

A Contrastive Analysis of consonantal phonemes and Phonotactics of Igbo and Ijọ (Izọn)

Ndubuisi Ogbonna Ahamefula

ndubuisi.ahamefula@unn.edu.ng

and

Olusanmi Babarinde

olusanmi.babarinde@unn.edu.ng

*Department of Linguistics and Nigerian Languages,
University of Nigeria, Nsukka*

Abstract

This study examines a contrastive analysis of the phonology of the Igbo and the Ijọ languages. While Igbo is a major and national language predominantly spoken in the south-eastern region of Nigeria, Ijọ is a minority language in the Niger-Delta region. The paper analyses the different phonological structures of the two languages within the theoretical framework of the Contrastive Analysis. Descriptive method is used to analyse data obtained through interviews using purposive sampling. The study discovers that Contrastive Analysis is prognostic; learner-oriented and focuses on the language pedagogic needs of the Second Language or Alternate Language learner which in-turn provides input for the curriculum design for the L₂ or AL learner. Several areas that may pose learning problems for the Ijọ learner of Igbo and vice versa are identified at segmental, syllable, and tonal levels. These pedagogic problems are predicted based on the differences that exist in the phonology of the two languages. The nasalized vowels of Ijọ and some aspects of the Ijọ phonotactics would constitute areas of difficulty for the Igbo learner of Ijọ. This study is imperative given the large population of Igbo and Ijọ speakers in the Niger-Delta and south-eastern regions respectively for some reasons due to proximity.

Keywords: Ijọ, Igbo, language learner, language pedagogy, phonemes, phonotactics

Introduction

Each language of the world has its own unique sound system and how these sounds are organised following certain permissible phonotactic or distributional patterns allowed by the linguistic rules. As such, no two languages of the world are exactly the same; however, they may share some similarities.

Humans have the need to acquire or learn other languages for some reasons like academic, business, marriage, migration, crisis/war, etc. and they need to meet their communicative needs within the new environment. These necessitating factors have motivated applied linguists to get involved in the investigation of the first language (L₁) and second language (L₂) in order to understand the learning dynamics and learner challenges. Any native speaker of the Igbo language will encounter some difficulties in learning the Ijọ language as L₂ or alternate language (AL) and vice versa. This is as a result of the phonological differences between the mother tongue and the target language. Thus, the inherent sound system of the L₁ may pose a problem in learning the L₂ or AL.

This study will be of great value for AL learners of both languages especially students that are native speakers of Igbo that are confronted with learning Ijọ whether in the primary schools or secondary schools as well as those learning Ijọ as AL in the higher institutions. The same applies to the native speakers of Ijọ learning Igbo as AL.

In other words, structures in the mother-tongue (MT) or L₁ influence or interfere with the learners' capability to produce structures in the target language or L₂. Bell (1981) opines that those who strongly hold this view that the deviant behaviour of the L₂ learner is consequent upon the transfer of the habits of L₁ into the L₂ belong to the school of CA.

Thus, CA is seen as highly predictive such that it is believed that a Contrastive Analysis of two languages will assist the teacher have a greater understanding of the pedagogic problems the intending language learner will encounter ever before he sets out to learn the language. Haspelmath (2010) adds credence to the assumptions of CA that the most efficient teaching materials are those that rely on a scientific description of the target language. Such materials should be carefully compared with a parallel description of the source language. It is believed that similarities between the mother tongue or first language and the target language (TL) will bring about facilitation in learning while difference between the mother tongue or first language and the target language will bring about interferences. The foregoing forms the premise for this study.

The Igbo language (Nigeria, New Benue Congo) is spoken predominantly in the South East of Nigeria. Ijo, the second language of our study (Nigeria, Niger-Congo: Ijoid), is a language spoken in Niger Delta States of Nigeria where it has a very large group of speakers. The study examines a contrastive analysis of the phonology of the Igbo and Ijo languages with a view to identifying the differences and similarities that exist in both languages at segmental and auto-segmental levels. This will enable us identify the pedagogic problems which an Igbo native speaker will encounter in learning the Ijo language and also the pedagogic problems that an Ijo native speaker will encounter in attempting to learn the Igbo language. Having predicted these areas of difficulty, the language teacher would concentrate more on these areas. In carrying out this study we shall highlight the similarities in the sound patterns of the two languages under study, identify the differences in the sound patterns of Igbo and Ijo, investigate the extent to which the identified similarities would facilitate the learning of either Igbo or Ijo as AL, and find out the pedagogical effects of the differences between the Igbo language and the Ijo language for any native speaker of one of the languages learning the other language as AL.

The study will help the learners of the two languages in taking note of the areas of the languages that may pose greater challenge and be prepared to tackle such beforehand by paying more attention to them by constant drills. The foregoing is important for some motivational reasons like academic, marriage, migration, business opportunities as earlier mentioned. In other words, the findings will provide input for linguists and educational institutions involved in indigenous languages curriculum designing in coming up with effective learning materials and methods that will help the native speaker of the Igbo language that wants to learn the Ijo language or vice versa.

