

Phonological Interference in Second Language Acquisition: A Study of Senior Secondary Two Students in Ibiono Ibom Local Government Area

By

Akpabio, Samuel Friday
Department of English
University of Uyo, Uyo, Nigeria
sf.akpabio@gmail.com
+2347064657219

Ene, Ndifreke Bills
Department of English
University of Uyo, Uyo, Nigeria
missbills15@gmail.com
+2347030876285

Esu, Itoro S.
Department of English
University of Uyo, Uyo, Nigeria
Itoro.esu@akwaibompoly.edu.ng
+2347063606794

Inyang, Eno-Obong Ime
Department of Linguistics and Nigerian Languages
University of Uyo, Uyo, Nigeria
enoobongiinyang@uniuyo.edu.ng
+2348120867479

Abstract

This qualitative research analysed consonantal and vowel interferences and their implications in teaching English as a second language to Ibiono Ibom Local Government secondary school students, based on the hypothetical claim that when speakers or language learners attempt to learn a second language, the linguistic properties of their first language occasionally influence the production of utterances of the target language. Adopting Robert Lado's *Contrastive Analysis Hypothesis* model as its theoretical lens, the study therefore examines how the Ibiono Ibom variety of Ibibio as a native language influences English sounds as produced by Ibiono Ibom secondary school students. Forty male and female native Ibibio SS2 students of Ibiono South Secondary School and Uduakobong Comprehensive High School, Ibiono Ibom Local Government Area were selected through simple random sampling method to participate in a reading test of forty item word list containing ten English sounds. Based on the findings made from the consonantal, monophthong and diphthong categories, three forms of phonological interference were discovered to include sound replacement, sound insertion and sound omission. There were consonantal interferences in disyllabic words as well as consonantal replacement irrespective of the content of the syllable or the position of the sound. Students also over generalised their knowledge of pronouncing the English singular present tense markers in verbs and the regular plural markers in nouns. It was further discovered that the realisation of

English monophthongs was morpho-phonemically conditioned, that lengthening feature was not a feature of the students' realisation of English monophthongs, that diphthongs were reduced to monophthongs through different gliding processes, and that diphthong realisations among the students aligned with Crystal's sound replacement as well as sound insertion interference phenomena. It was therefore recommended that the language curriculum should be designed and implemented to cater for these phonological interferences.

Keywords: Phonological, Interference, Bilingualism, Second Language Acquisition and Ibiono

Introduction

One of the issues in teaching foreign languages is interference. Interference can be seen as the transfer of phonological, grammatical, lexical, and orthographic components from one language to another (Lekova, 2010). The term 'phonological' specifically covers elements that have a foreign accent, such as stress, rhythm, intonation, and speech sounds, which are transferred from one language to another. Interference in second language acquisition describes the inaccuracy that a speaker brings into one language as a result of contacting another language (Green & Abutalebi, 2013). The native tongue usually interferes when learning a foreign language, although interference can also happen in other interaction settings, such as when a person is multilingual.

A well-known division of interference was introduced by Weinreich (1953) as cited in Sinha, Banerjee, Sinha and Shastri (2009), namely lexical, grammatical, and phonological interference. Phonological interference, as one of the types, is the most observable one because it is productive by nature. One well-known theory on this is perception-production link as postulated by Flege (1995) in his Speech Learning Model (SLM) wherein he concludes that only the different features of the language will remain as a new L2 category in learners' perception. When L2 category is different and the production is accurate, it means that the learner has perceived a new phonetic category accurately. Therefore, it is important to predict whether a learner's L1 might interfere with their L2 acquisition in order to allow better acquisition of the target language.

Phonological interference may take form in approximately three categories of interference as suggested by Crystal (2003). These categories are sound addition, sound omission, and sound replacement. The first category occurs when an L2 learner adds another sound or phoneme to the supposed phonetic form. This phenomenon might be caused by lack of exposures to the target language and lack of understanding of the target language's phonological rules (Wardani & Suwartono, 2019). This happens mostly in languages whose words are pronounced as they are written (as observed in Ibibio and most other African languages). Therefore, it is not easy to adapt to the new feature of phonology in the target language. The second category is sound omission. In this category, an L2 learner could omit phonemes where they are supposed to be pronounced. It usually occurs in pronunciation of diphthongs which are simplified to short vowels, such as home [həʊm] pronounced as [hom]. Crystal's third category of phonological interference is sound replacement. This category is identified by replacing the standard phoneme with another phoneme.

Phonological interference, as other kinds of interference, can be traced back to the mother tongue as a mechanism for analysing source of linguistic errors, which could be developmental errors, interlingual errors, ambiguous errors, and other errors (Dulay, Burt & Krashen, 1982).

The people of Ibiono Ibom are an extraction of the Ibibio people whose language is Ibibio, and is spoken in most parts of Akwa Ibom State. It therefore implies that Ibibio is the native language of the Ibiono Ibom people. Given this positioning, English constitutes a second language programme for Ibiono Ibom people, including Ibiono Ibom secondary school students.

