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ASSIMILATION IN ENGLISH AND IGBO: A CONTRASTIVE PHONOLOGICAL STUDY OF L1 AND L2 SPEECH PROCESSES

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Abstract
This paper presents a comparative analysis of assimilation in English and Igbo within the context of L1 and L2 language learning. Assimilation, a phonological process in which speech sounds influence one another, is universal but varies across languages due to differences in phonological structure. Despite extensive separate studies on English and Igbo assimilation, there is a clear research gap in comparative analyses that explain how their structural differences shape assimilatory processes, particularly in bilingual and second-language contexts. The research work adopts a comparative research design using both documentary and field methods. English data were sourced from established phonological literature, while Igbo data were collected through recorded interviews with two native speakers of the Ohuhu dialect in Abia State, Nigeria. The data were analysed using Natural Phonology Theory and Linguistic Relativity as guiding frameworks. Findings show that assimilation in English is mainly consonant-based and frequent in connected speech, involving partial, progressive, regressive, and coalescent processes. In contrast, Igbo assimilation is predominantly vowel-based, strongly influenced by its open syllable structure and vowel harmony system. Although both languages share processes such as regressive and double assimilation, they differ significantly in directionality, frequency, and phonological conditioning. The study concludes that these differences reflect the phonotactic constraints of each language and help explain pronunciation difficulties faced by Igbo learners of English. Its significance lies in contributions to phonological theory, contrastive linguistics, and second-language pedagogy by demonstrating how universal phonological processes are differently realized across languages.

Keywords: Assimilation, Phonology, English Language, Igbo Language, Contrastive Analysis

Introduction

Language is a dynamic system of communication in which speech sounds interact constantly within different phonological environments. In natural speech, sounds rarely occur in isolation; rather, they influence one another within words, across morpheme boundaries, and during connected speech. These interactions often result in phonological modifications generally referred to as phonological processes. One of the most important and widely studied phonological processes is assimilation. Assimilation refers to the process whereby a speech sound acquires some or all the phonetic features of a neighbouring sound within the same phonological environment (Jones, 1972; Abercrombie, 1975; Roach, 2000). In essence, a sound becomes similar to another sound as a result of articulatory influence during speech production.

Assimilation has attracted considerable scholarly attention in phonetics and phonology because of its universality and significance in connected speech. Scholars such as Abercrombie (1975), Clark and Yallop (1995), and Roach (2000) observe that assimilation commonly involves changes in place of articulation, manner of articulation, and voicing. Assimilation may occur progressively, regressively, partially, completely, coalescently, or doubly depending on the phonological structure of a language. Related concepts such as coarticulation, feature spreading, and coproduction are also frequently associated with assimilation (Ohman, 1967; Carney & Moll, 1971; Browman & Goldstein, 1992). While some scholars regard assimilation as a manifestation of coarticulation, others maintain that both concepts, though related, remain distinct in connected speech processes (Fromkin & Rodman, 1998; Clark & Yallop, 1995).

Assimilation is regarded as a universal phonological phenomenon because all natural languages exhibit some degree of sound adjustment aimed at facilitating ease of articulation and speech fluency. However, although assimilation occurs universally, its manifestation differs across languages due to variations in phonological systems, syllable structures, and phonotactic constraints. According to Natural Phonology Theory, phonological processes are universal in motivation but language-specific in application (Donegan & Stampe, 1979; Dziubalska-Kolaczyk, 2006). This implies that while assimilation exists in all languages, its forms and patterns differ from one language to another.

English and Igbo are two linguistically distinct languages that coexist extensively within Nigeria's multilingual environment. English belongs to the Indo-European language family under the West Germanic group, whereas Igbo belongs to the Niger-Congo language family within the Kwa sub-group. English functions as Nigeria's official language and as a second language for most Nigerians, while Igbo is one of the major indigenous languages predominantly spoken in South-Eastern Nigeria (Graddol, 2000; Udofot, 2007). Consequently, many educated Igbo speakers are bilingual and use both languages in education, administration, and everyday communication.

