

PHONOLOGICAL PROCESSES IN IDOMA AND THEIR EFFECTS ON ENGLISH LANGUAGE LEARNING

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Abstract

This study investigates the phonological processes in Idoma and examines their potential impact on the acquisition of English as a second language. Idoma, like many indigenous languages, exhibits unique phonological features that may influence the way speakers of this language learn and produce English sounds. The aim is to identify specific phonological processes in Idoma and analyze how they may contribute to challenges or advantages in the acquisition of English pronunciation. The methodology involves a detailed examination of Idoma phonology, focusing on common phonological processes such as assimilation, elision, and vowel reduction. These processes are then compared to the phonological characteristics of English to determine potential areas of difficulty or facilitation for Idoma speakers learning English. Data for the study are collected through interviews and language assessments of native speakers engaging in English language tasks. The findings of this research will contribute to our understanding of the interplay between the phonological structures of Idoma, and the challenges or advantages they pose to English language learners. The implications of these findings can inform language teaching methodologies, curriculum development, and the design of language interventions for individuals from Idoma-speaking communities seeking to improve their English language proficiency. Ultimately, this study aims to enhance the effectiveness of language education programs by tailoring approaches to the specific linguistic needs and challenges of Idoma speakers learning English.

Keywords: Phonological processes; *indigenous languages*; language acquisition; target language; mutual intelligibility.

Introduction

Learning a second language, such as English, is a complex and multifaceted process, encompassing various linguistic components. One crucial aspect of second language acquisition is phonology, which deals with the study of speech sounds and their organization in language (Edwards & Zampini, 2008). This paper focuses on Phonological processes, which refer to the systematic patterns of sound change that occur within languages, influencing how speech sounds are produced, perceived, and combined, (Hawkins, 2003).

In the Nigerian context, Patrick and Sui (2013) believe that, where English is learned as a second or additional language, the phonological processes of native Nigerian languages can significantly impact learners' pronunciation and communication abilities in English. The diverse phonological systems in Nigerian languages often differ markedly from those in English, creating both challenges and opportunities for language learners, (Egwuogu, 2012).

As a non-native speaker of English, it can be challenging to understand the intricacies of English pronunciation, intonation, and stress patterns. However, by exploring the phonological processes in your native language, such as Idoma, one can develop a deeper understanding of these concepts and improve his/her English language skills. This paper will delve into some of the key phonological processes in Idoma and how they can enhance English language learning. It will also explore existing approaches to second language phonological instruction and discuss the implications for language educators and learners in Nigeria.

Native speakers of a language internalize certain rules and these are applied when they speak. Some of the rules are phonological processes, such as assimilation, deletion, insertion, and metathesis which take place in such languages (Omachonu, 2011). He further identified two aims of the phonological processes. While one is to modify a derivable syllable to achieve the preferred syllable structure through the manipulation of the segments, another is the simplification of pronunciation with the view to making it easier or pleasing to the ear. Similarly, Oyebade (1998, p. 56) added that sometimes phonological processes come about to maintain the musical quality of the utterance or to make its production smooth and easy to release the articulatory contact in the production of one sound and to imitate a different articulatory contact for a contiguous sound. This effort is considerably reduced if both contiguous sounds require the same articulatory mechanism to produce them. Some phonological processes ensure that this is the case.

The process of learning a new language involves navigating various linguistic elements, and understanding the phonological processes of one's native language can significantly impact the learning process (Kuhl et al., 2008). This paper explores how the phonological processes in Idoma, a language spoken in Nigeria, can serve as a valuable asset in enhancing the acquisition of English as a second language. By dissecting the phonetic intricacies of Idoma, learners can uncover ways to leverage their linguistic background for a more effective and nuanced approach to English language learning. The paper will emphasize the symbiotic relationship between Idoma phonology and English language learning. By recognizing the shared elements, leveraging contrasts, and incorporating practical applications, learners can harness the power of their Idoma linguistic background to enrich their journey towards mastering English pronunciation and fluency.