This study is therefore designed to test the hypothetical claim that when speakers or language learners attempt to learn a second language, the linguistic properties of their first language occasionally influence the production of utterances of the target language. This is because there are psycholinguistic properties that are dormant in their brains and are activated automatically (Bullock, Toribio, Jacqueline, González, & Dalola, 2006). It is possible for such learners to make errors in pronunciation while learning a second language. This category of language learners could create utterances that are distinct from those produced by native speakers, yet they could consistently make an effort to communicate the same meaning. There are changes in their production of sounds while learning the L2 which is influenced by certain linguistic properties of these learners' L1. This phenomenon is referred to as interference (Derakhshan & Karimi, 2015).

Objectives of the Study

This study is designed to:

- i. test interference in consonantal production among Ibiono Ibom secondary school learners of English;
- ii. examine interference in vowel production among Ibiono Ibom secondary school learners of English; and
- iii. discuss the implications of phonological interference in teaching English as a second language to students of Ibiono Ibom Local Government Area.

Research Questions

The following questions are designed to guide the study:

- What are the interference phenomena in consonantal productions among Ibiono Ibom secondary school learners of English?
- What are the interference phenomena in vowel productions among Ibiono Ibom secondary school learners of English?
- What are the implications of phonological interference in teaching English as a second language to students of Ibiono Ibom Local Government Area?

Empirical Review

Many researchers have conducted studies on L1 and L2 language interference. Weda and Sakti (2017) discussed and analysed the effects of method of instruction on the acquisition of English short vowels. Their research found that method of instruction relates significantly to

the improvement of L2 learners' acquisition of English short vowels. The subjects of the study demonstrated a tendency to transcribe and use short vowels as long vowels: a tendency influenced by their L1.

Nada (2012) identified the cause of errors made by Iraq EFL students, relating it to their L1. From the study, learners rely or depend on their L1 when speaking or expressing their ideas in the L2. The main cause of this problem is a grammatical error affecting learners' written and spoken English. Akhyaruddin as cited in Utami, Wello and Atmowardoyo (2017) conducted research to analyse the interference of Bugisnese language in the learning of Indonesian language. The data is an oral language which is spoken by the students whose the mothers language is Buginese. The research found that three types of interference occur in the subjects' conversation: phonological, morphological and syntactic interferences. The interference of Buginese does not occur consciously, but as a result of an effect from daily life so that the elements of Buginese words or sentences are still employed in their communications at the school.

Bennui (2008) analysed the problems that Thai EFL learners faced with transfer phenomena in the learning process while trying to communicate their ideas. The research revealed that there was a significant level of L1 interference that represents more negative transfers than positive transfers in students' written English. In addition, the results showed the different types of errors in the use of vocabulary, phrases, clauses and sentence structure, as well as style of paragraphing. The study concluded that identifying aspects of L1 interference should be seriously considered by teachers in writing courses so that negative transfers will be reduced and positive transfers will become a useful tool for students when analysing both structures.

Bhela as cited in Derakhshan Karimi (2015) provided a broader experimentation carried out on the writing of young school-aged children who requested some help with schoolwork from time to time. There were 4 participants in the study. Two sets of sequential pictures were given to them and they were asked to write a story beginning with the first picture and ending with the last picture. They were to write individually without any group interaction initially and after an individual attempt, they could interact with each other if they wish. They were to write in second language and then write the same story a second time in the native language. After that they were asked to write a story with second sets of pictures both in English and native languages. This provided a broader base for the analysis of the errors made and provided a suitable sample of written performance. After the writing tasks, they explained why they used a specific structure in L1 and L2 in an individual interview. Four learners had errors in both L1 and L2 texts, as found out by the analysis of the results. An error made in L2 showed a lack of understanding of L2 and the learners used the L1 form in L2, thereby making errors in L2.

Chukwuokoro, Nwode &Nwokwu (2022) examine the phonological difficulties posed by linguistic interference and language transfer in the study of English as a second language in Ohaozara. They found that phonological constraints among Ohaozara-English bilinguals are as a result of the disparities in the phonological features of Ohaozara dialect of Igbo language and the English language but proposed that these barriers can be minimised if a contrastive study of Ohaozara dialect of Igbo and English languages is constantly carried out.

In conclusion, this review has revealed the effects of first language in second language acquisition. The review has shown how the first language interferes with the second language. These interference phenomena are rooted in factors such as the similarities and differences in

the structures of two languages, the age of the L2 learner, background knowledge of the learner, proficiency of learners on second languages, and the structures of consonant and vowels in L1 and L2. These factors combined can pose either a positive or negative transfer. L1 facilitates L2 acquisition if the structures of two languages are similar but poses a negative transfer if the structures of two languages are different. This tendency is without pedagogical implications. While failure to treat positive phonological interference phenomena may not be detrimental to achieving positive behavioural outcomes, in L2 learners, that would not be the same as negative phonological interference phenomena may yield conspicuously gruesome behavioural outcomes in L2 phonological performances.

Theoretical Framework: Contrastive Analysis Hypothesis Model

Through relatively a theory of linguistics Contrastive Analysis as an aspect of comparative linguistics has garnered much importance over the years. Given its premium in comparative linguistics, Contrastive analysis seeks to compare two or more languages, with the aim of describing their similarities and difference. This particularly holds true as contrastive analysis has often been done for practical/ pedagogical purposes. The aim has been to provide better descriptions and better teaching materials for language learners. It however, follows that there is more to Contrastive Analysis (CA) than this.

