

## **THE PRONUNCIATION OF NON-NATIVE PHONEMES BY EDUCATED HAUSA SPEAKERS OF ENGLISH**

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### **Abstract**

This study examines the pronunciation of non-native phonemes by educated Hausa speakers of English, with a focus on the dental fricatives /θ/ and /ð/, which are absent in the Hausa phonological system. These sounds are frequently replaced with phonemes such as /t/, /d/, /s/, or /z/. Data were collected from 40 participants, evenly divided into graduate and postgraduate groups, through a word-list reading task containing 20 target words. The results revealed that while a minority of participants accurately articulated the target phonemes, the majority relied on substitutions, with /t/ and /d/ being the most common. Postgraduate participants demonstrated slightly higher accuracy than graduates. These findings underline the pervasive influence of Hausa phonology on English pronunciation and highlights the need for focused pedagogical strategies to address these challenges and improve intelligibility in English spoken by Hausa speakers.

### **1.0 Introduction**

The study of Nigerian English phonology has increasingly focused on regional variations, such as Hausa, Igbo, and Yoruba. Scholars like Bamgbose (1995), Akinjobi (2004), Igboanusi (2006), Olaniyi (2011) and Utulu (2014) have analyzed these varieties to document and describe the forms of English usage in Nigeria. Bamgbose's proposal, cited in Akinjobi (2004: 558), emphasizes describing local standards of English usage rather than debating the existence of Nigerian English. Similarly, Awonusi (2004: 190) advocated for the recognition of localized English varieties as part of the global community of world Englishes, provided intelligibility is maintained.

Studies on Hausa English can be traced to the pioneering works of Nuttall (1961, 1965) and Schafer (1967). Nuttall's research focused on the influence of Hausa phonology on Hausa English, identifying challenges such as the lack of contrast between long and short vowels and the substitution of English phonemes with Hausa phonemes. More recent studies, such as those by Bamgbose (1971) and Sani (1989), have confirmed these findings and highlighted the structural differences between Hausa and English phonology.

This study narrows its focus to the pronunciation of the dental fricatives /θ/ (voiceless) and /ð/ (voiced), which are absent in Hausa phonology. These phonemes are often replaced by /t/ and /d/ because of interference from the native phonological system.

In addition, Hausa speakers of English may ordinarily experience problems bordering on interference or aberrations because of structural differences between English and Hausa. Sani (1989) asserted that the phonology of a language can never be the same as that of another language. He cited examples from English and Hausa. There are many sounds in English that are absent in Hausa, such as [ f, v, θ, ð, æ] in words like after, van, thick,

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that, and cat. Similarly, there are quite a number of sounds in Hausa that are not found in English, such as [b, d and k] in the words *yumbu*, (clay), *dā* (son) and *bako* (guest). The scope of this paper is narrowed to only the pronunciation of the dental, fricative, voiceless /θ/ and dental, fricative, voiced /ð/ sounds.

### 1.1 Statement of the Problem

Language learners often struggle with pronouncing non-native phonemes because of differences in phonemic inventories. Hausa is a Chadic language spoken primarily in Northern Nigeria, and it has a distinct phonological system that differs significantly from English. For instance, Hausa lacks the dental fricatives /θ/ and /ð/ which are prominent in English and often replace them with /t/, /d/, /s/, /z/. The substitution of phonemes with some variants presents in the Hausa phonemic inventory prompted this research to analyze how educated Hausa speakers of English pronounce words with the target phonemes /θ/ and /ð/. This study advances existing research on Hausa English phonology by providing a focused analysis of specific phonemes, /θ/ and /ð/, that are particularly challenging for Hausa speakers. Unlike earlier studies that broadly documented general phonological interference, this research employed a detailed methodological approach to quantify substitution patterns across educational levels. It fills a significant gap by the following:

1. Marking the persistent influence of native phonology even among educated speakers.
2. Introduce pedagogical recommendations tailored to address these specific phonological challenges.
3. Demonstrating incremental improvements in pronunciation accuracy based on education levels, thereby providing insights into the efficacy of formal instruction.