Phonological Processes in Idoma

Below are examples of phonological processes taken from different dialects of Idoma. It should be noted that Armstrong (1957, p. 87), has classified Idoma into five dialects:

- i. the central Idoma (C.I) or Òtùkpó dialect, spoken in Òtùkpó, Adoka, Ugboju, Oglewu and Onyagede in Benue state.
- ii. the southern Idoma (S.I) dialect, spoken in Igwumale, Agila in Benue state.
- iii. The western Idoma (W.I) dialects spoken in Otukpa, Òwùkpa, Orokam and Edumoga in Benue state.

- iv. The northern Idoma (N.I) dialect spoken in Àgàtú and Ochekwu districts, both in Benue State, as well as Àgàtú spoken in Àgàtú district of Nasarawa State.

Assimilation, Insertion, Deletion and Vowel Harmony are some phonological processes which occur frequently across the phonology of Idoma.

1. *Consonant Assimilating Vowel Features*- This usually occurs in secondary articulations as in palatalization and labialization. Palatalization occurs when a particular consonant assimilates an /i/ like vowel colouration especially when it precedes a high (front) vowel. In Idoma dialects, these processes are attested as shown in the data below:

(i)	o-piàbɔ	→	[o-pʲiàbɔ]	‘changes’
(ii)	o-higwú	→	[o-hʲigwú]	‘calling’
(iii)	fìà	→	[fʲià]	‘quickly’
(iv)	pínyɛ	→	[pʲínyɛ]	‘lick’
(v)	pí	→	[pʲí]	‘squeeze’
(vi)	òfiè	→	[òfʲiè]	‘slave’
(vii)	fíɛ-ɔla	→	[fʲíɛ-ɔla]	‘flog’
(viii)	fiákata	→	[fʲiákata]	‘scatter’

Similarly, Labialisation involves the super-imposition of lip-rounding quality of a round vowel, especially /u/ on a segment. This process is highly productive in Idoma. The data below are a few examples taken from the dialects.

- a. i. ígwú /íɡʷú/ ‘history’
 ii. òkwúkwù /òkʷùkʷù/ ‘knee’
 iii. dɔgwù /dòɡʷù/ ‘crawl’
 iv. ukwú /ukʷu/ ‘finger nail’
 v. shégwù /tséɡʷù/ ‘stop/prevent’
 vi. zúgwù /zùɡʷù/ ‘respect’
 vii. fúkwù /fùkʷù/ ‘transplant’
 viii. èkwúɔlá /èkʷù-ɔlá/ ‘fire place’
 ix. zíríkwù /zìrìkʷu/ ‘cry’
 x. aplɔnɔkwù /áplónókʷù/ ‘buttock’

2. *Deletion/Elision*- Deletion or contraction takes place when a syllable or sound is dropped in the process, but its tone may be retained. This is exemplified in the following example.

- i. hé # òchí → hóchí
 cut tree cut a tree
- ii òché # ìdɔmà → òchídɔmà
 kingìdɔmà king of ìdɔmà
- iii. áda # òlé → [ádólé]
 father house ‘landlord or head of the family’
- iv. apu # òchí → [apɔtʃí]
 bark tree ‘bark of tree’ (a male name)

- v. inù # áchí [inátʃí]
 house grass ‘thatched house’
- vi. éné # àyí [énáyí]
 mother children ‘mother of children’
- v. ùkpòkwú # ókwù [ùkpòkwókwù]
 bone hip ‘hip bone’

3. *Consonant Assimilating Consonant Feature*- This type of assimilation that occurs in Idoma is called Homorganic Nasal Assimilation, where the two consonants involved agree in their places of articulation. In the examples below, the consonant sounds assimilated agree with the assimilating consonant in the place of articulation. That is, the preceding bilabial nasal /m/ is followed by only voiced bilabial plosives /b/ or voiceless bilabial plosive /p/ as shown below:

- i. ùmbà – ‘drum’
- ii. úmbì - ‘charcoal’
- iii. àmbulé - ‘sin’
- iv. úmpì – ‘odour’
- v. àmpè - ‘pawpaw’

On the contrary, if the preceding nasal sound is alveolar nasal /n/ or velar nasal /ŋ/ the following consonant may be any other consonant sounds other than /p/ and /b/ as in the examples below:

- i. ñchè - ‘today’
- ii. óŋkpà – ‘stick’
- iii. óŋgwá – ‘rope’
- iv. úndo – ‘navel’
- v. ónto – ‘mud’

4. *Nasalization in Idoma* - In the following examples as the examples above, the initial vowels are nasalized by the nasal sounds that follow them. Note that the direction of influence is regressive, that from right- to-left. Nasalization takes place in **Idoma** only when the nasal sound is followed by a nasal consonant and not a vowel sound. For example:

<i>Phonemic</i>	-	<i>Phonetic</i>	
i. ùmbà /ùmbà/		[ũmbà]	‘drum’
ii. úmbì /úmbì/		[ũmbì]	‘charcoal’
iii. àmbulé/àmbulé/		[ãmbulé]	‘sin’
iv. úmpì/úmpì/		[ũmpì]	‘odour’
v. àmpè /àmpè/		[ãmpè]	‘pawpaw’

However, nasalization does not take place in words like;

- i. ɔmè/ òmè/ ‘mud’
- ii. ɔná/ òná/ ‘food’
- iii. ènè/ éné/ ‘four’

5. *Insertion in ídòmà* - This process takes place when a syllable or sound is added. This phonological process is observed most often in borrowed words in most Nigerian languages, ídòmà inclusive. For instance: **umoto** for 'motor. However, below are examples of the introduction of morphemes which are not phonologically conditioned and therefore are not insertions per se. For instance, in Àgàtù, the northern dialect, there is the introduction of a morpheme between two nouns to show possession. Examples:

- i. òché # ídòmà → òché **gi**ídòmà (N.I)
kingídòmà king of ídòmà
- ii. jè # ìcho → jè **li** ìcho (W.I)
stand up stand to up (stand up)
- iii. àyì # ùgwu → àyì**gu**úgwu (N.I)
egg hen egg of hen (eggs)
- iv. àngbùlù # àjè → àngbùlù **ga**ajè (N.I)
banana ground banana of ground (pinapple)
- v. àyí # àbò → àyí**ka**abò (C.I, W.I)
children hand children of hand (fingers)
- vi. ìpú # ìkpó → ìpú **ki**ìkpó (C.I,W.I)
inside leg inside of leg (sole)

The data above shows that the [gi], [gu], [ga], [ka] and [li] are some of the morphemes that are inserted within two nouns to form compound nouns.

6. *Vowel Harmony in Idoma* - The seven oral vowels are realized phonetically in Idoma and the presence of vowel harmony is attested sometimes with irregularities, especially in Southern Idoma. The seven vowels of Idoma (a, e, i, **ɛ**, **ɔ**, **o**, **u**) can be divided into three subsets of vowel harmony tiers and examples of segmental tiers are as follows.

Set 1 [+ATR] = e - o

- i. èwo 'dog'
- ii. ówè 'suffering'
- iii. óchè 'disease'
- iv. ògbé 'hornbill'

Set 2 [-ATR] = ɛ - ɔ

- i. èdò 'type of'
- ii. òjè 'sand'
- iii. òwè 'road'
- iv. òlè 'home'

Set 3 [NEUTRAL] = a/ i/ u

- i. àyì 'egg'
- ii. ápù 'peel, bark'
- iii. ipú 'stomach'
- iv. ènà 'cow, scorpion'

Impact of Idoma Phonological Processes on English Language Learning

Most learners of English in Nigeria often transfer phonological rules from their native languages to English. This transfer can lead to various challenges in pronunciation and communication. The phonological processes commonly observed in Nigerian languages, such as consonant cluster simplification, vowel reduction, voicing assimilation, tone and stress patterns, rhotic sounds, and intonation differences, can influence the pronunciation and fluency of learners of English.