Contrastive Analysis was propounded by Robert Lado in his book “Linguistic Across Cultures” (1951) and the theory came into existence to identify the areas of difficulty a particular foreign language will present for natives’ speaker of other languages by systematically comparing the two languages and cultures. Lenon (2008).

According to Lenon (2008), Contrastive Analysis focused on a surface comparison of languages starting with sounds, then the grammar and finally and only selectively the vocabulary. This emphasis reflected the focus of American linguistics at the time, which was still very much under the influence of structuralism as propounded by the great American structuralist, Bloomfield in “Language (1933). Contrastive analysis also addresses the effects of L1 on L2.

Weinreich as cited in Ahemefula (2015) avers that “it is the conclusion of a common experience, if not yet a finding of psycholinguistic research that the language which has been learnt first or the mother tongue, is in a privileged position to resist interference” in respect to this, Oluipke and Udegbuma as cited in Ahemefula (2015) propounded two basic theories of interference: positive and negative interference. Language interference is positive when the L1 closely approximates the structure in the L2 and it is negative when a structure in the L2 is lacking in L1

Meanwhile, Oyemelukwe and Anidobe as cited in Ahamefula (2015) identify three kinds of interference L1 and L2. They are positive, neutral and negative interference. The neutral interference occurs where prior linguistic performance has no effect on subsequent language acquisition. By implication, Contrastive Analysis is to predict the possible difficulties a learner(s) may encounter in learning their L2 thereby providing inputs to pedagogy.

Research Methodology

This paper adopts a qualitative research method. The aim of this study is to demonstrate how Ibibio (the L1 of native Ibibio SS2 students of Ibiono South Secondary School and

Uduakobong Comprehensive High School, Ibiono Ibom Local Government Area) poses phonological interference influences in the acquisition of English.

Ibiono South Secondary School is a public secondary school with students drawn mainly within the local and surrounding communities. Uduakobong Comprehensive high School is however a private secondary school with students drawn within the local communities and the neighbouring Uyo town.

The participants tested in this study were natives of Ibiono Ibom Local Government Area. The people of Ibibio speak a dialect of the Ibibio language, one of the Lower Cross languages. The study adopted simple random sampling method in the selection of the research's population.

A total of forty (40) students were drawn to constitute the population of this study. Twenty (20) students each were selected from Ibiono South Secondary School and Uduakobong Comprehensive High School in Ibiono Ibom Local Government Area. The data which contained a total of 10 (ten) English sounds including 4 (four) consonants: /z, v, dʒ, g/, 3 (three) monophthongs: /ə, ɜ:, u:/ and 3 (three) diphthongs: /ʊə, eə, ɪə/ was administered through a reading test containing 40 (forty) item word list.

Each participant was guided to study the word list before being asked to read the words aloud at least twice. Their responses were subsequently transcribed and recorded in a notepad for further reviews and documentation. The instruments were validated by the research supervisor before they were approved to be used for the study.

The data were collected following Crystal's (2003) phonological interference categories, namely: sound addition, sound omission and sound replacement. To achieve the aim of this study, ten (10) problematic English sounds constituting (four (4) consonants (/v, dʒ,z,g/), three (3) monophthongs (/ɔ:, u:, ɜ:/ and three (3) diphthongs (/ɪə, eə, ʊə/), which are not present in Ibibio, as one of the Nigerian languages, constituted the range of variables tested on the participants of this study.

The data were analysed through the adoption of Crystal (2003) and Weinreich's (1963) models of phonological interference theory. Crystal (2003) divides phonological interference into three categories, namely: sound addition, sound omission and sound replacement. Weinreich postulates that phonological interference occurs when in the process of speaking a second language, the resulting phonemes tend to be adjusted to the phonetic rules of the first language system. Gries' (2011) case study was also used as one of the theoretical lenses to aid the interpretations of the data. According to Gries, a case study is a type of empirical inquiry that examines a current phenomenon in its actual environment, particularly when the lines separating the phenomenon from its environment are not immediately apparent.

DATA PRESENTATION, RESULTS AND DISCUSSION OF FINDINGS

Data Presentation

The data presented in this section were administered to a total of forty (40) (male and female) SS2 Ibibio native students. Twenty (20) students each were selected from Ibiono South Secondary School and Uduakobong Comprehensive High School in Ibiono Ibom Local Government Area.

The data which contained a total of 10 (ten) problematic English sounds including 4 (four) consonants: /z, v, dʒ, g/, 3 (three) monophthongs: /ə, ɜ:, u:/ and 3 (three) diphthongs: /ʊə, eə, ɪə/ was administered through a Reading Test containing 40 (forty) item word list. The results were shown in tables 4.2.1, 4.2.2 and 4.2.3.