Besides, the Nigerian educational system emphasizes the study of indigenous Nigerian languages and encourages the students to study the language of their immediate environment as contained in the language provisions of the National Language Policy (NPE). The policy was designed to develop over 450 languages (including Hausa, Igbo and Yoruba which are the major and national languages) in Nigeria. This policy, however, has not been accorded the deserved attention since its formulation in 1974 due to the negligence of indigenous (minority) languages like Ijo.

The development in generative phonology provides input for linguists to come up with the use of distinctive features, underlying representations, rules and derivations as a way of accounting for L₂ utterances (Abdulraman, 2016). And recently, as many theoretical phonologists have turned from rule-driven to constraint-based approach to phonological analyses, there have been studies explaining L₂ pronunciation in terms of constraint rankings and re-rankings in the learner's inter language (Omachonu, 2001; McCarthy, 2002). One of

the important themes that have recurred in virtually all phonological frameworks has been the report and explanation of L₂ phonological patterns that are not directly attributable either to the learner's NL or the TL, but is attested in the phonologies of other languages of the world. Indeed, it is this kind of evidence that purports to explain the fundamental properties involved in the acquisition of L₂ phonology.

The study is significant to the development of the two languages as alternate language. Besides, the study will enhance the effective teaching and learning of Ijò (a minority language) as stipulated in the language provisions of the NPE through a broad-based curriculum which will in-turn reposition improve its status in a region (Niger Delta) where none of its numerous languages is included in the national languages of Nigeria.

Literature review: Theoretical Studies

The theoretical foundation for what is now known as the Contrastive Analysis Hypothesis (CAH) was formulated in Lado (1957). Lado notes that elements of L₂ which are similar to the learner's native language will be simple for him whereas elements that are different will be difficult to internalize. Lado was the first contrastive analyst to provide a comprehensive theoretical treatment and to suggest a systematic set of technical procedures for the contrastive study of languages.

C.A is, therefore, a systematic study of languages with a view to identifying their structural differences and similarities. According to James (1980), C.A is a linguistic enterprise aimed at providing an avenue for comparing two or more languages' structural differences and similarities. It is a tool for determining similarities and differences between languages, and predicting difficulties learners face while learning foreign, second or alternate languages (Lado, 1957). According to Mekiliuwa (2016:45), contrastive analysis is one of the earliest models or approaches used to tackle second language teaching. The main task of CA is to contrast two languages (the learner's L₁ and TL) with the aim of drawing out structural similarities and dissimilarities between the two languages.

Larsen-Freeman and Long (1991) observe that before the Second Language Acquisition (SLA) was established, researchers from 1940s and 1960s had conducted contrastive analyses, systematically comparing two languages. They (the researchers) were encouraged by the prospect of being able to identify points of similarities and differences between particular native languages (NLs) and target languages (TLs), strongly believing that a more effective teaching orientations and/or pedagogy would emerge when these were taken into consideration. Applied linguistics has paid attention to explaining the nature of language use by learners and, in particular, to assign the learner's L₁ some degree of responsibility for that behaviour (Bell, 1981; Bland, 2017). According to Bell (1981), there are two opposing claims to contrastive analysis; the strong and the weak claims. According to him, those who make the 'strong claim' are clearly committed to contrastive analysis not only as means of explaining error but also as a technique for predicting error. The language teacher can devise drills based on the differences identified which will give the learners the opportunity to practice and then form habits.

The strong claim is then highly predictive in that it assumes that, armed with a contrastive analysis of the languages involved the teacher will have a clear picture of the problem areas even before the learners have commenced their learning.

On the weak claim, Bell (1981:182) notes that since those who make the weak claim insist that the structure of the L₁ is only one of many influences at work in the learning

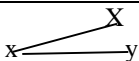
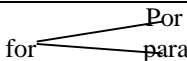
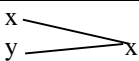
process, it follows that contrastive analysis may be of some value in explanation of errors but cannot have a strong predictive value. From the foregoing, according to Davies (2007), for those who make the weak claim, ‘post facto’ analysis of the errors currently being made by learners is likely to be of far greater value in designing the syllabus than any ‘a priori’ comparison of the languages involved.

The Contrastive Analysis Hypothesis

The conviction that linguistic differences could be used to predict learning difficulty gave birth to Contrastive Analysis Hypothesis (CAH). Lado (1957:2) opines that the L₂ learner finds “those elements that are similar to his native language ...simple for him and those elements that are different ...difficult”. In the same view Peterson (2015) asserts that the greater the difference between two systems, i.e. the more numerous the mutually exclusive forms and patterns in each, the greater are the learning problems and the areas of interference between the two languages. In their own assertion, Larsen – Freeman and Long (1991) agree that when two languages are similar, positive transfer would occur; where they are different, negative transfer, or interferences, would result. They further state that many CAs were not merely lists of binary predictions of the form whereby similarity/differences would equal ease/difficulty.

