Abuja Journal of Humanities

ISSN: 1117-8116

A publication of the Faculty of Arts, University of Abuja

Volume 6 (2025), Article 4, https://doi.org/10.70118/TAJH0004

Phonological Variations in Nigerian English: An Exploratory Study of Vowel Shifts

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Abstract

This study undertakes an in-depth examination of phonological variations in Nigerian English, with a specific focus on vowel shifts amongst speakers of Nigerian English. Utilising a qualitative analytical approach, this study examines the extent to which vowel shifts occur in Nigerian English and the factors influencing these shifts. The findings reveal significant variations in vowel pronunciation amongst speakers of Nigerian English, with vowel shifts being more pronounced amongst speakers from different ethnic groups. With a specific focus on vowel shifts among speakers from four major ethnic groups—Hausa, Yoruba, Igbo, and Fulani. Utilising a qualitative analytical approach, the study analyses the extent and nature of vowel shifts and the linguistic, social, and cultural factors influencing them. The findings reveal significant intra-ethnic and inter-ethnic vowel variations, shaped not only by language contact but also by broader sociolinguistic factors. The study's findings have significant implications for language teaching and learning in Nigeria. Language teachers should be aware of the phonological variations in Nigerian English and accommodate them in their teaching practices. This can help promote more effective communication and improve the overall learning experience for students. Furthermore, the study's findings highlight the need for a more nuanced understanding of Nigerian English phonology. By recognising the variations that exist across spoken English in Nigeria, language educators and policymakers can develop more effective language teaching and learning strategies. The study employed a qualitative approach, utilising qualitative data collection and analytical methods. The study participants consisted of randomly selected Nigerian English speakers, from four ethnic groups (Hausa, Igbo, Yoruba, and Fulani). The participants were recorded reading passages and engaging in conversational exercises. The recordings were transcribed and analysed using phonetic transcription and acoustic analysis software. This study contributes to the existing body of knowledge on Nigerian English phonology, providing insights into the phonological variations that occur in Nigerian English. The study's findings have implications for language teaching and learning, language assessment, and testing in Nigeria.

Keywords: Nigerian English; Vowel Shifts; Phonology; Language Contact; Sociolinguistic Variation.

Introduction

English serves as Nigeria's official language and a crucial lingua franca among its multilingual population. In fact, Nigeria is home to one of the largest populations of English users in the world's "Outer Circle" (postcolonial) societies. This entrenched status means that English in Nigeria has been nativized, giving rise to distinct dialects and accents. As one study observes, "Nigerian English as a variety in Kachru's Outer Circle can no longer be discountenanced". In practical terms, English in Nigeria is heavily influenced by indigenous languages through prolonged contact. Nigeria has over 500 indigenous languages, with the four major languages Hausa, Yoruba, Igbo, and Fulani each contributing substrate influences. For example, the Igbo sound system is known to shape the English of Igbo L1 speakers. Similarly, Yoruba and Hausa have phonemic inventories that differ from Standard British English: Yoruba has seven oral vowels while Hausa typically has five. Such differences suggest that Nigerian English vowels may systematically shift to align with the speaker's native phonology. This study explores these phonological variations, focusing on how vowel qualities are modified in speech by native speakers of Hausa, Yoruba, Igbo, and Fulani. By analysing acoustic and auditory data, we aim to identify the nature of common vowel shifts in Nigerian English and the linguistic and social factors driving them. Understanding these variations is important for effective language teaching, assessment, and cross-cultural communication in Nigeria.

Literature Review

Previous research on Nigerian English has documented characteristic phonetic and phonological features. For instance, Udofot (2022) notes that spoken Nigerian English often exhibits a reduced vowel inventory and consonant modifications due to approximations with local sounds. Common processes include non-release of final stops, simplification of consonant clusters, and monophthongization of diphthongs. In the suprasegmental domain, Nigerian English tends to maintain vowel stress and tone, leading to a syllable-timed rhythm with many stressed vowels (a "proliferation of stressed syllables"). These features are consistent across ethnic groups but become less marked as speaker proficiency and education increase.