Phonological processes, according to Minkova, (2013), refer to the systematic patterns of sound changes and rules that govern the pronunciation of sounds in the language. These processes can affect how certain sounds are produced and perceived, leading to variations in pronunciation based on specific linguistic contexts. Understanding English phonological processes, in the opinion of Solé (1992), is crucial for language learners and teachers to improve pronunciation and communication skills. Learning English as a second language for speakers of Idoma dialects can pose specific challenges due to differences in phonological processes between the two languages.

Here are some challenges that Idoma speakers might encounter when learning English:

- i. **Consonant Contrasts:** Idoma and English have different sets of consonant sounds, and some sounds may not exist in one language but do in the other. For instance, the English "th" sounds (/θ/ as in "think" and /ð/ as in "this") are absent in Idoma, and learners might struggle to articulate these sounds accurately.
- ii. **Vowel Pronunciation:** English has a larger vowel inventory compared to Idoma, and some English vowels may not have direct equivalents in Idoma. Idoma speakers may face challenges with vowel sounds like /ɪ/ in "sit" and /i:/ in "seat," which don't have direct counterparts in Idoma.
- iii. **Word Stress and Intonation:** English relies heavily on word stress and intonation patterns, which play a crucial role in conveying meaning. Idoma speakers might find it challenging to adapt to English stress patterns, as Idoma typically has more even stress distribution across syllables.
- iv. **Consonant Clusters:** English frequently uses consonant clusters at the beginning or end of words, which can be challenging for Idoma speakers. Idoma tends to have simpler syllable structures, and the presence of clusters, such as in words like "street" or "plant," can be difficult to pronounce.
- v. **Aspiration and Voicing:** English distinguishes between aspirated and non-aspirated sounds (e.g., /p/ in "pat" vs. /ph/ in "pat"), while Idoma generally does not make this distinction. Understanding and producing aspirated sounds accurately can be a challenge for Idoma speakers.
- vi. **Nasal Consonants:** English includes nasalized consonants in words like "song" (/ŋ/) and "think" (/n/). Idoma speakers may not have these sounds in their native phonology, making it challenging to differentiate and produce them correctly.

- vii. **Rhotic Sounds:** The English "r" sound can be challenging for Idoma speakers, as Idoma often uses a tap or flap /ɾ/ for its rhotic sounds. Pronouncing the English "r" sound at the beginning or end of words might require focused attention and practice.
- viii. **Syllable Timing vs. Mora Timing:** Idoma tends to have a more mora-timed rhythm, where each syllable takes roughly the same amount of time, whereas English has a syllable-timed rhythm, with stressed syllables taking more time. Idoma speakers may need to adjust their rhythm to match English patterns.
- ix. **Lack of Certain Phonemes:** Some English sounds may not exist in Idoma, and this absence could lead to challenges in distinguishing and producing these sounds accurately. For example, the English /v/ sound in "very" might not be present in all Idoma dialects.
- x. **Interference from Idoma Phonological Rules:** Idoma speakers might transfer phonological rules from their native language to English, leading to pronunciation errors. This interference can affect the production of specific sounds or the application of stress patterns.

To address these challenges, targeted pronunciation exercises, phonetic training, and exposure to English in natural contexts can be beneficial. It's important to create a supportive learning environment that encourages practice and provides constructive feedback to help Idoma speakers develop accurate English pronunciation.