Larsen-Freeman and Long (1991) provide a simplified version of Stockwell, Bowen and Martin’s (1965) hierarchy of difficulty in the Table 1 below:

Table 1: Hierarchy of Difficulty (Adopted from Larsen-Freeman and Long, 1991:54)

Types of difficulty	L1: English	L2: Spanish	Example
Split			
New	∅ - - - - x		Making grammatical gender
Absent	x - - - - ∅		Do as a tense carrier
Coalesced			His/her is realized as a single form <i>su</i>
Correspondence	x - - - - x		-ing = -ndo as a complement with verbs of perception

Larsen-Freeman and Long (1991:53) note that Stockwell, Bowen and Martin’s hierarchy is more complicated than this because, among other things, they distinguish between structural and functional/semantic correspondence. Nevertheless, from the table above we can see that they would expect the easiest linguistic point for a language learner to master to be one where the L₁ and L₂ correspond structurally and functionally/semantically. To them, those which are coalesced, where a number of forms in the L₁ collapse in the L₂; and a form which is new to the L₂, are progressively more difficult. But the most difficult of all would be the splits, where a single form in the L₁ is manifest as two or more in L₂. Note that their examples are to an English speaker learning Spanish as L₂.

Another attribute of their system which is worthy of note also is that, unlike Lado’s system,

Stockwell, Bowen and Martin do not predict the greatest difficulty in the new and missing categories, where supposedly the differences between the two languages are the greatest (Larsen-Freeman & Long, 1991).

Habit formation is extensively used in CA tool for language teaching. This is in line with the tenets of behaviourism. The behaviourists hold that language acquisition is a product of habit formation. Habits are constructed through the successive repeated association between some stimulus and some response, which would become bonded when positively reinforced. L₂ learning, therefore, is viewed by the behaviourists language in order to acquire the new habits of the TL. This was to be achieved via the pedagogical practices of dialogue memorization, imitation, and pattern practice. The CAH is important to this view of language learning, in that if trouble spots in the TL could be anticipated, errors might be prevented or at least held to a barest minimum. In this way, the formation of bad habits could be avoided (Larsen-Freeman & Long, 1991).

In contrast to the above, while the ‘marriage’ of CAH to behaviourism gives it, no doubt, academic legitimacy, it eventually brought about some criticisms of CAH. Alatis (1968) notes that these criticisms arose a result of Chomsky’s review of Skinner’s ‘Verbal Behaviour’. Chomsky at this time seriously challenged the behaviourist view of language acquisition and notes that when predictions arising from contrastive analysis were finally subjected to empirical tests, serious flaws were detected.

Criticism of Contrastive Analysis

The major flaw observed in Contrastive Analysis (CA) as an approach, according to Mekiluwa (2008:51-52), “is in the attention it pays to the analysis of the structure or form of the two languages in contact”. It has, therefore, been criticized as being too theoretical, prescriptive and too predictive. Instead of guessing what expected problem areas are, scholars now propose a closer study of actual performances of learners.

Abdi (2017) avers that the use of the term CA has been over explored by many scholars. In her own view, it is not all problems or difficulties that can be predicted by CA that may cause the same degree of difficulties and the degree of difficulties as a result of the differences cannot be predicted adequately. In his own opinion, Johnson (2015) argues that contrastive analysis should be used to explain difficulties already found rather than predicting such difficulties. Burens (1980:83) posits that

contrastive analysis should be justified in its explanatory power and if a contrastive study fails to explain anything about the nature of the language data; it scarcely seems worth the time, and labour that have been expended on it

CA has further been criticized for being inadequate to account for all learner errors. There are a variety of errors made by learners which are as a result of interference and transfer of L₁ features into the L₂. Such errors are, according to Mekiliuwa (2016), interlingual errors. On the contrary, there are a number of other types of errors that are due to different factors like learners’ personal learning/communicative strategies, training methods/procedures and misapplication of TL rules leading to over generalization of rules.

Despite these criticisms, CAs continued to be conducted, particularly in Europe, and the problem of identifying just where and when L₁ influence can be expected to take place has continued to be of interest (Larsen-Freeman & Long, 1991:56).

Influence of a Native Language on the Second Language

Although there has been a debate over whether the L₁ has a significant role to play in the acquisition of L₂ syntax (Flynn, 1987), it has been widely accepted that the learner's NL influences the acquisition of L₂ phonology, even by those who doubt NL influence in the area of syntax (Abdulraman, 2016). Thus, as Durlay and Burt (1974:105) observe "...most of the valid (contrastive analysis) evidence is phonological".