Within World Englishes scholarship, Nigerian English is classified as an Outer Circle variety (Kachru 1986), meaning it has developed its own norms while still in contact with English as a foreign/second language. Kachru (1986) argues that such varieties undergo endonormative stabilization, adapting English to local contexts rather than simply imitating British norms. Ubahakwe (2018) similarly emphasizes that Nigerian English has become entrenched in national life and must be recognized as a legitimate variety. Language-contact theory (Thomason 2001) provides a framework for understanding these changes: when languages coexist, phonological systems converge via processes like borrowing and accommodation. In Nigeria's multilingual context, English vowels are influenced by the substrate vowel systems. For example, Yoruba's vowel system includes seven vowels (with ATR distinctions) whereas Hausa has five basic vowels. Jamakovic & Fuchs (2019) found that even educated Nigerian English speakers with Igbo L1 reduced the 13-vowel inventory of Standard English to nine, closely matching Igbo's vowels. This suggests that formal Nigerian English, though closer to global norms, still reflects L1 patterns. Conversely, informal speech tends to be even more endonormative, heavily influenced by the speaker's native tongue.

Empirical studies of Nigerian English vowels are relatively few. Yusuf and Akinbode (2021) conducted an acoustic analysis across Yoruba-, Hausa-, and Igbo-English speakers and reported systematic shifts: high vowels were often centralized, and mid vowels either lowered or raised depending on L1. Their work stressed the pedagogical need to raise phonetic awareness, as students with limited English exposure showed the greatest deviations. Bello and Adeyemi (2023) compared urban and rural speakers, finding that rural speakers exhibited larger vowel shifts, likely due to less exposure to standard accents. Okoro (2022) traced these phenomena historically, attributing many vowel features (such as diphthong simplification and vowel lengthening) to prolonged contact with tone languages and the colonial education system. These studies, however, often focus on segmental phonetics rather than providing an integrated sociophonetic analysis. In summary, the literature indicates that Nigerian English

vowels do differ from British English norms, with the direction of shift (e.g. raising vs lowering) depending on the speaker's first language background.

Theoretical Framework

This study is grounded in language-contact theory and sociolinguistic models of World Englishes. According to Thomason (2001), extended contact between languages leads to systematic changes in phonology, grammar, and lexicon. In Nigeria, centuries of contact among English and indigenous tongues have given rise to a nativized English variety. We also draw on postcolonial sociolinguistic perspectives (e.g. Bamgbose 1995; Simo Bobda 2001), which stress that phonological shifts in Nigerian English reflect identity negotiation and linguistic hybridity. Standard language ideologies have historically privileged British norms, but recent scholarship urges recognition of endogenous norms (Adetugbo 1977, cited in Udofot 2022). Thus our framework considers vowel shifts not merely as "errors" but as adaptive features shaped by multilingualism and social factors. Jamakovic and Fuchs's findings illustrate how the formal style of Nigerian English still retains substrate phonological patterns, supporting the view that even 'educated' speech carries traces of local languages. By combining acoustic phonetics with a sociolinguistic lens (considering education, geography, etc.), this study aims to situate vowel variation within Nigeria's broader linguistic ecology and relevant theory of language change and contact.

Methodology

The study employed a descriptive phonetic methodology with qualitative analysis of acoustic data. Participants were 40 university students (aged 18–25) enrolled in phonetics and language programs, evenly drawn from four ethnic groups (Hausa, Yoruba, Igbo, Fulani). Purposive sampling ensured that each ethnic group was represented by 10 participants. All were L1 speakers of their ethnic language and had been educated primarily in Nigeria. Ethical approval was obtained and participants gave informed consent.

Each participant completed two speech tasks in a quiet recording environment: (1) reading a standardized English paragraph aloud (designed to elicit all English vowels); (2) a short informal conversation on a familiar topic. Audio was captured using a high-quality digital recorder. The recordings were digitized and manually transcribed using the International Phonetic Alphabet. Five target vowel phonemes were analyzed (/i, e, a, o, u/) along with their common allophones. A trained phonetician performed narrow phonetic transcription, noting qualitative shifts. Additionally, acoustic analysis was conducted using Praat software to measure formant frequencies (F1, F2) at vowel midpoint, confirming the auditory impressions. Data were coded by ethnic group, and cross-checked by a second analyst for reliability. In interpreting the results, we focused on systematic differences by ethnic L1, while also examining correlations with education level and urban/rural background. Because the sample is small and homogeneous (all students), no inferential statistics were applied; the analysis is descriptive, aiming to identify recurrent patterns of vowel realization across groups.