Phonologically, English and Igbo differ considerably in their sound systems and syllable structures. English possesses a relatively complex phonological structure characterized by consonant clusters, syllable-final consonants, and a large vowel inventory. Igbo, on the other hand, is predominantly vowel-final and does not permit consonant clusters in the same way English does. Standard Igbo is generally described as having twenty-eight consonants and eight vowels, although some dialects possess additional consonantal sounds (Nkamigbo, 2014). Igbo phonology also strongly favours vowel harmony and vowel assimilation processes, especially across word boundaries (Ihiunu & Kenstowicz, 1994).

These structural differences significantly influence the operation of assimilation in both languages. In English, assimilation occurs more prominently among consonants, particularly in

connected speech where sounds adjust according to place of articulation, manner of articulation, and voicing (Clark & Yallop, 1995; Roach, 2000). In Igbo, however, assimilation occurs more prominently among vowels because of the language's vowel-based syllable structure and phonotactic restrictions against consonant clusters and word-final consonants. Studies by Nagy (1992), Ihiunu and Kenstowicz (1994), and Erne (2007) show that vowel assimilation, vowel harmony, nasalisation, and coalescent assimilation are common features of Igbo phonology.

Several studies have examined assimilation in English and Igbo separately. Studies on English assimilation by Abercrombie (1975), Gimson and Cruttenden (1994), Clark and Yallop (1995), Roach (2000), and McMahon (2002) focused mainly on consonantal assimilation in connected speech. Similarly, studies on Igbo phonology by Nagy (1992), Ihiunu and Kenstowicz (1994), Maduagwu (N.D.), Erne (2007), and Nkamigbo (2014) investigated vowel assimilation, nasalisation, and connected speech processes in different Igbo dialects.

Statement of Problem

Despite these scholarly contributions, most previous studies have examined assimilation within English and Igbo independently without undertaking a detailed comparative analysis of both languages. Existing literature has therefore paid limited attention to the similarities and differences in the assimilatory processes of English and Igbo, particularly within the context of L1 and L2 language learning in Nigeria. This creates a significant gap in comparative phonological research, especially in understanding how phonological universals interact with language-specific sound structures in the manifestation of assimilation.

Furthermore, inadequate comparative knowledge of assimilation in English and Igbo may contribute to pronunciation difficulties, phonological interference, and speech production challenges among bilingual speakers and second language learners. Igbo speakers learning English may encounter difficulties with consonant clusters and consonantal assimilations that are uncommon in Igbo, while English speakers learning Igbo may struggle with vowel harmony and vowel-based assimilatory processes. It is against this background that the present study comparatively investigates assimilation in English and Igbo in order to identify the types of assimilation that occur in both languages, examine their similarities and differences, and explain how the phonological structures of English and Igbo influence the manifestation of assimilation.

Objectives of the Study

The English Sound System

		monophthongs				diphthongs			Phonemic Chart
VOWELS	iː sheep	ɪ ship	ʊ good	uː shoot	ɪə here	eɪ wait			voiced
	e bed	ə teacher	ɜː bird	ɔː door	ʊə tourist	ɔɪ boy	əʊ show		unvoiced
	æ cat	ʌ up	ɑː far	ɒ on	eə hair	aɪ my	aʊ cow		
CONSONANTS	p pea	b boat	t tea	d dog	ʧ cheese	ʤ June	k car	g go	
	f fly	v video	θ think	ð this	s see	z zoo	ʃ shall	ʒ television	
	m man	n now	ŋ sing	h hat	l love	r red	w wet	j yes	

Ọnwụ Alphabet/Igbo Sound System

Letter	A	B	Ch	D	E	F	G	Gb
Pronunciation (IPA)	/a/	/b/	/tʃ/	/d/	/e/	/f/	/g/	/□~ɓ□□/

Letter	Gh	Gw	H	I	Ị	J	K	Kp
Pronunciation	/ɣ/	/gʷ/	/h/	/i/	/ɪ□□/	/dʒ/	/k/	/ƥ□~k□p/

Letter	Kw	L	M	N	Nw	Ny	Ñ	O
Pronunciation	/kʷ/	/l/	/m/	/n/	/ŋʷ/	/ɲ/	/ŋ/	/o/

Letter	Ọ	P	R	S	Sh	T	U	Ụ
Pronunciation	/ɔ□□/	/p/	/ɾ/	/s/	/ʃ/	/t/	/u/	/ʊ□□/

Letter	V	W	Y	Z
Pronunciation	/v/	/w/	/j/	/z/

The graphemes ⟨gb⟩ and ⟨kp⟩ are described both as co-articulated /□͡□b/ and /k□͡p/ and as implosives, so both values are included in the table. Source: Wikipedia.com