Likewise, Richards (1971:204) avers that "studies of second language acquisition have tended to imply that contrastive analysis may be most predictive at the level of phonology and least predictive at the syntactic level". Some of the earliest research on the role of the L₂ learner's NL in accounting for pronunciation errors dates from the middle of the last century. During this era, a phonological analysis consisted of an account of the phonemes of the language in question and the distribution of the allophones of those phonemes (Abdulraman, 2016; Abdi, 2017). Abdulraman (2016) further observes that it is not surprising, then, that L₂ pronunciation errors were explained in terms of a comparison of the phonemes and their distribution within the Native Language (NL) and Target Language (TL).

Although phonemes featured prominently in the prediction of the CAH, a large role was also played by allophones. Lado's (1957) proposals address the question of what constitutes maximum phonological difficulty, allophonic differences between the NL and TL are important in his predictions. For him, the greatest difficulty lies in the learner giving two or more allophones in the NL to different phonemes in the TL. The example given by Lado involves the sounds [d] and [!] which are allophones of [d] in Spanish. Lado asserts that assigning the allophones [d] and [!] to separate phonemes in English by a learner whose native language is Arabic constituted maximum learning problem.

Phonetic similarity is also a key concept in other important work(s) on the role of perception in L₂ phonology, specifically, studies of equivalence classification in the works of Flege (1995). Flege claims that TL sounds which are equivalent or 'similar' to NL sounds are difficult to acquire because the learner perceives the NL sounds, and therefore does not establish a new phonetic category for the TL sounds. On the other hand, learners do set up new phonetic categories for sounds that are perceived as different. One problem with all of the works basing an explanation for L₂ pronunciation on similarities or equivalences is that no one has yet been able to make precise what the criteria are for determining similarity or equivalences (Rochet, 1995).

Research within the CAH paradigm at least as far as production is concerned, shows that, while NL influence has a role to play in explaining L₂ pronunciation errors, the influence of the NL could explain only a portion of the errors. Over the years, a good number of proposals have been made to account for facts that are not subsumed under the CAH, as we have this far explicated. This brings us, eventually, to the role of L₂ learner's pupation of the TL.

Syllable Structure

The syllable has been one of the most fertile areas for investigation of L₂ phonology. Studies of L₂ syllable structure were among the earliest in second language phonology to report patterns not directly attributable to either the NL or TL, but attested to in other languages. Most of the longitudinal studies in L₂ phonology have focused on the

development of syllables and many of the proposals regarding the nature and magnitude of factors affecting variability in pronunciation have come from works on L₂ syllables.

There are several good reasons for the syllable being a particularly viable domain for L₂ research. First, the construct of the syllable itself, along with its structure, are relatively uncontroversial among scholars (phonologists). It is generally evident that syllables comprise two main parts: an onset and a rhyme, with the rhyme being further subdivided into a nucleus and coda (2007; Oyebade, 2014). Secondly, there exist a number of cross-linguistic generalizations which describe the ways in which languages differ widely, yet systematically, in the kinds of syllable structure they exhibit.

Abdulraman (2016) notes that all languages appear to have syllables comprising a single onset consonant followed by a vowel (open syllables). He further notes that other languages operate much more complex syllables, allowing up to four consonants in the onset (e.g. Polish) and five consonants in the coda (e.g. German, Swedish) (Abdulraman, 2016). Yet, despite the relative complexity of these onsets and codas, there are principles and empirical generalizations that describe the systematicity of syllable structure. By and large, the learner's strategies for modifying TL syllable types have in general been a clear indication of L₂ learner's progress, making syllables the focus of several longitudinal studies. L₂ phonologists have been able to explore the systematic, cross-linguistic differences in syllable structure by studying language-contact situations in which the NL and TL have contrasted sharply in their allowable syllable types. The ensuing analyses of the L₂ utterances have then been brought to bear on a good number of questions and issues in L₂ phonology, involving the role of NL transfer and language universal.

NL transfer is shown to form constraints on the learning of L₂ syllable structure in an interesting way (see Broselow, 1983; Gholami, 2009; Abid, 2017). Broselow (1983) shows that the different pattern of errors involving English onset clusters made by speakers of Egyptian Arabic, on the one hand, and by speakers of Iraqi Arabic, on the other hand, can be explained in terms of the epenthetic rules in the respective native languages. Broselow's data show that while speakers of Egyptian Arabic generally break up onset clusters by epenthesizing (inserting) a vowel between consonants, speakers of Iraqi Arabic insert the epenthetic vowel initially, before the consonant cluster.

Phonotactics according to Babarinde (2015) is the most common tactic term used in the systematic arrangements of sounds. Crystal (2003, 366) notes that 'it is a term used in phonology to refer to the sequential arrangements of phonological units which occur in a language.' This is, in other words, what counts in a phonologically well-formed word. In English, for example, Crystal (2003, 366--367) observes that 'consonant sequences such as /fs/ and /spm/ do not occur initially in a word, and there are many restrictions on the possible consonant + vowel combinations which may occur, e.g. /D/ occurs only after some short vowels /æ,ɒ,ʌ/. These sequential constraints can be stated in terms of phonotactic rules. Akintola (2005) and Awobuluyi (2015) aver that every language has certain conditions, principles or constraints that govern the possible sequences of phonemes in its words. This phenomenon that ensures orderliness and non-violation called phonotactic constraints.