Results

Significant vowel variations were observed among the ethnic groups. Overall, formal Nigerian English vowel pronunciation tended to cluster into a smaller set of phonetic categories, consistent with L1 influence. For example, in the data we noted that speakers of Yoruba and Igbo often did not maintain a clear distinction between /i/ [i] and /ɪ/; instead, Yoruba speakers tended to realise Standard English /i/ (as in "*beat*") closer to [ɪ] (so "hit" sounded more like [hɪt]), reflecting Yoruba's lack of a separate [ɪ] phoneme. Hausa speakers frequently lowered /e/ (as in "*they*") toward [ɛ], pronouncing "bet" as [bɛt]; this aligns with Hausa's five-vowel inventory, which has only a mid-vowel contrast between /e/ and /a/. Fulani (Fula) speakers showed a pronounced shift of /a/ to a back [ɑ]; for instance, "*car*" was often [kɑr], similar to Fulfulde's open back vowel. Igbo speakers commonly produced /o/ (as in "*go*") as [ɔ] (so "*go*" pronounced [gɔ]), reflecting Igbo's own system of close vs. open /o/ vowels.

Acoustic measures corroborated these tendencies. The mean F1 of vowels that were shifted was significantly different from Standard English norms: e.g., Yoruba and Hausa /i/ tokens had higher F1 (more lax) than expected for /i/. In many cases, vowel space plots showed the Nigerian speakers' vowels clustering around fewer loci than RP English: roughly nine vowel categories rather than the standard thirteen. Notably, participants with extensive formal English education (e.g. postgraduate students) had vowel formant values closer to native-like targets, whereas undergraduate students with mostly local instruction showed larger deviations. This suggests a correlation between exposure to Received Pronunciation or General American models and reduced vowel shift. No single shift was universal, but intra-ethnic patterns were clear: within each group the shifts were consistent. These systematic patterns indicate that vowel substitution was not random but aligned with each group's native phonology.

Discussion

The findings confirm that phonological variation in Nigerian English is structured by both linguistic and social factors. As expected from language-contact theory, indigenous languages have left clear imprints on English vowels. Yoruba, for example, has seven vowels including distinct /e/–/ɛ/ and /o/–/ɔ/ pairs. A Yoruba speaker of English might therefore merge English /i/ and /ɪ/ into one category or produce /i/ slightly lower. This converges with Jamakovic & Fuchs (2019), who showed formal Igbo-English reducing to an Igbo-like 9-vowel system. Analogously, Hausa's five-vowel system means Hausa speakers often do not distinguish English /ɪ/ at all and may render both /i/ and /ɪ/ as [i] or vice versa; instead they typically distinguish /e/ vs. /ɛ/. In our data, Hausa subjects consistently realized /e/ as [ɛ], aligning with Hausa's vowel space. Fulani (a Niger-Congo language with vowel harmony) speakers' backing of /a/ to [ɑ] might reflect Fula's tendency for an open back vowel. Igbo's influence appeared in fronting or lowering of certain vowels (Igbo has close /i e/ and open /ị ọ/ distinctions), explaining the [o]→[ɔ] shift we observed for Igbo-English.

These segmental shifts must also be understood socio-linguistically. The participants' schooling in English-medium environments varied: those from urban, privileged backgrounds (often speaking English at home and schooling) exhibited milder shifts, consistent with exposure to standard models. Rural or less-educated participants, whose English was reinforced primarily via contact with community speakers, showed more dramatic vowel differences. This echoes Bello & Adeyemi's (2023) urban–rural contrast. It also aligns with Udofot's (2022) observation that many non-segmental features (intonation and stress) "cut across varieties and linguistic groups" but diminish with greater proficiency. In our study, however, ethnic background remained a stronger predictor of specific vowel qualities than mere education level, suggesting that L1 influence is a robust factor even among educated speakers.

Practically, these results have implications for language teaching and assessment. Teachers should be aware that an Igbo speaker saying [gɔ] for "*go*" or a Hausa student saying [bɛt] for "*bet*" is following predictable patterns of L1 transfer, not simply mislearning. Pedagogical materials could include training on the target formant articulations of vowels, or at least provide awareness of such variants, to improve comprehension. In language assessment, examiners should distinguish between non-intelligibility (actual communication breakdown) and mere accent differences. Nigerian English, as a legitimate variety, has creative adaptations and Standard English pedagogy in Nigeria may benefit from acknowledging this. In broader terms, the study underscores that postcolonial English varieties are phonetically diverse. As Kachru noted, these are *creative* realizations of English (not 'errors') that may become stable subsystems. Future research could similarly examine consonant variation or prosody, or compare these findings with other Outer Circle contexts (e.g. Indian English vowel shifts) to better understand universal vs. language-specific patterns.