The broad objective of this study is to comparatively investigate the process of assimilation in English and Igbo with a view to understanding how the phenomenon manifests in the phonological systems of the two languages. Specifically, the study seeks to:
i. Examine the nature and operation of assimilation in English and Igbo phonology.
ii. Identify and analyse the various types of assimilation that occur in English and Igbo;
iii. investigate the similarities and differences in the assimilatory processes of both languages;
iv. determine how the phonological structures and syllable patterns of English and Igbo influence the manifestation of assimilation; and

Research Questions

The study is guided by the following research questions:
i. What types of assimilation occur in English and Igbo?
ii. How does assimilation manifest in the phonological systems of English and Igbo?
iii. What similarities and differences exist in the assimilatory processes of English and Igbo?
iv. To what extent do the phonological structures of English and Igbo account for the observed assimilatory patterns in the two languages?

Methodology

Research Design

The study adopted a comparative research design to examine assimilation in English and Igbo. Two sets of data were used: English data and Igbo data. The English data were obtained from published scholarly works on assimilation in English phonology, while the Igbo data were collected from native speakers of the Ohuhu dialect spoken in Nkwoegwu, Umuahia North Local Government Area of Abia State, Nigeria. The choice of the dialect was based on Ikekeonwu's (1987) classification of Igbo dialects, where Ohuhu belongs to the Umuahia dialect cluster, a variety closely related to Standard Igbo.

Data Collection Methods

The study employed both documentary and fieldwork methods of data collection. The English data were sourced from textbooks and existing linguistic studies on assimilation. For the Igbo data, two adult respondents (one male and one female), both above fifty years old and native speakers of the dialect, were purposively selected.

The respondents were interviewed separately through partially structured interviews. They were asked to narrate how the New Yam Festival is celebrated in their community, particularly the

preparations made by the elders before and during the festival. The interviews were audio-recorded to ensure accurate capture of the speech data.

Data Analysis Techniques

The recorded interviews were listened to repeatedly in order to identify relevant segmental and suprasegmental sound features. Data relating to assimilation were extracted, transcribed, and analysed comparatively alongside the English data. The analysis focused on the different types of assimilation identified in both languages, including complete, partial, progressive, regressive, coalescent, nasal, and double assimilation.

The English assimilation typologies served as the framework for analysing the Igbo data and for determining the similarities and differences in the assimilatory processes of the two languages.

Review of Relevant Literature

Assimilation is a major phonological process in natural languages arising from the interaction of speech sounds within specific phonological environments. It occurs when sounds influence one another due to shared articulatory features such as place, manner of articulation, and voicing. In connected speech, across morpheme boundaries, or in rapid speech, sounds tend to adjust for ease of articulation and fluency. Consonant assimilation, for example, occurs when a consonant adopts features of a neighbouring sound. McMahon (2002) notes that assimilation is a common phenomenon in natural languages, especially among nasal sounds, while Ofulue, Urua, and Egbokhare (2010) emphasize that sounds in phonological environments often undergo systematic modification.

Scholars have proposed various classifications of assimilation (Jones, 1972; Abercrombie, 1975; Gimson & Cruttenden, 1994; Clark & Yallop, 1995; Roach, 2000; Ramos, 2010). Ramos (2010) distinguishes between synchronic assimilation (active sound changes in present-day speech) and diachronic assimilation (historical sound changes). Abercrombie (1975) offers a broader framework, identifying similitude, historical, and juxtapositional assimilation. Juxtapositional assimilation, most relevant to phonetics, occurs at word boundaries or in connected speech and may be progressive or regressive, involving changes in glottal state, voicing, and articulation.

Clark and Yallop (1995) and Roach (2000) further emphasize assimilation based on place, manner, and voicing. For instance, /t/ may become /p/ before bilabials or /k/ before velars, reflecting articulatory ease in connected speech. These perspectives highlight assimilation as a natural consequence of speech efficiency.