Empirical Studies

A good number of researches exist on L₁ and L₂ contrastive analysis as they concern African languages. Among these researches Dunstan (1969) carries out a phonological

contrastive analysis of twelve (12) Nigerian languages. She makes some predictions on possible areas in which L1 speakers of these languages would likely face difficulties while learning English as their L₂. However, she did not include Ijò in these languages.

Similarly, Mekiliuwa (2016:47-51) contrasts spoken English and Hausa, and that of Igbo and Yoruba. The following Tables 2 to 4 are used to demonstrate her findings.

English and Hausa

Table 2: (a) Consonants

English	Hausa
Has /p/ sound	Has no /p/ sound; users substitute /f/ for /p/ as in FDF (PDP), youth corfer (youth corper)
Has /v/ sound	Substitutes /b/ sound for /v/ as in ban (van), bent (vent)
Has dental fricatives /θ/ and /ð/	/θ/ and /ð/ are realized as /t/ and /d/.
Has the sound /z/ as in 'vision'	/z/ is realized as /ʃ/ in Hausa
Has the sounds /k/ and /g/.	Does not have /k/ and /g/; they are pronounced as /kw/ and /gw/ as in 'kwonsikwensis' (consequences)

(b) Vowels

English	Hausa
Has the vowel /i:/ closed by a consonant, e.g. 'sheep'	The vowel /i:/ does not occur in syllable closed by a consonant. This leads to difficulty in distinguishing between 'ship' and 'sheep'.
Has the vowels /ʊ/ and /ʌ/.	/ʊ/ and /ʌ/ do not occur in Hausa. To distinguish between 'hut', 'hot', and 'hurt' therefore, becomes difficult.

(c) Syllable Structure

English	Hausa
Has initial and final consonant clusters	Does not permit initial or final consonant clusters, so a word such as 'driver' is pronounced by an Hausa speaker of English as 'direba' (CVCVCV).

English and Igbo

Table 3 (a) Consonants

English	Igbo
Has dental fricatives /θ/ and /ð/	Has no dental fricatives /θ/ and /ð/, so /t/ and /d/ are used as substitute, e.g. 'thin' /tin/ and 'then' /den/.

Vowels

English	Igbo
Distinguishes between /ɪ/ and /i:/; /æ/ and /a:/, which are short and long vowels respectively.	Has no such distinction, so that 'seat' and 'sit', 'sheep' and 'ship', 'cat' and 'cart', 'park' and 'pack' are pronounced alike
Has diphthongs such as /eɪ/, /aʊ/.	Does not have such diphthongs, so that words such as 'gate' and 'vowels' are pronounced /get/ and /vowels/.

Has sounds /ʌ/, /ə/ and /ɜ:/	These three sounds do not exist in Igbo, so that such words like ‘hut’, ‘about’, and ‘bird’ are pronounced using the nearest similar vowel sounds
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(c) Syllable Structure

English	Igbo
Permit consonant clusters.	Does not permit consonant clusters, creating difficulties for Igbo speakers of English, especially learners.

English and Yoruba

Table 4: (a) Consonants

English	Yoruba
Has /p/, /θ/ and /ð/ sounds.	Has no /p/, /θ/ and /ð/ sounds. Though there are no noticeable difficulties in pronouncing /p/ by Yoruba speakers of English, /t/ and /d/ are substituted for /θ/ and /ð/, leading to errors such as ‘dere’ (there), ‘Tomas’ (Thomas) etc.
Has /v/, /z/, /ʃ/ and /ʒ/ sounds	Has no such sounds, leading to mispronunciation such as ‘sosi’ (church), ‘fan’ (van), ‘sip’ (zip), /ʃ/ instead of /ʒ/ in ‘change’ or ‘watch’, ‘preyo’ (pressure) etc.

(b) Vowels

English	Yoruba
Distinguishes between short and long vowels	Has no such distinction, so that the pairs ‘ship’ and ‘sheep’, ‘bit’ and ‘beat’, ‘cat’ and ‘cart’, ‘hot’ and ‘hot’ are pronounced the same manner.
Has /ʌ/ sound	/ʌ/ does not exist in Yoruba; /o/ is substituted for it, so that ‘hut’ is pronounced /hot/.
Has diphthongs /əʊ/ and /eɪ/ etc.	Has no such diphthongs, leading to difficulties in pronouncing words like ‘go’ and ‘says’; /go/ for /gəʊ/ and /seys/ for /sez/ etc.

