2: Frequency and Percentage of Mispronunciation of Labiodental Fricatives /f/ and /v/ by Respondents

S/N	Words	Mispronunciation	No. of Respondents	%
1	orphan	/’əpən/	60	86%
2	of	/ɒp/	66	94%
3	phase	/pes/	60	86%
4	very	/beri/	63	90%
5	photo	/poto/	60	86%
6	five	/paib/	60	86%
7	fat	/pat/	63	90%
8	van	/ban/	60	86%
9	physic	/pizik/	60	86%
10	verb	/bab/	60	86%

The table above reveals that a high percentage of the respondents mispronounced English words containing labiodental fricatives. The word "recorded" recorded the highest percentage of mispronunciation with 94%, while very and fat recorded 90%. Other words, such as orphan, phase, photo, five, van, physic, and verb, recorded 86% each. These findings indicate that Hausa-speaking learners face serious challenges in accurately producing English labiodental fricatives. The substitutions of /f/ with /p/ and /v/ with /b/ demonstrate the influence of mother tongue interference and confirm the assumptions of the Speech Learning Model.

These pronunciation deviations may negatively affect intelligibility and effective communication in English. Consequently, the findings suggest the need for greater emphasis on pronunciation teaching and phonetic practice in English language instruction.

Discussion of Findings

The findings support the assumptions of the Speech Learning Model. Hausa learners appear to relate English labiodental fricatives to familiar Hausa bilabial sounds, resulting in substitution errors. The substitution of /f/ with /p/ and /v/ with /b/ indicates that learners encounter difficulty establishing separate phonetic categories for English labiodental fricatives. Consequently, they rely on native-language articulatory habits.

The findings also align with previous studies on first-language interference in second-language pronunciation.

Findings

The study reveals the following:

1. Many Hausa-speaking SS III students substitute the English voiceless labiodental fricative /f/ with /p/.

2. Many learners substitute the voiced labiodental fricative /v/ with /b/.
3. Mother tongue interference significantly influences the pronunciation patterns of learners.
4. The Speech Learning Model effectively explains the pronunciation deviations observed among the participants.
5. Pronunciation deviations affect intelligibility and spoken communication.

Conclusion

This study examined the realisation of English labiodental fricatives by Hausa learners of English as a second language using the Speech Learning Model as its theoretical framework.

The findings reveal that Hausa-speaking learners have trouble in producing both /f/ and /v/. Many learners substitute /f/ for /p/ and /v/ for /b/. The observed pronunciation deviations result primarily from first language interference and phonological differences between Hausa and English.

The study demonstrates the usefulness of the Speech Learning Model for explaining second-language pronunciation patterns among Hausa learners. The model shows that learners' perception and production of English sounds are influenced by their existing native-language categories.

The study concludes that effective pronunciation teaching is essential for improving spoken English among Nigerian learners.

Recommendations

Based on the findings, the study recommends that:

1. English teachers should devote greater attention to pronunciation instruction in secondary schools.
2. Phonetics and oral English should be taught using practical articulation exercises.

3. Teachers should expose learners to audio materials featuring standard English pronunciation.
4. Minimal pair drills should be used to help learners distinguish between /f/ and /v/.
5. Language laboratories and pronunciation software should be provided in schools.
6. Students should be encouraged to practise spoken English regularly.

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