Pedagogical Approaches to Challenges of Phonological Processes

To address the phonological challenges faced by Idoma learners of English, educators can employ the following effective teaching approaches:

1. **Phonological Awareness:** Encourage learners to develop phonological awareness through activities that focus on recognizing and producing distinct sounds in English.
2. **Minimal Pair Exercises:** Use minimal pair exercises to highlight the differences between similar sounds in English (e.g., "bat" vs. "pat" or "ship" vs. "sheep").
3. **Pronunciation Practice:** Regular pronunciation practice, including drills and repetition exercises, can help learners improve their speech clarity and accuracy.
4. **Audio-Visual Materials:** Utilize audio-visual materials that feature native English speakers to expose learners to authentic pronunciation and intonation patterns.
5. **Role Play and Dialogues:** Engage learners in role play and dialogue activities to practice stress and intonation in various communicative contexts.
6. **Corrective Feedback:** Provide learners with corrective feedback to help them identify and rectify their pronunciation errors.

Conclusion

Phonological processes significantly influence second language learning, especially in the Nigerian situation, where English serves as a lingua franca. The phonological features present in Nigerian languages can present unique challenges for learners trying to acquire English pronunciation and fluency. By understanding these challenges and adopting appropriate teaching strategies, educators can help Nigerian learners overcome phonological barriers and become more effective communicators in English.

Recommendations

The following recommendations are proposed to enhance second language learning, particularly English acquisition, in the Nigerian context, considering the impact of phonological processes on learners. By implementing these recommendations, educators, policymakers, and learners can work together to overcome phonological barriers and create an inclusive and effective language learning environment in Nigeria:

1. **Phonological Instruction Integration:** Incorporate targeted phonological instruction into language learning programs. Teachers should allocate sufficient time and resources to address phonological challenges, helping learners improve their English pronunciation, stress patterns, intonation, and fluency.
2. **Native Speaker Models:** Provide ample exposure to native English speakers through audio-visual materials, videos, and interactive sessions. This exposure allows learners to imitate and internalize authentic pronunciation and intonation patterns.
3. **Minimal Pair Practice:** Utilize minimal pair exercises and drills to highlight the distinctions between similar sounds in English. These exercises help learners identify and rectify specific pronunciation errors.
4. **Audio-Visual Labs:** Establish language laboratories equipped with audio-visual technology to facilitate individualized practice and self-assessment of pronunciation skills. Learners can record and compare their speech with native speaker models, receiving immediate feedback for improvement.
5. **Speaking Clubs and Conversation Partners:** Organize speaking clubs and pair learners with conversation partners to practice English pronunciation and communication in a supportive environment. Regular interaction with peers and native speakers fosters language fluency and boosts learners' confidence.
6. **Professional Development for Educators:** Offer professional development workshops and training sessions for language educators to enhance their understanding of phonological processes and effective instructional strategies. Continued learning enables educators to stay abreast of best practices and adapt their teaching methodologies accordingly.
7. **Pronunciation Apps and Online Resources:** Encourage learners to use pronunciation apps and online resources that offer interactive exercises and feedback on pronunciation accuracy. These tools can supplement classroom instruction and promote self-directed learning.
8. **Culturally Relevant Content:** Incorporate culturally relevant content and materials into language instruction. This approach helps learners relate to the language and motivates them to engage actively in the learning process.
9. **Multilingual Awareness:** Foster multilingual awareness in language classrooms by celebrating the linguistic diversity of Nigeria. Encourage learners to appreciate the richness of their native languages while developing proficiency in English.
10. **Regular Assessment and Feedback:** Implement regular assessment of learners' phonological progress and provide constructive feedback to address pronunciation issues. Individualized feedback helps learners focus on specific areas of improvement.
11. **Long-Term Language Exposure:** Promote long-term language exposure by encouraging learners to engage with English outside the classroom. Encourage reading English books, watching English movies, and participating in English-speaking events to enhance language proficiency.

12. Research Collaboration: Facilitate collaboration between language educators, linguists, and researchers to conduct further research on phonological processes in Nigerian languages and their impact on second language acquisition. Continuous research contributes to the development of more effective language-teaching approaches.

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