### 1.2 Objectives

This paper has dual objectives;

1. To analyze how educated Hausa speakers produce specific non-native phonemes in English.
2. To provide pedagogical recommendations for teaching English pronunciation to Hausa speakers.

### 2.0 Hausa Phonology

Hausa phonology has been extensively studied, with significant contributions from scholars such as Greenberg (1941), Abraham (1959), and Sani (1989, 2005). The phonemic inventory of Hausa comprises 34 consonants and 12 vowels, including 5 short vowels, 5 long vowels, and 2 diphthongs. Notable consonants that are absent in English include the hooked letters /b/, /d/, and /k/. These structural differences pose challenges for Hausa speakers learning English.

### THE CONSONANT CHART OF STANDARD HAUSA

	BILA BIAL	PALATA LIZED BILABI AL	ALVE OLAR	RETRO FLEX	POST- ALVE OLAR	PAL ATA L	VE LA R	LA BIO - VEL AR	LABIA LIZED VELAR	PALATA LIZED VELAR	GLO TTAL	PALATA LIZED GLOTT AL
STOP/PL OSIVE	b		t d				k g		kw gw	kj gj	ʔ	ʔj
IMPLOSI VE	ɓ			d̥								
EJECTIV E			s'				ƙ		ƙw	ƙj		
NASAL	m		n			ɲ	ɗ					
FRICATI VE	ɸ	ɸj	s z		ʃ						H	
AFFRIC ATE					tʃ dʒ							
LATERA L			l									
TRIL/RO LL			r									
FLAP				ɾ								
APPROX IMANT SEMI- VOWEL							J	w				

Figure 1. Hausa Consonant Chart

## 2.1 English Consonants

English consonants are defined both phonetically and phonologically. Phonetically, they are sounds produced with varying degrees of obstruction in the vocal tract. Phonologically, consonants function at the margins of syllables, either singly or in clusters (Crystal, 2008). English has 24 consonant phonemes, which are classified by place, manner, and voicing.

According to Roach (2000), English consonant phonemes are based on the places and manners of articulation. There are eight places of articulation: bilabial, dental, labio-dental, alveolar, post-alveolar, palatal, velar, and glottal. The manners of articulation are six in number: plosive, fricative, affricate, lateral, liquid, and semi-vowels. Consonants are also classified based on the following three criteria:

- i. The place of articulation, according to the place where the obstruction is produced.
- ii. The manner of articulation, according to the manner in which they are produced;
- iii. Voicing, reflected in the fact that whenever there are both possibilities within a given consonant category, the voiceless sound precedes its voiced pair in the corresponding cell of the table.

		MANNER	VOICING	PLACE						
				Bilabial	Labiodental	Interdental	Alveolar	Palatal	Velar	Glottal
Obstruent	Stop	Voiceless	p			t		k	ʔ	
		Voiced	b			d		g		
	Fricative	Voiceless		f	θ	s	ʃ		h	
		Voiced		v	ð	z	ʒ			
	Affricate	Voiceless					tʃ			
		Voiced					dʒ			
Sonorant	Nasal		Voiced	m			n		ŋ	
	Liquid	Lateral	Voiced				l			
		Rhotic	Voiced					r (ɹ)		
	Glide		Voiced	w				j	(w)	

**Figure 2: English Consonants Chart**

## 2.2 Theoretical Framework

Selinker's (1972) Interlanguage Theory provides the theoretical framework for this study. This theory posits that second-language learners develop an intermediary linguistic system influenced by their native language. Jibril's (1986) classification of Nigerian English speakers, based on educational attainment and proximity to Received Pronunciation (RP), was also used to contextualize the participants' pronunciation patterns.

Jibril's (1986) classification of speakers of Nigerian English was used as a reference to determine whether such a classification is currently applicable. The study population was situated within the continuum of Jibril's (1986) classification of speakers of Nigerian English, with educational level as the sole criterion. The study population are educated Hausa speakers of English based in Sokoto State who are situated within educational level 2 and 3. According to Jibril's (1986) classification on educational level and proximity to RP, the following are his categorization; Educational level 1: speakers with secondary education and professional training, educational level 2: speakers who holds first degree, educational level 3: speakers who have higher degree, educational level 4: University professors. The theory of Interlanguage by Selinker (1976) was used as the theoretical framework for the study because it is the language developed by the learner of a second language who is in the process of learning the language before he/she becomes proficient in the language.