4.1.1 Consonant Reading Test

S/NO	/dʒ/	/v/	/z/	/g/
1.	joy /dʒɔɪ/	very /verɪ/	begs /begz/	great /greɪt/
2.	job /dʒɒb/	server /sɜ:və/	pushes /pʊʃɪz/	glory /glɔ:rɪ/
3.	junction /dʒʌŋkʃən/	vision /vɪʒən/	misses /mɪsɪz/	grow /grəʊ/
4.	junior /dʒu:nɪə/	victor /vɪktə/	boys /bɔɪz/	grammar /græmə/
No. of Participants	10	10	10	10

4.1.2 Monophthong Reading Test

S/NO	/ə/	/ɜ:/	/u:/
1.	amoeba /əmi:bə/	word /wɜ:d/	tooth /tu:θ/
2.	doctor /dɒktə/	fur /fɜ:/	wood /wu:d/
3.	after /æftə/	turn /tɜ:n/	rude /ru:d/

4.	particular /pə'tɪkjələ/	learn/lɜ:n/	food /fu:d/
No. of Participants	10	15	15

4.1.3 Diphthong Reading Test

S/NO	/ʊə/	/eə/	/ɪə/
1.	pour/pʊə/	fair /feə/	weird/wɪəd/
2.	sure /ʃʊə/	air /eə/	fear /fɪə/
3.	lure/lʊə/	scare /skeə/	dear /dɪə/
4.	tour /tʊə/	chair /tʃeə/	near /nɪə/
No. of Participants	15	15	10

4.2 Results

4.2.1 Consonant Reading Test Results

Students' realisation of /dʒ, v, z, g/.

S/NO	Words		/dʒ/ → /j/	Word	/v/ → /f/	Word	/z/ → /s/		Word	
1.	Joy	/dʒɔɪ/	•	very	/veri/	/ferɪ/	begs	-	/begs/	great
2.	Job	/dʒɒb/	-	server	-	/sefæ/	pushes	-	/pʊʃɪs/	glory
3.	junction	/dʒʌŋkʃən/	/jʌŋkʃən/	vision	/vɪʃən/	/fɪʃən/	misses	-	/mɪsɪs/	grow
4.	junior	/dʒuniə/	/juniə/	victor	/vɪktə/	/fɪktə/	boys	-	/bɔɪs/	grammar
Responses		7	3		4	6		0	10	

4.2.2 Monophthong Reading Test Results

Students' realisation of /ə, ɜ:, u:/

S/NO	Word	/ə/ → /æ/ → /ɒ/			Word	/ɜ:/ → /e/ → /ɔ/			Word	/u:/→/ʊ/	
1.	amoeba		/æmɒebæ/	-	word	-	-	/wɒd /	tooth	-	/tʊθ/
2.	Doctor	-	-	/dɒktɒ /	fur	-	-	/fɔ/	wood	-	/wʊd /
3.	After	-	/æftæ/	-	turn	-	-	/tɔn/	rude	-	/rʊd/
4.	particular	-	/pætɪkulæ /	-	learn	-	/len /	-	food	-	/fʊd/

Response s		0	10	10		0	10	10		0	10
-----------------------	--	---	----	----	--	---	----	----	--	---	----

4.2.3 Diphthong Reading Test Results

Students' realisation of /ʊə, eə, ɪə/.

S/NO	Word	/ʊə/→/ʊɔ/→/ɔ/→/ɪə/				Word	/eə/→/e/		Word	/ɪə/ →/ɪe/	
1.	Pour	-	/pʊɔ/	-	-	fair	-	/fe/	weird	-	/wɪed/
2.	Sure	-	-	/ʃɔ/	-	air	-	/e/	fear	-	/fiə
3.	Lure	-	-	-	/liɔ/	scare	-	/ske/	dear	-	/diə/
4	Tour	-	-	/tɔ/	-	chair	-	/tʃe/	near	-	/niə/
Responses		0	10	10	10		0	10		0	10

Discussion of Findings

Firstly, the results of table 4.2.1 indicate that there are phonological interferences resulting in the realisation of [dʒ] as [j], [v] as [f], [z] as [s] and [g] as [k] as shown in the words “joy”, “job”, “junction”, “junior”, “very”, “server” “vision” “victor”, “begs”, “pushes”, “misses”, “boys”, “great”, “glory”, “grow” and “grammar”.

The results indicate that only 3 out of the 10 students tested on the realisation of [dʒ] demonstrated phonological interference by realising [dʒ] as [j]. 7 students realised [dʒ] correctly except in the words “junction” and “junior”. The results suggest that while [dʒ] may not pose phonological interference in monosyllabic words (as shown in ‘joy’ and ‘job’) to students of Ibiono Ibom Local Government Area, the reverse is the case with disyllabic words (as shown in ‘junction’ and ‘junior’). In this case, students would likely replace [dʒ] with [j].

Regarding the realisation of [v], the test's respondents demonstrated a high tendency to replace [v] with [f] irrespective of the content of the syllable or the position of the sound. They seemed to alternate between the realisation of [v] and [f] freely such that there was no clear difference between the two phonemes as shown in ‘very’, ‘vision’ and ‘victor’. The results suggest that the test's respondents do not assume it wrong to say *ferry, *fision or *fictor respectively for ‘very’, ‘vision’ or ‘victor’. As indicated by the absence of any respondents giving the correct realisation of [v] in ‘server’, disyllabic words would constantly undergo the realisation of [v] as [f] when [v] is in syllable medial position.

One other conspicuous manifestation of phonological interference among Ibiono Ibom Local Government Area students is noticeable their pronunciation of the singular present tense markers in English verbs as well as the regular plural markers in nouns. These inflectional elements which manifest as suffixes (generally marked as “-s”) have three levels of phonetic realisation:

- (a) “-s” becomes [s] after a voiceless consonant;
- (b) “-s” becomes [z] after a voiced sound;
- (c) “-s” becomes [ɪz] after a fricative consonant.