However, debate persists on whether assimilation is distinct from coarticulation. Fromkin and Rodman (1998) view assimilation as an outcome of coarticulatory processes, while Clark and

Yallop (1995) maintain a conceptual distinction between the two phenomena. Cross-linguistic studies further show that assimilation is universal but language-specific in realization. Erne (2007) observes that Igbo exhibits different assimilatory directions and patterns compared to other languages, reflecting structural differences.

Despite extensive research, most studies focus on English or other Indo-European languages, with limited attention to African languages such as Igbo. Even Igbo-based studies (Nagy, 1992; Ihiunu & Kenstowicz, 1994; Erne, 2007) largely examine isolated phenomena without comparative analysis with English. This reveals a significant gap in contrastive phonological research, particularly regarding L1 and L2 learning contexts.

Therefore, the present study addresses this gap by comparatively examining assimilation in English and Igbo to identify their types, similarities, and differences within their phonological systems.

Theoretical Background

Comparative linguistic studies have traditionally relied on two major frameworks: comparative linguistics and contrastive analysis. Comparative linguistics, formerly known as comparative philology, investigates the historical and genetic relationships among languages with the aim of establishing common ancestry and identifying similarities in phonology, morphology, syntax, and lexis (Greenberg, 2001; Campbell, 2004). Hock (1991) explains that the comparative method involves systematic comparison of linguistic structures across languages. Although this framework is useful in tracing language families and reconstructing ancestral forms, its limitation lies in its focus on genetically related languages. Since English belongs to the Indo-European language family while Igbo belongs to the Niger-Congo family, comparative linguistics alone cannot sufficiently account for the phonological similarities and differences observed in their assimilatory processes.

Another important framework is Contrastive Analysis (CA), which compares a learner's first language (L1) and second language (L2) in order to identify areas of similarity and difference that may result in learning difficulties. Ellis and Tomlinson (1980) observe that CA helps predict possible interference errors in second language acquisition, while McLaughlin (1987) and Brown (2000) maintain that linguistic differences often account for pronunciation and learning challenges among L2 learners. In the context of this study, CA is useful in explaining how the phonological structure of Igbo may influence the pronunciation of English among Igbo speakers. For instance, because Igbo rarely permits consonant clusters, Igbo learners of English may experience difficulty with consonantal assimilations common in English connected speech. However, the framework is limited because it focuses mainly on language learning difficulties rather than on the natural operation of phonological processes across languages.

For this reason, the present study is anchored mainly on Natural Phonology Theory and Linguistic Relativity, which together provide a more comprehensive explanation of assimilation in English and Igbo.

Natural Phonology Theory, associated with the works of David Stampe (Donegan & Stampe, 1979), views phonology as a system of natural and universal phonological processes motivated by articulatory ease and perceptual clarity. According to Bader (2010), the theory explains the relationship between the phonetic capacities and limitations of speakers and the phonological structure of languages. Assimilation is therefore regarded as a natural phonological process arising from the interaction of sounds during speech production. Dziubalska-Kolaczyk (2006) further explains that Modern Natural Phonology (MNP) considers phonological processes as universal tendencies that are language-specific in application. This means that although assimilation exists in all languages, its manifestation differs depending on the phonological structure of each language.

The relevance of this theory to the present study lies in its explanation of why assimilation occurs in both English and Igbo despite their structural differences. In English, consonantal assimilation is prominent, as in ten bikes becoming /tem baɪks/, where /n/ changes to /m/ before a bilabial consonant. In Igbo, assimilation occurs more frequently among vowels due to the language's predominantly open syllable structure and vowel harmony system. Natural Phonology therefore, explains both the universality of assimilation and its language-specific realizations.

The second framework is Linguistic Relativity, a weaker version of the Sapir–Whorf Hypothesis. The theory, associated with Sapir and Whorf, proposes that language influences the way speakers perceive and organize reality (Sapir, 1974; Whorf, 1974). Earlier, Sapir argued that people "see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation" (Whorf, 1974, p. 64). Hudson (1996) also explains that meaning and interpretation are shaped by the linguistic and cultural environment of speakers.