### 3.0 Methodology

Forty native Hausa speakers (20 graduates and 20 postgraduates) aged 25-60 participated in this study. The participants were evenly divided by gender. The participants met at their respective institutions, and informed consent was obtained. Data were collected through a word-list reading task containing 20 English words with the target phonemes /θ/ and /ð/ (e.g., "think" and "then"). Each participant pronounced each word twice, and the recordings were analyzed for accuracy and substitution patterns. Words were carefully selected from the English lexicon.

### 4.0 Presentation and Interpretation of the Research Results

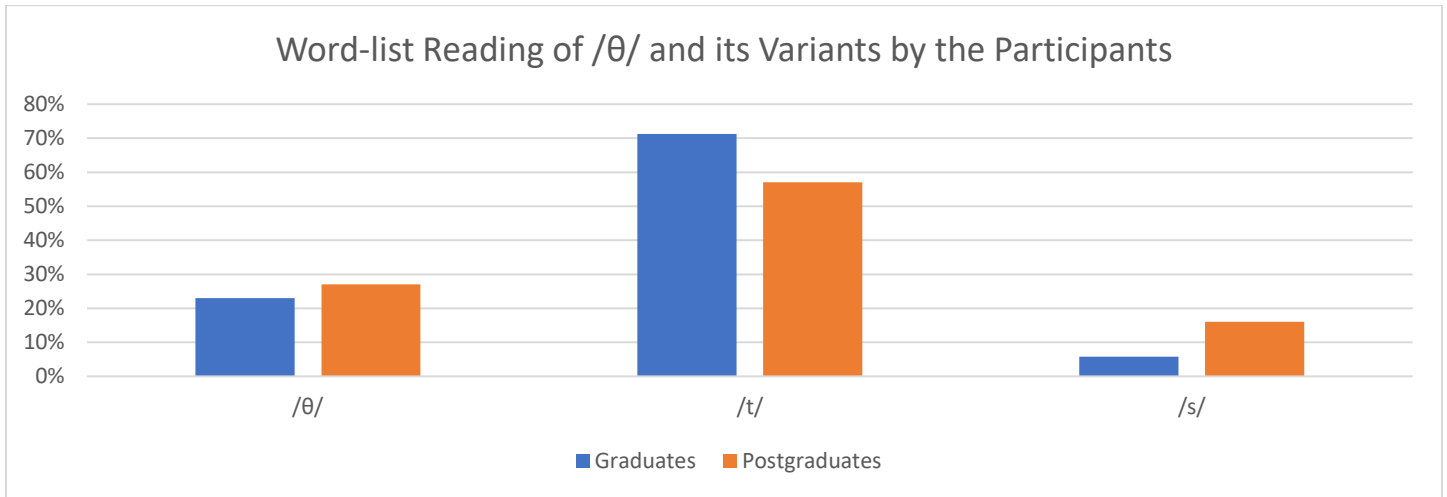
This section presents and analyzes the data collected from the participants. The table below presents the figures obtained from the participants' word-list readings.

**Table 1. Pronunciation of the Phoneme [θ] and its Variants by Participants**

	Graduates			Postgraduates		
Words	/θ/	/t/	/s/	/θ/	/t/	/s/
Think	5	13	2	6	9	5
Thin	4	16	0	4	13	3
Thank	4	14	2	6	9	5
Through	5	12	3	4	10	6
Third	5	12	3	7	8	5
Thigh	6	13	1	6	9	5
Thread	5	15	0	6	9	5
Thief	6	14	0	5	15	0
Throw	6	14	0	6	11	3
Theater	5	15	0	4	16	0
Thursday	5	13	2	4	13	3
Theme	3	17	0	6	11	3
Thick	4	15	1	6	11	3
Thrap	3	15	2	7	13	0
Thing	6	14	0	6	11	3
Thailand	3	17	0	5	15	0
Thyme	4	16	0	6	11	3
Mathematics	3	15	2	5	9	6
Therapy	4	13	3	5	9	6
Threaten	5	15	0	4	16	0
Total	92	285	23	108	228	64
<b>TOTAL</b>	400			400		

The results of the word-list reading show that 23% of graduates used the standard phoneme /θ/, 71.25% substituted the standard phoneme with the sub-variant /t/, and 5.75% used another sub-variant /s/. This shows that the subvariant /t/ recorded higher pronunciation by the graduate participants.