Following *CONDITION C*, the test’s results for [z] show a clear phonological interference from the respondents’ realisation of [z] as [s]. None of the items tested on “begs”, “pushes”, “misses” or “boys” supports *CONDITION A* rather, while ‘begs’ and ‘boys’ support *CONDITION B* (that is having a voiced [g] and [ɔɪ] respectively), ‘pushes’ and ‘misses’ support *CONDITION C* (that is having the final fricatives [ʃ] and [s] respectively). However, the respondents clearly demonstrated their knowledge of *CONDITION A* and hence over generalised their knowledge to overwhelm *CONDITIONS B, C*. This phonological error is suggestive of the respondents’ absence of [z] in their L1, thus the ease of the replacement. All 10 respondents are categorised under this phonological interference phenomenon.

Recourse to the realisation of [g], the test’s respondents showed a potency to replace [g] with [k]. They alternated freely between the realisation of [g] and [k]. They could not differentiate between the two phonemes. As demonstrated in the words ‘great’, ‘glory’, ‘grow’ and ‘grammar’, the results suggest that the test’s respondents did not assume it wrong to say *kreat, *klory, *krow and *krammar respectively for great’, ‘glory’, ‘grow’ and ‘grammar’ in syllable initial position.

Secondly, the results in table 4.2.2 are significant manifestation of phonological interferences in the realisation of the English monophthongs [ə] as [æ] or [ɒ], [ɜ:] as [e] or [ɔ:] and [u:] as [ʊ] among the test’s respondents, as shown in the words “amoeba”, “doctor”, “after”, “particular”; “word”, “fur”, “turn”, “learn”; “tooth”, “wood”, “rude”, “food”.

Accordingly, none of the respondents showed an accurate realisation of [ə], rather they either realised [ə] as [æ] or [ɒ] as proven in the four test items ‘amoeba’, ‘doctor’, ‘after’ and ‘particular’. Among the respondents, the realisation of [ə] as [æ] or [ɒ] is *morpho-phonemically conditioned*:

- a) [ə] becomes [æ] if [ə] is used to represent the “-er/a(r)” morpheme in open syllable, as demonstrated in ‘amoeba’, ‘after’, ‘particular’;
- b) [ə] becomes [ɒ] if [ə] is used to represent the “-or” morpheme in open syllables.

As demonstrated in ‘amoeba’, ‘after’, ‘particular’ or a case of ‘particular’ in (b), these phonological interference phenomena are because of the absence of the schwa in respondents’ phonological L1. In effect, they replaced the schwa with such assumed closely related sounds as [æ] and [ɒ].

For the realisation of [ɜ:], the results showed that respondents could not realise [ɜ:] rather, they alternated the realisation of [ɜ:] between [e] and [ɔ:]. Their alternative is however suggestive of being morpho-phonemically conditioned:

- a) [ɜ:] becomes [e] if it is represented by the “-ear” grapheme, as shown in “learn”;
- b) [ɜ:] becomes [ɔ] if it is represented by the “-or/ur” grapheme, as shown in “word”; “fur” and “turn”.

In other words, the realisation of [ɜ:] is morphologically conditioned: it is the morphological shape of the word that conditions what alternation of [ɜ:] is realisable. 10 out of 10 respondents clearly corroborated claims (a) and (b). Again, this phonological interference phenomenon is founded in the absence of [ɜ:] in L1 vowel chart of the respondents. Even the equivalents [e] and [ɔ] are noticeably realised without the lengthening feature in [ɜ:]. That is, [ɜ:] is no longer available as a long vowel but as a short [e] or [ɔ].

On the last section of the test on vowel interference, [u:] was observed to be realised as [ʊ]. All of the respondents’ responses indicated that they did not have a place for the long [u:]. As shown in the test’s items on “tooth”, “wood”, “rude” and “food”, the results are suggestive that the respondents do not have the long [u:] vowel in their vowel chart, hence the subscription of [u:] for [ʊ].

Finally, the discussion based on the results in table 4.2.3 reveals different phonological interference phenomena bothering on the realisation of English diphthongs, specifically diphthongs [ʊə], [eə] and [ɪə]. The test results indicated that there were realisations of these phonemes recourse to the no availability of the phonemes in the respondents’ vowel chart.

From the perspective of the realisation of [ʊə], no respondents realised the sound in any of the test’s items administered on them. Rather, in the words “pour”, “sure”, “lure” and “tour”, the respondents assumed three different kinds of realisation of [ʊə]:

- a) [ʊə] becomes [ʊɔ] in the word ‘pour’.
- b) [ʊə] becomes [ɔ] in the words ‘sure’ and ‘tour’.
- c) [ʊə] becomes [ɪɔ] in the ‘lure’.

The varying realisation of [ʊə] as [ʊɔ], [ɔ] or [ɪɔ] by the respondents aligns with Crystal’s sound replacement phonological interference. This category is identified by replacing the standard phoneme [ʊə] with another phoneme [ʊɔ], [ɔ] or [ɪɔ] in which each case is identifiable in Ibibio.

For the realisation of [eə], all the respondents demonstrated again Crystal’s sound replacement interference phenomenon. From the test’s items in this category, they replaced [eə] with [e] to pronounce fair as /fe/, air as /e/, scare as /ske/ and chair as /tʃe/. This implies that the native students of Ibiono Ibom Local Government Area do not have diphthong [eə] in their L1 vowel repertoire, and so the paramount need to alternate [eə] with its assumed equivalent monophthong [e].