Within the context of this study, linguistic relativity explains why assimilation manifests differently in English and Igbo. English permits consonant clusters and consonant-final syllables, thereby encouraging consonantal assimilation in connected speech. Igbo, on the other hand, predominantly favours vowel-final syllables and avoids consonant clusters, resulting in more frequent vowel assimilation processes. For example, consonantal coalescence occurs in English expressions such as did you → /dɪdʒu/, whereas in Igbo, coalescent assimilation occurs mainly between vowels.

The integration of Natural Phonology Theory and Linguistic Relativity therefore provides a suitable framework for this study. While Natural Phonology explains the universal nature of assimilation as a natural speech process, Linguistic Relativity accounts for the language-specific differences in its manifestation. Together, the theories demonstrate that although assimilation is universal, its operation in English and Igbo is shaped by the distinct phonological systems and linguistic structures of the two languages.

Empirical Studies

Nagy (1992) studied variation in the assimilation of Igbo vowels. Data for the study were collected from a native speaker of 'central' Igbo. The data comprised morphological, syntactic and phonological categories all derived from the recorded speech of the respondent. *The* findings of the study showed that instead of deletion, what is common in Igbo is assimilation. This, according to Nagy, is because instead of having shorter vowels as in the case of deletion, the lengths of the vowels are retained. In addition, Nagy suggests that what is common in Igbo is generally regressive assimilation, although evidence of occasional progressive assimilation exists. It was also found in the study that nasal assimilation occurs in Igbo, as shown by the example below:

/é + jè + mụ + ọrụ/ --> [éjèmọọrụ]

I go I to work = I'm en route to work

The findings of Nagy's study provide empirical evidence on assimilation in Igbo. Although categorisation of assimilation in Igbo is not part of the objectives of Nagy's study, progressive, regressive and nasal assimilations were found to be present in Igbo. However, assimilation in English and Igbo was not compared as this was beyond the study scope. This does not diminish the contribution of the study to the literature on assimilation in Igbo. Ihiunu and Kenstowicz (1994) studied Igbo vowels, including what they referred to as V-V assimilation. They concluded that assimilation in Igbo, like many other African languages, sharply reduces the number of vowel clusters that result from the combination of words into sentences. According to this source, the vowel assimilation they studied operates freely as these vowels had no "particular phrasing requirement", provided there is no "pause" between words. For instance, /ra ịkpa/ 'lick ịkpa' becomes rị ikpa/which is homophonous with /rị ịkpa/ 'climb ikpa᷆ or /re ikpa/ 'sell ikpa', among others. Although the conclusion captures some features of assimilation in Igbo, Ihiunu and Kenstowicz's (1994) study can hardly be considered a classification or comparative analysis of assimilation in English and Igbo. However, their contribution is relevant to the present study.

Maduagwu (N.D.) studied assimilation in Oghe dialect of Igbo and found that, like other dialects of Igbo Oghe manifests both progressive and regressive assimilation. However, the study showed that Oghe dialect does not have a voiced labialized velar nasal consonant, which is present in Standard Igbo. Maduagwu's findings corroborate the findings in Nagy (1992) to the extent that both progressive and regressive assimilations were found in the study. The observation that there is no voiced labialized velar nasal consonant in Oghe dialect may mean that this dialect will

manifest a different assimilation process in relation to nasal sounds. This study is also relevant to the present analysis.

Erne (2007) studied Igbo speech patterns perceptually using data collected from two Igbo dialect clusters, the Northern Igbo dialect cluster and the Inland West Igbo dialect cluster (Ikekeonwu,1987). Ezza dialect in Ezza Local Government Area and Arnaezu dialect in Ishielu Local Government Area, both in Ebonyi State, represent the Northern Igbo cluster. The Akpo dialect in Aguata Local Government Area and the Adazi-Nnukwu dialect in Anaocha Local Government Area, both in Anambra State, represent the Inland West Igbo dialect cluster. Among other things, connected speech features such as assimilation were found in the study. Eme identified both vowel and consonant assimilation, which are complete or partial, progressive or regressive as well as coalescent assimilation.

Although Erne's study is a comprehensive investigation of the speech patterns of Igbo dialects, her findings in relation to assimilation in Igbo and its categorisation are more in-depth. However, in spite of its contribution to knowledge in this area, her study scope did not include examining the assimilation process in English. Most importantly, neither Erne (2007) nor other empirical studies reviewed so far, or any other known to the researcher, has analysed the assimilation process in English and [1] Igbo. This area is the focus of this present study.