Among the postgraduate participants, 27% used the standard phoneme /θ/, 57% substituted the variant /t/ and 16% used the other variant /s/. Similar to the graduate participants, the variant /t/ recorded higher usage than the standard phoneme/θ/ and the other variant /s/. The chart below compares graduates' and postgraduates' pronunciation of the phoneme and its substituted variants in the word-list reading task. The above result is presented in the following chart:



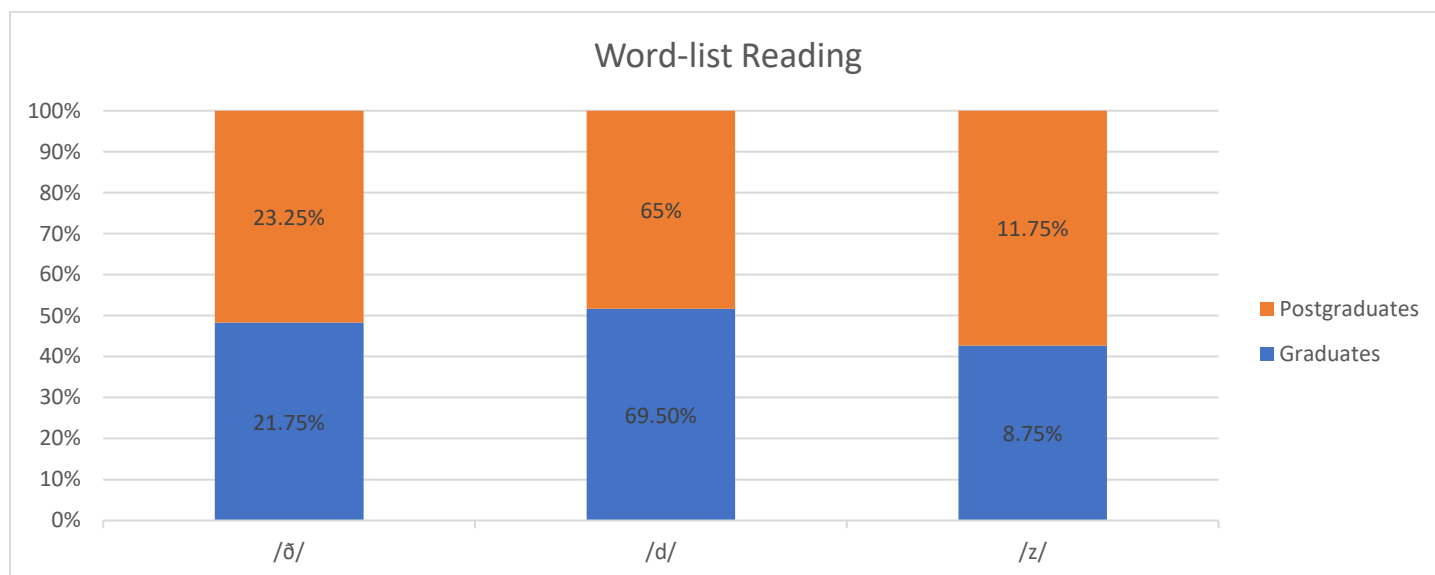
**Figure 3. Results of the use of /θ/, /t/, and /s/ by graduates and postgraduates**