Finally, in the realisation of [ɪə], there was a change in the gliding process of [ɪə] whereas the sound glided from [ɪ→e] thereby giving rise to the realisation of [ɪə] as [ɪe]. By implication, the respondents assumed the alternative pronunciation of diphthong [ɪə] in the test’s items as follows: weird /wɪed/, fear /fiɛ/, dear /diɛ/ and near /niɛ/.

From this discussion on diphthongs, two clear nuances are inferable. Diphthongs are:

- a) reduced to monophthongs as shown in the weight reduction of [ʊə] to [ɔ] and [eə] to [e] respectively;

- b) changed forms with different monophthongs gliding with the onset monophthong in the diphthong as shown in the gliding processes of [ʊə] and [ɪə]. However, the sounds glided from [ʊ→ɔ], [ɪ→ɔ] and [ɪ→e] respectively thereby giving rise to the realisation of [ʊə] as [ʊɔ] or [ɪɔ] and [ɪə] as [ɪe] respectively.

In effect, diphthong realisations among the study's respondents tend to be tilted towards Crystal's sound replacement as well as sound insertion interference phenomena. While the weight reduction of [ʊə] to [ɔ] and [eə] to [e] indicates Crystal's sound replacement, the gliding changes in [ʊə] and [ɪə] indicate Crystal's sound insertion.

Implications in Teaching English as a Second Language

This discussion has underpinned some underlying impacts of the first language on the acquisition of English as a second language. It has been shown that the phonological system of a first language interferes with the second language. The study therefore aligns with Weda and Sakti's (2017) identification of effects of the similarities and differences in the phonological system of two languages, the background knowledge of the learner and the proficiency of learners on second languages. The study also agrees with Bennui's assertion that similarities between L1 and L2 pose fewer problems and fewer errors in acquisition of L2. Where there are however no or little similarities of the structures of both first language and second language, the learner is faced with a lot of problems in L2 acquisition.

Finally, the study follows Udofot and Eshiett's recommendations that L2 instructors should be forearmed to adopt and incorporate utilisable instructional methods aimed at addressing these phonological interference phenomena. Instructors should account adequately for tendencies of negative transfers and evaluate how these phenomena may mar their instructional objectives, aims and goals since failure to recognise negative phonological interference phenomena may yield conspicuously gruesome behavioural outcomes in learners' phonological performance in learning English as a second language.

Summary of Findings and Conclusion

Based on the findings made from the consonantal, monophthongal and diphthongal categories, three forms of phonological interference analysed in this study have shown that there are cases of sound replacement, insertion and omission among Ibiono Ibom native student speakers.

Regarding consonantal production, there are phonological interferences resulting in the realisation of [dʒ] as [j], [v] as [f], [z] as [s] and [g] as [k]. While [dʒ] may not pose phonological interference in monosyllabic words, the reverse is the case with disyllabic words. In this case, the students would replace [dʒ] with [j]. There is also a high tendency to replace [v] with [f] irrespective of the content of the syllable or the position of the sound. Similarly, they seem to alternate between the realisation of [v] and [f] freely such that there is no clear difference between the two phonemes. Disyllabic words also constantly undergo the realisation of [v] as [f] when [v] is in syllable medial position.

Another conspicuous manifestation of phonological interference in consonantal productions is the pronunciation of the singular present tense markers in English verbs and the regular plural markers in nouns. The students overgeneralise their knowledge of "-s" becoming [s] after a voiceless consonant to overwhelm any instance of "-s" becoming [z] after a voiced

sound or [ɪz] after a fricative consonant. This phonological error arises from the absence of [z] in the students' L1. Finally, there is a free distribution between the realisation of [g] and [k].

Next, the study demonstrates phonological interferences in the realisation of the English monophthongs [ə] as [æ] or [ɒ], [ɜ:] as [e] or [ɔ:] and [u:] as [ʊ]. The students either realised [ə] as [æ] or [ɒ]. This is morpho-phonemically conditioned since [ə] is assumed to be [æ] if it is used to represent the “-er/a(r)” morpheme in open syllables or [ɒ] if it is used to represent the “-or” morpheme in open syllables.

There is also the free distribution of [ɜ:], [e] and [ɔ:]. This is also morpho-phonemically conditioned since [ɜ:] is assumed to be [e] when it represents “-ear” grapheme or [ɔ] when it represents the “-or/ur” grapheme. This phonological error is caused by the absence of [ɜ:] in the students' L1 vowel inventory. The alternative [e] and [ɔ] also lack the lengthening feature of [ɜ:], which is not a feature of the students' L1. There is also the free distribution for [u:] and [ʊ]. The respondents' responses indicated that they did not have a place for the long [u:], hence the free distribution of [u:] and [ʊ].

Finally, this study has revealed different phonological interference phenomena bothering on the realisation of English diphthongs, specifically diphthongs [ʊə], [eə] and [ɪə] recourse to the non-availability of these phonemes in the students' vowel repertoire. The varying realisation of [ʊə] as [ʊɔ], [ɔ] or [ɪɔ] is identifiable in Ibibio. Similarly, the replacement of [eə] with [e] implies that the native students do not have diphthong [eə] in their L1 vowel inventory, so they assume [eə] to be [e]. The realisation of [ɪə] would undergo a gliding process where [ɪə] glides from [ɪ→e], thereby giving rise to the realisation of [ɪə] as [ɪe].