(c) Syllable Structure

English	Yoruba
Permit consonant clusters	Does not permit consonant clusters, so that the word ‘bread’ is pronounced /buredi/ (CVCVCV) in Yoruba.

Following from tables 2, 3 and 4, it is evident that due to the absence of some phonemes in Hausa, Igbo and Yoruba, non-native speakers of these languages find it difficult to pronounce such phonemes while speaking in the L₂. However, the present study is on two Nigerian languages with different status: while Igbo is a major and one of national languages, Ijọ is a minority language.

Ayegba (2011) notes that Igala has only two fricatives; /f/ and /h/. Thus, the sounds /v θ ð s z ʃ ʒ/ do not occur in the language. He also observes that Igala does not distinguish between short and long vowels. Also, Igala does not operate consonant clusters like English. Judging from the differences between English and Igala phonemes, Ayegba (2011) predicts that Igala speakers learning English would pronounce the following words wrongly thus:

1. (a) 'zaria' /dzaria/ instead of /zæriə/
(b) 'favour' /feɪvə/ instead of /feɪvɔ/
(c) 'with' /wɪt/ instead of /wiə/
(d) 'said' /ʃeɪd/ instead of /seɪd/
(e) 'the' /de/ instead of /ðə/
(f) 'washing' /wɒʃɪŋ/ instead of /wɒʃɪn/
(Adopted from Ayegba, 2011:16).

Theoretical Framework

The theoretical framework for this study is Contrastive Analysis (CA). Richards and Schmidt (2002:119) describe C.A as the comparison of the linguistic systems of two languages that have been practiced as an application of structural linguistics and based on the following assumptions: that the main difficulties in learning a new language are caused by interference from the first language; these difficulties can be predicted by contrastive analysis; teaching materials can make use of contrastive analysis to reduce the effects of interference.

It was the native speakers' difficulties in trying to learn another language that gave rise to Contrastive Analysis. Larson-Freeman and Long (1991) note that Contrastive Analysis has been employed in Second Language Acquisition (SLA) and gives us a fair knowledge of what SLA is all about. Davies (2007) observes that second language acquisition research started in a very traditional applied linguist way by making foray into the errors by language learners trying to find out whether it is linguistic and can be accounted for by contrastive analysis. He posits that "an error is a confusion of some kind between one or more component of the L1 and the L2". (Davies, 2007: 84)

The history of C.A is traced to Lado (1957), although Fries (1945) could be seen as the inception of Contrastive studies. Fries (1945) advanced the description of both native and foreign languages in an attempt to teach students foreign languages. In C.A, what the applied linguist attempts to do, as observed by Lado (1957), is to discover or isolate the features that the Target Language has in common with the First Language as well as the differences. Obviously stated, these differences constitute the new things in the Target Language that the language learner does not know. It then follows that the syllabus would be made up of more of the differences since it is assumed that the learner will find it easier to learn the similarities while it would be more difficult to grasp the differences.

Methodology

Purposive sampling method was adopted for the selection of respondents. Data for this research are derived from primary sources through unstructured (oral) interviews, personal contacts with native speakers of the Ijọ language and participant observation. Additional information on the Igbo language to aid this research is from the intuitive knowledge of the native speaker, one of the authors. It is believed that the teacher of either language would be empowered or aided in his language teaching efforts as he discovers the areas of priority for the learner.

Contrastive studies of Igbo and Ijọ Consonantal Phonemes of Igbo

In the following we use minimal pairs/sets test to identify the consonantal phonemes of the Igbo language.

- 2 /p/ /b/
pìá /piá/ 'press'
bìá /biá/ 'come'
- /t/ /d/
tàá /tàá/ 'chew'
dàá /tàá/ 'fall'
- /k/ /g/
kèé /kèé/ 'tie'
gèé /gèé/ 'listen'
- /gb/ /kp/
àgbà /àgbà/ 'jaw'
àkpà /àkpà/ 'bag'
- /g^w/ /k^w/
àgwà /àg^wà/ 'beans'
àkwà /àk^wà/ 'bed'
- /m/ /n/
mà /mà/ 'but'
nà /nà/ 'and'
- /ɲ/ /ŋ/
ányá /áɲá/ 'eye'
áñá /áŋá/ 'a type of cane'
- /ɲ^w/ /s/
nwùó /ɲ^wúó/ 'die'
sùó /súó/ 'pound'
- /tʃ/ /dʒ/
ochá /oʃá/ 'clean'
ùjá /úʒá/ 'barking of a dog'
- /f/ /v/
fùó /fúó/ 'blow (by mouth)'
vùó /vúó/ 'harvest (by unearthing)'
- /s/ /z/
sùó /súó/ 'pound'
zùó /zúó/ 'buy'
- /ʃ/ /h/
áshà /áʃà/ 'a kind of bird'
áhà /áhà/ 'name'
- /ɾ/ /k/
agha /áɾá/ 'war'
áká /áká/ 'hand'
- /t/ /k/
òrú /òrú/ 'work'
ókú /ókú/ 'fire'