**Table 2. Pronunciation of the Phoneme [ð] and its Variants by Participants**

Words	Graduates			Postgraduates		
	/ð/	/d/	/z/	/ð/	/d/	/z/
Then	3	15	2	4	12	4
That	3	15	2	4	12	4
There	3	15	2	4	12	4
Their	4	15	1	5	12	3
This	4	15	1	4	15	1
Those	3	14	3	2	14	4
Though	5	12	3	2	14	4
Them	5	14	1	3	15	2
Another	5	15	0	5	14	1
Feather	5	14	1	5	14	1
Rather	3	16	1	4	15	1
Father	6	11	3	4	13	3
Smooth	3	17	0	5	15	0
With	3	17	0	5	15	0
Breathe	2	18	0	3	17	0
Mother	6	11	3	6	11	3
Together	6	11	3	7	10	3
Brother	6	11	3	7	10	3
Another	6	11	3	7	10	3
Further	6	11	3	7	10	3
Total	87	278	35	93	260	47
<b>TOTAL</b>	400			400		

The results of the word-list reading show that 21.75% of the graduate participants used the standard phoneme /ð/, 69.5% substituted the phoneme with the variant [d], and 8.75% used another variant /z/. This shows that the variant /d/ has higher usage than the standard phoneme /ð/ and its other variant /z/.

The postgraduate participants' pronunciation of the phoneme /ð/ amounts to 23.25%. The variant /d/ recorded 65% usage, while the other variant /z/ recorded 11.75% of the postgraduates' pronunciation. The chart below compares graduates' and postgraduates' pronunciation of the phoneme and its variants in the word -list reading task. The above result is graphically presented below:



**Figure 4. Result of the use of /ð/, /d/, and /z/ by the Participants**

The results revealed a consistent pattern of substitution in the pronunciation of /θ/ and /ð/ by educated Hausa speakers of English. Across both groups (graduates and postgraduates), the substitutions predominantly involved /t/ and /d/, aligning with the phonemes available in Hausa phonology. These results indicate that although postgraduates displayed a modest improvement in their ability to articulate /θ/, the majority relied heavily on /t/ as a substitute. This reflects the phonological interference of Hausa, which lacks dental fricatives. Notably, postgraduate participants showed increased use of /s/, suggesting a broader range of substitutions and possibly greater exposure to diverse English pronunciations. The marginal improvement among postgraduates can be attributed to their higher education level and potential exposure to formal instruction in English. However, the prevalence of substitutions, even among advanced learners, demonstrates the persistent influence of native phonology and the challenges in acquiring non-native phonemes. The findings align with Selinker's Interlanguage Theory, suggesting that learners develop an intermediary linguistic system influenced by their native language while acquiring a second language.

In addition, Jibril's (1986) classified speakers of Nigerian English based on educational attainment and proximity to Received Pronunciation (RP). In this framework, the participants (graduates and postgraduates) align with levels 2 and 3, respectively. Graduates, positioned at level 2, exhibit pronunciation patterns indicative of Basic Hausa English (BHE), characterized by consistent substitution of non-native phonemes with variants from the Hausa phonological inventory. Postgraduates at level 3 demonstrate traits of Sophisticated Hausa English (SpHE), with improved accuracy and a broader range of substitutions. This suggests some convergence toward RP features, although modest. Areas of convergence between graduates' and postgraduates' pronunciations include;