Summarily, diphthongs are reduced to monophthongs as shown in the weight reduction of [ʊə] to [ɔ] and [eə] to [e] respectively. Diphthongs undergo different gliding processes to become monophthongs as shown in the gliding processes of [ʊə] and [ɪə], whereas the sounds glide from [ʊ→ɔ],[ɪ→ɔ] and [ɪ→e] respectively thereby giving rise to the realisation of [ʊə] as [ʊɔ] or [ɪɔ] and [ɪə] as [ɪe] respectively. This pattern of diphthong realisations among the students aligns with Crystal's sound replacement as well as sound insertion interference phenomena. While the weight reduction of [ʊə] to [ɔ] and [eə] to [e] indicates Crystal's sound replacement, the gliding changes in [ʊə] and [ɪə] indicate Crystal's sound insertion.

Conclusion

The thrust of this study has been on the analysis of consonantal and vowel interferences as well as their implications in teaching English as a second language to Ibiono Ibom Local Government secondary school students. The study aims at analysing the hypothetical claim that when speakers or language learners attempt to learn a second language, the linguistic properties of their first language occasionally influence the production of utterances of the target language. There are changes in their production of sounds while learning the L2 which is influenced by certain linguistic properties of their L1. The study therefore examines how the Ibiono Ibom variety of Ibibio as a native language influences English language sounds as produced by Ibiono Ibom secondary school students. Based on the findings made from the consonantal, monophthongal and diphthongal categories, three forms of phonological interference have been discovered to include sound replacement, sound insertion and sound omission.

Regarding consonantal production, there are phonological interferences in the realisation of [dʒ], [v], [z] and [g]. [dʒ] mostly poses phonological interference in disyllabic words and

causes the students to replace [dʒ] with [j]. Irrespective of the content of the syllable or the position of the sound, they replace [v] and [f] freely.

However, the students overgeneralise their knowledge of “-s” becoming [s] after a voiceless consonant to overwhelm any instance of “-s” becoming [z] after a voiced sound or [ɪz] after a fricative consonant in the pronunciation of the English singular present tense markers in verbs and the regular plural markers in nouns ____ an error traceable to the absence of [z] in the students’ L1. There is also a free distribution between the realisation of [g] and [k].

The study also discovers phonological interferences in realising the English monophthongs [ə], [ɜ:] and [u:]. The realisation of [ə] is morpho-phonemically conditioned since [ə] is assumed to be [æ] if it is used to represent the “-er/a(r)” morpheme in open syllables or [ɒ] if it is used to represent the “-or” morpheme in open syllables. The realisation of [ɜ:] is also morpho-phonemically conditioned since [ɜ:] is assumed to be [e] when it represents “-ear” grapheme or [ɔ] when it represents the “-or/ur” grapheme. This phonological error is caused by the absence of [ɜ:] in the students’ L1 vowel inventory. The alternative [e] and [ɔ] also lack the lengthening feature of [ɜ:], which is not a feature of the students’ L1. The students do not have a place for the long [u:], hence the free distribution of [u:] and [ʊ].

Finally, this study has revealed different phonological interference phenomena bothering on the realisation of English diphthongs, specifically diphthongs [ʊə], [eə] and [ɪə] recourse to the non-availability of these phonemes in the students’ vowel repertoire. Diphthongs are reduced to monophthongs as shown in the weight reduction of [ʊə] to [ɔ] and [eə] to [e] respectively. Diphthongs undergo different gliding processes to become monophthongs as shown in the gliding processes of [ʊə] and [ɪə] whereas the sounds glide from [ʊ→ɔ], [ɪ→ɔ], and [ɪ→e] respectively thereby giving rise to the realisation of [ʊə] as [ʊɔ] or [ɪɔ] and [ɪə] as [ɪe] respectively. This pattern of diphthong realisations among the students aligns with Crystal’s sound replacement as well as sound insertion interference phenomena. While the weight reduction of [ʊə] to [ɔ] and [eə] to [e] indicates Crystal’s sound replacement, the gliding changes in [ʊə] and [ɪə] indicate Crystal’s sound insertion.