/s/ /t/	pisí /pisí/ pití /pití/	'be wet (drenched)' 'bend/coil'
/n/ /r/	píní /pInI/ pírí /pIrI/	'ache' 'give'
/t/ /l/	otókò /otokò/ olókò /olokò/	'mud' 'trunk of elephant'
/k/ /l/	ikoki /ikoki/ ikoli /ikoli/	'hips' 'leg of pot'
/l/ /gb/	alalá /alalá/ alagbá /alagbá/	'aluminium or enamel plate' 'gun'
/k/ /d/	agbadá /agbadá/ agbaká /agbaká/	'lobster' 'shoe'
/s/ /n/	mesi /mesí/ meni /mení/	'forty' 'flesh'
/f/ /k/ /z/	fií /fií/ kií /kií/ zií /zií/	'die' 'stop/prevent' 'bear (bear a child)'
/t/ /k/	eteté /eteté/ eketé /eketé/	'big container (for food)' 'round basket'
/z/ /m/	ozá /zá/ omá /má/	'a type of fish' 'electric fish'
/s/ /y/	san /sa/	'exclamation of surprise when something is not found'
/w/ /j/	-gha /ya/ waí /waI/ yaí /jaI/	'not (negative marker)' 'turn/stir' 'son'
/j/ /k/ /t/	yarí /jarI/ karí /karI/ tarí /tarI/	'send' 'worship' 'love'
/v/ /k/	vọ́ /vɔɔ/ kọ́ /kɔ/	'trim off' 'remain'

From the above data we identify the following consonantal phonemes of Ijọ:

5. / p, b, t, d, k, g, kp, gb, f, v, s, z, ɾ, m, n, r, l, j, w /

The consonantal phonemes are thus presented in a chart in Table 6:

Table 6: Ijo Consonant Chart

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Labio-velar
Plosive	p b		t d		k g	kp gb
Fricative		f v	s z		ɣ	
Nasal	m		n			
Tap			r			
Lateral			l			
Approximant				J		w

The Syllable Structure of Igbo

In Igbo, single phonemes can form a syllable especially where we have some personal pronouns that are made up of only one vowel standing as a syllable, that is, single peak phoneme syllables. For example, the Igbo personal pronoun

6. 'O' He/She as in:
O mere ya. 'He did it.'

Here, 'o' stands as V syllable. The CV syllables also exist in Igbo. Examples of CV syllables in Igbo are:

- 7a. /bé/ 'cry'
b. /dé/ 'write'
c. /ké/ 'tie'
d. /tʃe/ 'think'
e. /zu/ 'buy'
f. /zè/ 'avoid'

The syllabic nasals (N) can also form a syllable in Igbo.

In Igbo we may also have a word with CV syllable + another syllable comprising a vowel or syllabic nasal. This is exemplified in the following:

- | | | | |
|-----|----------|------|-----------------------|
| | C V + V | CVV | |
| 8a. | g a + a | gaa | 'go' |
| b. | n ụ + o | nụo | 'drink' |
| c. | r i + e | rie | 'eat' |
| d. | gb u + o | gbuo | 'kill' |
| 9. | CV + N | | |
| a. | du + m | dum | 'all' |
| b. | gbi + m | gbim | 'sound of falling' |
| c. | gba + m | gbam | 'exactly (assertive)' |

In Igbo, we can have cases of multi-syllable words beginning with a vowel. Such words include:

- 10 edemede 'writing'
akwukwo 'book'
ewumewu. 'structure'

From the foregoing, the syllable structure of the Igbo language does not allow consonant clusters. In Igbo, a syllable can be a vowel or syllabic nasal i.e. a peak, it can also be a combination of a consonant and a vowel i.e. onset and a peak. Besides, a consonant can

start a syllable in Igbo but we cannot have a consonant ending a syllable i.e. coda. In other vowels, consonants do not occur in word final positions of Igbo words except in borrowed words.

The Syllable Structure of Ijò

In Ijò, V syllables, CV syllables, and VN syllables can be observed as in the following:

- | | | | | |
|-----|-----|--------|----------|--------|
| 11. | V | i | /I/ | ‘you’ |
| | C V | bò | /bò/ | ‘come’ |
| | V N | umgbou | /ungbou/ | ‘bone’ |

CV+V syllables are also observed in the Ijò language. e.g.

- | | | | |
|-----|------|-------|------------|
| 12. | lijì | /lii/ | ‘oil palm’ |
| | bùú | /bùù/ | ‘mound’ |

Tones in Ijò and Igbo

Igbo operates as register tone language with two basic tones; high [´] and low [`] tones and downstep tone with which occurs as result of the lowering of a high tone when being followed by another high tone. Thus, it is regarded as a lowered high tone. [¯] is used to indicate downstep tone. Ijò has two tones; high tone [´] and low tone which is usually left unmarked. It is pertinent to note that the high tone can rise continuously phonetically. The continuously rising tone is marked [ˇ].