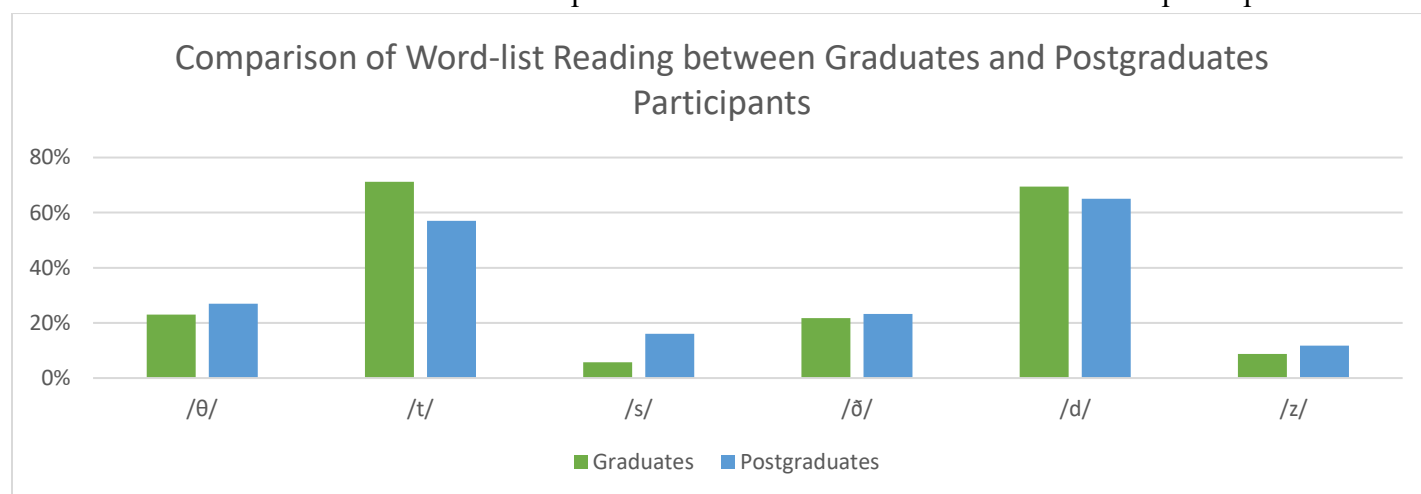
- i. Both categories showed a preference for substitutions that align with Hausa phonology (/t/ for /θ/ and /d/ for /ð/), reflecting shared linguistic roots.

- ii. The marginally better performance of postgraduates aligns with Jibril's observation that higher education correlates with greater proximity to RP features.

Areas of divergence include the following:

- i. The gap between graduate and postgraduate participants underscores the stratification within Jibril's classification and the varying degrees of phonological adaptation.
- ii. Postgraduates exhibit higher usage of variants like /s/ and /z/, suggesting greater exposure to diverse English inputs and an intermediate step toward approximating RP.

This study thus corroborates Jibril's (1986) classification while marking the persistent influence of Hausa phonology at higher educational levels. The convergence of BHE and SpHE features reflects a continuum rather than distinct category, with postgraduates occupying a transitional position. By comparing the results obtained, we can see that both graduates and postgraduates often used the variants /t/ and /d/ than the standard phonemes /θ/ and /ð/. The chart below shows the comparison between the results obtained from the participants.



**Figure 5. Comparison of Word- List Reading between Participants**

#### 4.1 Implications of Results

The findings have significant implications for understanding regional variations in English pronunciation in Nigeria. Globally, the study contributes to the broader discourse on World English, emphasizing how local phonological systems influence the acquisition of English. The persistent substitutions of /θ/ and /ð/ by educated Hausa speakers mark the need for context-specific teaching approaches to improve pronunciation and intelligibility. These insights are valuable for educators, linguists, and policymakers seeking to enhance English language instruction in multilingual settings.

#### 5.0 Suggestions for Remedy

To address the challenges faced by educated Hausa speakers of English in articulating /θ/ and /ð/, the following interventions are proposed:

1. Learn the articulatory properties of /θ/ and /ð/ using diagrams, videos, and phonetic models.
2. Use exercises like "thin" vs. "tin" to enhance auditory discrimination and articulation.
3. Design activities to help learners identify /θ/ and /ð/ in spoken English.
4. Training language instructors in effective strategies for teaching challenging phonemes.
5. Incorporating the target phonemes into sentence-level exercises and conversational activities.

#### 5.1 Conclusion

This study highlights the significant influence of Hausa phonology on the articulation of English dental fricatives by educated Hausa speakers. The frequent substitution of /θ/ and /ð/ with /t/ and /d/, even among advanced learners, reflects persistent challenges in mastering non-native phonemes. Although, postgraduate participants showed marginally improved accuracy, the prevalence of substitutions across both groups emphasizes the need



for targeted instructional strategies. Language educators should prioritize explicit phoneme instruction and incorporate multimedia tools and interactive exercises to bridge the phonological gap. Future research should evaluate the long-term effectiveness of such interventions and explore additional pronunciation challenges faced by Hausa speakers of English. This study contributes to the understanding of regional variations within Nigerian English and underscores the importance of tailored teaching methods that respect linguistic diversity while fostering clearer communication.

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