References

- Ambalegin, A., & Hulu, F. (2019). EFL learners' phonological interference of English articulation. *Journal Basis* 6(2), 145-154. Retrieved from <https://doi.org/10.33884/basisupb.v6i2.1415>
- Astuty, A. (2022). Phonological interferences in the English of Buginese students. *International Journal of Research on English Teaching and Applied Linguistics*, 3(1), 53 – 59.
- Aulia, V. (2018). Identifying the problems of Banjarese speaking students in learning English pronunciation. *Journal of English Language Studies*, 3(1), 1-17.
- Beardsmore, H. B. (1982). *Bilingualism*. Tieto: Avon.
- Bennui, P. (2008). A study of L1 interference in the writing of Thai EFL students. *Malaysian Journal of ELT Research*, 4, 205-212.
- Best, C. (1994). The emergence of native-language phonological influence in infants: A perceptual assimilation model. In H. Nusbaum, J. Goodman, & C. Howards (Eds.), *The transition from speech sounds to spoken words: The development of speech perception* (pp. 167-224) Cambridge MA: MIT Press.
- Bullock, B., Toribio, E., Almeida J., González, V., & Dalola, A. (2006). Language dominance and performance outcomes in bilingual pronunciation. In M. G. O'Brien, C. Shea, & J. Archibald (Eds.), *Proceedings of the 8th generative approaches to second language acquisition: The Banff Conference* (pp. 9-16). Somerville, MA: Cascadilla.
- Chukwuokoro, I., Nwode, G., & Nwokwu, F. (2022). Linguistic interference and language transfer as constraints in the phonological study of English as a second language in Ohaozara. *International Journal of Humanitatis Theoreticus*, 6 (1), 80-87.
- Crystal, D. (2003). *English as a global language*. Cambridge: Cambridge University Press.
- Derakhshan, A. & Karimi, E. (2015). The interference of first language and second language acquisition. *Journal of Theory and Practice in Language Studies*, 5(10), 2112-2117. Retrieved from <http://dx.doi.org/10.17507/tpls.0510.19>
- Flege J. (1999). Second language speech learning: Theory, findings, and problems. In W. Strange (Ed.), *Speech perception and linguistic experience: Issues in cross language research*, (pp. 233-273). Baltimore: York Press.
- Flege, J. (1995). Second language speech learning: Theory, findings, and problems. In W. Strange (Ed.), *Speech perception and linguistic experience: Issues in cross-linguistic research* (pp. 233-277). Timonium, MD: York Press.
- Green, D., & Abutalebi, J. (2013). Language control in bilinguals: The adaptive control hypothesis. *Journal of Cognitive Psychology*, 25(5), 515-520.
- Gries, S. T. (2011). Phonological similarity in multi-word units. *Cognitive Linguistics*, 22(3), 476-491.

- Guenther, F., & Vladusich, T. (2012). A neural theory of speech acquisition and production. *Journal of Neurolinguistics*, 25(5), 41-60.
- Hancin, J. Bhatt, K. (1994). Segment transfer: A consequence of a dynamic system. *Second Language Research*, 10, 241-269.
- Hayati, M. (1998). A contrastive analysis of English and Persian stress. *Papers and Studies in Contrastive Linguistic*, 34, 53-72.
- Karimi, E.& Derakhshan, A., (2015). The interference of first language and secondlanguage acquisition: Theory and practice in language studies. *International Journal of Research on English Teaching and Applied Linguistics*, 5(10), 2112-2117.
- Lekova, B. (2010). Language interference and methods of its overcoming in foreign language teaching. *Trakia Journal of Sciences*, 8(3), 321-322.
- Muhassin, M., Ansar, F.,& Putri, P. (2018). Phonological interference of Madurese towards English at the eleventh students of SMA Al Hikam Bangkalan East Java. *Tadris Bahasa Inggris Journal of English Education*, 11(2), 144-159.
- Nada, R. (2012). The effects of EFL learners' mother tongue on their writings in English: An error analysis. *Iraq Journal of the College of Arts*, 25(2), 41-51.
- Nation, P. (2001). The role of the first language in foreign language learning. *Asian EFL Journals*, 32(3), 177-175.
- Nwode, C., Azubuike, P., & Egwu, U. (2022). Mother-tongue interference and clashing phonetic and phonological manifestations in speeches of Eghugbonon-native speakers of English. *Journal of Social Sciences and Humanities*, 1, 66-72.
- Suryani, M. (2018). Mother tongue affecting the English vowel pronunciation of Batak Toba adults. *Proceedings of the 1st Annual International Conference on Language and Literature*, (pp. 66-80). Medan: KnE Social Sciences & Humanities. Retrieved from <https://doi.org/10.18502/kss.v3i4.1920>
- Udofot, I. & Eshiett, B. (2009). *An oral English course for schools and colleges*. Ikot Ekpene: DEVCONSORT Press.
- Utami, D., Wello, B., & Atmowardoyo, H. (2017). The Phonological Interference of Students' first Language in Pronouncing English sounds: A case study of Buginese and Makassarese students. *ELT Worldwide*, 4(2), 2503-2291
- Utin, I.D. (2024). The Pronunciation of English Long Vowel Sounds by Final Year Students of Akwa Ibom State University. *BW Academic Journal*, 11-11, 2024.
- Utin, I.D. (2016). Information and Communication Technology: A Tool for the Teaching and Learning of the English Language in the Open Educational Resources Development in Nigeria. *International Journal of Academia* 1(1), 78-87.

- Utin, I. D. (2023). Spoken English and the Nigerian Identity: An Analysis of the Features of the Annang Accent of English. *Sapientia Global Journal of Arts, Humanities and Development Studies*. 6 (4), 2023.
- rdani, N. & Suwartono, T. (2019). Javanese language interference in the pronunciation of English phonemes. *Journal of Culture, English Language Teaching, Literature, & Linguistics*, 6(2), 14-25.
- Weda, S. & Sakti, F. (2017). The effect of formal instruction on the acquisition of English short vowels. *International Journal of Science and Research (IJSR)*, 6(5), 36-46.
- Weinreich, U. (1963). *Languages in contact: Findings and problems*. The Hague: Mouton & Co.
- Wells. J. (2000). Overcoming Phonetic Interference. *Journal of the English Phonetic Society of English Phonetic Society of Japan*, 3, 9-21.