Data Analysis

The following are examples of the data on the different types of assimilation in the two languages.

Table 1: English Data

Type of Assimilation	**Examples**	**Transcription**
Complete Assimilation	Ten mice → tem mice On Monday → om Monday	/ten mais/→/tem mais/ /ɔn mΛndei/ →/ ɔm mΛndei/
Partial Assimilation	Ten bikes → tem bikes Don't be silly	/ten baiks/ → /tem baiks/ /dəunt bi sili/ → /dəum bi sili/
Progressive Assimilation	Dogs 's' → 'z' What is the time?	/dDgz/ /wDt tz ðə taim/ → / wDt s ðə taim/
Regressive Assimilation	Open bacon → opem bacon	/əʊ pən/ → / əʊ pəm

	on = the vowel /ɔ/ in 'on' becomes nasalized by the /n/ nasal sound Bank =	/ɔn/ /bæŋk/ = /n/ → /ŋ/
Coalescent Assimilation	Get you Did you	/t/ + /j/ → /tj/ /getju/ /d/ + /j/ → /dj/ /didju/
Nasal Assimilation	Men; on ring → the vowel are nasalized	/men/, /ɔn/, /riŋ/
Double Assimilation	Man	/mæn/ m → æ ← n

Assimilation in English

Table 1 above shows the various types of assimilation in English. Complete or total assimilation occurs when a sound segment takes up all the features of the sound that influenced it (Pavlik, 2009). In the above complete assimilation examples, the consonant /n/ in 'ten mice' assimilates to the consonant */m/* based on the place of articulation and acquires the features of its assimilator; hence, we have /tem mais/. The same thing is applicable to the second example on Monday. This is consonant-to-consonant assimilation.

Partial or incomplete assimilation occurs when the assimilated sound adjusts partially to the assimilator and shares some of its features. In other words, the two sounds are not identical, as the assimilated sound does not acquire all the features of the sound that assimilates it. In the English partial assimilation examples (in Table 1), the consonant /n/ changes to *1ml m* 'ten bikes' based on the place of articulation. This is because the /b/ sound in 'bikes' is a bilabial sound, and m an attempt at producing the /b/ after the /n/, /n/ acquires the bilabial quality of /b/. The consonant sound /n/ in 'don't be silly' changes to /m/, while /t/ is completely deleted.

Progressive assimilation involves influence from the left to the right. Progressive assimilation is also known as Preservative assimilation. In English, the alveolar fricative sound /s/ changes to /z/ after the velar stop /g/. For instance: Dogs /d gz/. Regressive assimilation may be referred to as anticipator) or right-to-left assimilation. In other words, assimilation is regressive when a sound assimilates the sound that occurs before it (backward). Regressive assimilation is very common in English, In English, tine alveolar syllabic nasal /n/ may become /m/ when followed by a bilabial or velar plosive in the same word or across word boundary. The vowel /0/ in 'on' becomes nasalised by the influence of the nasal /n/.

Coalescent assimilation occurs when two sounds influence one another in reciprocal assimilation. This results in a single segment which shares the features of both sound components. Emenanjo (1978, p.25) observes that the complexity involved in the process of coalescent assimilation includes the elision of some segments.

In natural languages, there are instances when a sound changes due to the influence of two sound segments on it. In other words, there is a bi-directional influence exerted by two sound segments on a particular sound segment. What this means is that the assimilation is both progressive and regressive at the same time. This is what is called double assimilation. This is why a vowel may acquire a nasal quality either from one direction (nasal assimilation), or from two directions (double assimilation).