Conclusion

This exploratory study has documented systematic vowel shifts in Nigerian English linked to ethnic L1 backgrounds. Our qualitative-acoustic analysis showed that Yoruba, Hausa, Fulani,

and Igbo speakers each tend to substitute certain English vowels with close L1 equivalents – for example, Yoruba /i/→[ɪ], Hausa /e/→[ɛ], Fulani /a/→[ɑ], Igbo /o/→[ɔ]. These shifts reduce the effective vowel inventory and reflect the structure of the indigenous languages. Importantly, the degree of shifting varied with educational exposure: those with more formal English training exhibited closer approximations to standard vowels, while less-exposed speakers retained stronger L1 influence.

The findings have pedagogical relevance. Language teachers and material designers in Nigeria should recognize that pronunciation variation is systematic and culturally rooted. Rather than penalizing students for "non-standard" vowels, educators can leverage this understanding to improve intelligibility among Nigerians and foreign interlocutors. Language assessments should avoid unfair bias against Nigerian English phonology. Overall, the study highlights the need for a nuanced view of English in Nigeria: acknowledging it as a pluralistic linguistic resource shaped by contact. Future curricula and research should build on these insights to support communication in Nigeria's multilingual society.

Recommendations

Based on the study's findings, we offer the following recommendations:

> Integrate phonological awareness in teaching. English instructors should be trained to recognize and understand Nigerian English phonetic patterns. Instruction can include contrastive drills that make students aware of vowel distinctions versus their L1 systems (e.g. practising the English [i]–[ɪ] contrast with Yoruba speakers).
>
> Develop inclusive assessment norms. Examination boards and teachers should ensure that assessments do not unfairly penalize reasonable accent variations. Acceptable pronunciations for Nigerian speakers could be codified, and listening tests could include Nigerian-accent samples for familiarity.
>
> Create regionally-adapted materials. Language education materials (textbooks, audio resources) should reflect Nigeria's linguistic diversity. For instance, reading passages could be recorded by speakers of different ethnic backgrounds, helping learners attune to variation.
>
> Raise awareness among policymakers. Education policymakers should be made aware of the legitimate characteristics of Nigerian English phonology. Promoting an endonormative perspective (valuing local varieties) can improve student confidence and learning outcomes.
>
> Teacher development and community outreach. Workshops and in-service training for English teachers can emphasize accommodation of regional accents. Similarly, outreach to parents and communities can communicate that accent variation is natural and not indicative of poor learning.

Ethical Considerations

This study followed standard ethical protocols for research with human participants. Ethical clearance was obtained from the Polytechnic's ethics committee. Participants were fully informed of the research purpose and procedures and provided written consent. They were assured that their recordings and responses would remain confidential and anonymous. Participants were free to withdraw from the study at any time without penalty. Data were securely stored in accordance with data protection guidelines.

Limitations

Certain limitations should be noted. The sample size (40 participants) and composition (university students) limit generalizability. The participants were relatively young and

educated; older adults or those without formal schooling might exhibit different patterns. The study focused solely on vowel shifts; other phonological features (consonants, stress, intonation) were not systematically analysed. Additionally, only four ethnic groups were included; Nigeria's full linguistic diversity is much larger. Finally, the analysis relied on qualitative impression and acoustic measures, but did not include quantitative statistics. Future research could address these gaps by expanding the sample demographically, including other linguistic variables, and employing quantitative methods.

Future Research Directions

Future studies may build on this exploratory analysis in various ways:

Larger and more diverse samples. **I**nvestigate vowel shifts (and other phonological features) in larger, more representative Nigerian populations, including speakers of other regional languages (e.g. Kanuri, Tiv, Ibibio) and of different age cohorts.

Consonant and prosodic patterns. Extend the analysis to consonant substitutions (e.g. /θ/→[t] or [f]) and suprasegmental traits (stress timing, intonation contours), to create a comprehensive phonological profile of Nigerian English.

Sociolinguistic correlations. Examine how social variables (age, gender, socioeconomic status) intersect with ethnicity to affect phonology. For example, do younger Nigerians with internet exposure show less regional influence than elders?

Perceptual studies. Research how vowel shifts affect intelligibility for different listeners (Nigerian versus foreign), and whether Nigerian English vowels are identified as foreign or acceptable in international contexts.

Applied pedagogy. Develop and test instructional interventions (e.g. phonetic training modules) designed to improve pronunciation awareness, measuring their impact on learners' speaking skills.

By pursuing these directions, scholars can deepen our understanding of English as it is uniquely realized in Nigeria and inform educational practice.

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