Table 2: Igbo Data

Type of Assimilation	**Examples**	**Transcription**
Complete Assimilation Olilo nlocha	Afọ ukwu = big stomach Ụlọ anụ = animal house	Afọ ukwu → afu ukwu Ụlọ anụ → Ụla anụ
Partial Assimilation * Olilo nlofọ)	m taa = Should I eat? m kọọ = Should I tell? Ka *m* lewechi = let me look unto God	/m taa/ → /n taa/ /m kọọ → n kọọ /n kọọ / /ka m lewet*ʃ*i/ /ka n lewet*ʃ*i/
Progressive Assimilation (Olilo Ihu)	Atụrụ a = this sheep	Atụrụ a → Atụrụ ụ Eghu a → eghu u
Regressive Assimilation (Olilo Azụ)	Onye Owere = an Owerri indigene na izu – in a week na eto = is growing anụ + igbo = Igbo meat ga + iri = will eat	Onye Owere → onyo Owere na izu → ni izu n'izu na eto → ne to na-eto /aniigbo/ /giiri/

	ebe + ole = where	/eboole/
Coalescent Assimilation (Olilo Mgbochiume)	a kwa ya = is it? gbasara ya = concerns him or her	a kwa ya → /a kwia/ gbasara ya → gbasari a
Nasal Assimilation	Nri = food	/nri/ the /i/ is nasalized
Double Assimilation	Nwa m – (my child) Mwa m Nneka	/ŋwa m/ ŋwa → a ← m / ŋwa m nneka

Assimilation in Igbo Language

Table 2 above shows the various types of assimilation and some of their examples in Igbo. In Igbo complete assimilation can only be from one vowel to another or from consonant to consonant, but vowel-to-vowel is more prevalent as consonants do not end words in Igbo. In addition, consonant-to-consonant assimilation can only be regressive in Igbo when the first word ends in a syllabic nasal and the second word begins with either a nasal consonant or a syllabic nasal. In the complete assimilation examples in Table 2, we have a case of vowel assimilation. The /ọ n 'afo ukwu' assimilates to the /u/ and acquires the features of its assimilator. In 'uḷọ anụ', the /o / assimilate to /a/ and becomes like its assimilator.

Partial assimilation in Igbo occurs across word boundaries, particularly when a syllabic nasal and a consonant are involved. This is because the Igbo phonotactic rule abhors the presence of a consonant at the word final position. While partial assimilation in English involves place, manner and voice considerations, in Igbo, the place of articulation is common. In the above examples, in 'm taa', 'm kọọ' and 'm lewechi changes to /n/. These examples are referred to as partial assimilation because the assimilated sounds did not completely acquire the nature of their assimilators; rather, they only acquired the place of articulation qualities. Progressive assimilation is not very common in Igbo, although a few examples were found in the data.

These Igbo examples of regressive assimilation in Table 2 show that there is regressive assimilation in Igbo. They are also examples of complete assimilation, as the assimilated sounds acquired all the qualities of the assimilators. The vowel sounds that occur after the nasal consonant /fl/in 'na izu' have also acquired the feature of the nasal sound /m/. As for double assimilation in Igbo, its existence is supported by the example in the table above. For instance, in "nwa m', the same bidirectional assimilation occurs on/ from / /and */m/*. This indicates that the assimilation of the sounds in the examples is double in nature, as the two assimilated sounds both acquired their nasality from both sounds on each side.

Findings

The research work shows that assimilation occurs in both English and Igbo, confirming its universality, but it differs in form and distribution across the two languages. In English, assimilation is mainly consonantal and frequent in connected speech, while in Igbo it is more vowel-based due to its open syllable structure (Clark & Yallop, 1995; Roach, 2000; Nkamigbo, 2014).

Partial assimilation in English involves place, manner, and voicing, whereas in Igbo it is mainly conditioned by place of articulation, especially in vowel–nasal contexts. Progressive assimilation is more productive in English, while Igbo shows limited cases, mainly in vowel environments. Regressive assimilation is common in both languages, though English typically involves consonant changes and nasalisation, while Igbo involves vowel merging and nasal influence (Nagy, 1992; Ihiunu & Kenstowicz, 1994).

Coalescent assimilation in English is consonant-based, whereas in Igbo it is vowel-based and occurs across word boundaries. Both languages also exhibit double assimilation, though in different phonological environments. Overall, differences in syllable structure and phonotactics strongly shape assimilatory patterns in both languages.

Conclusion

The study concludes that assimilation is a universal phonological process, but its realization in English and Igbo is language-specific. English favours consonant assimilation due to its complex syllable structure, while Igbo favours vowel assimilation because of its open syllable system. These differences reflect the influence of each language's phonological structure on speech processes, supporting the view that phonological universals operate differently across languages while still maintaining shared underlying principles.

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