Discussion

Comparison of Consonantal Phonemes of Igbo and Ijò

Contrasting the consonantal phonemes of Igbo and Ijò, it is discovered that although there are consonantal similarities, there are a good number of differences between them. The following consonants are found in both Igbo and Ijò:

13. /p, b, t, d, k, g, kp, f, v, s, z, h, r, m, n, ŋ, dʒ, r, l, w/.

However, Igbo has a number of (9) consonants which are absent in Ijò. These are

- /kʷ, gʷ, ɲʷ, dʒ, ʃ, ʒ, ŋ, ɲ, h/.

The absence of the above consonant phonemes in Ijò will create problems for Ijò learners of Igbo. It is, therefore, apparent to say that the Ijò language has less consonantal phonemes as compared to those of the Igbo language. While Ijò has only nineteen (19) consonants, Igbo has twenty-eight (28) consonants.

Note also that because of the absence of the consonants /ʃ/ and /ʒ/ in Ijò, an Ijò speaker learning Igbo substitutes them with /s/ to conform to the phonotactics of the Ijò language. So the Ijò learner of Igbo would pronounce:

- | | | | | | |
|-----|-------|--------|------------|--------|----------------|
| 14. | Chumà | /suma/ | instead of | /ʃuma/ | name of person |
| | ishá | /Isá/ | instead of | /iʃa/ | crayfish |

Comparison of Syllable Structures of Igbo and Ijò

Generally, both Igbo and Ijò observe V and CV syllable structure. Besides, they do not allow consonant clusters in their syllable structure or phonotactics. However, while Igbo has N, a syllabic nasal, Ijò has VN. Since Ijò and Igbo observe V and CV syllables and do not allow consonant clusters, we predict that there will be facilitation in terms of learning the phonotactics of both languages.

Pedagogical implications of the similarities and differences between Igbo and Ijò sound patterns

The primary purpose of contrastive analysis is pedagogy; CA is a theory of language teaching. Although many scholars have criticised the tenets of CA, a good number of researchers have applied it, and proved it successful in their studies.

When two languages are compared and contrasted for the purpose of language teaching, the question that readily comes to mind is, which aspects of the languages are similar and which aspects are different. It is as a result of this knowledge of the similarities and differences between, say the phonological patterns of the two languages involved that the language teacher will be able to carry out his/her job successfully. This is because the difficulties encountered by speakers of language 'A' learning language 'B' or speakers of language 'B' learning language 'A', as their second or alternate languages will be adequately defined via CA. It is, therefore, worthy of note that the problems faced by second language learners are always associated with the areas where their first language or mother tongue is different from the target language, and the teacher is expected to emphasise those areas of differences pedagogically.

Though Igbo and Ijò segmental and suprasegmental features have a good number of similarities, there exist several differences in Ijò than they are in Igbo. As earlier mentioned, Ijò does not have nine consonantal phonemes such as / k^w, g^w, ŋ^w, dʒ, tʃ, ʃ, ŋ, ɲ, h / but Igbo does have them. In other words, while Igbo has 28 consonantal phonemes, Ijò has 19. The implications of the above differences between the phonological patterns of the two languages are pedagogic problems. For instance, when an Ijò learner of Igbo comes across phonemes which are in Igbo, but not in Ijò (his first language), he becomes stranded; and this also happens to an Igbo learner of Ijò. Additionally, one discovers that second language learners are always tempted to transfer features from their first language to their second or alternate languages as a result of differences between the phonotactics of the two languages; this is true of Ijò learners of Igbo, and vice-versa.

Following from the above explication of pedagogical and learning problems of similarities and differences between Igbo and Ijò phonological patterns, it is important to aver that the areas where the two languages are similar do not constitute problems to learners, but the areas where they are different pose difficulty to learners. However, when learners' difficulties in learning their second language or alternate language are known, it is the duty of the language teacher to emphasise such difficult areas with a view to solving their problems. This is therefore, the essence of the theory of contrastive analysis.

Summary of findings and conclusion

The purpose of any study such as this is to improve upon and fill a gap in the existing knowledge. The insight into the study of phonological patterns of Igbo and Ijò as we have examined is enormous. Although, there are similarities between the two languages'

consonantal phonemes, a good number of differences in their consonantal entries are fundamental, there are nine (9) consonantal entries of Igbo which are not found in Ijo.

Furthermore, it is discovered that the similarities between the functions of tone both at lexical and grammatical levels in Igbo and Ijo notwithstanding, the number of tone types in Igbo is more than that of Ijo; while Igbo has three tones, Ijo has two tones. There are also similarities and differences between the syllable structures of the languages though there is a variation between N syllabic nasal in Igbo and VN syllabic structure in Ijo would pose some pronunciation difficulty to both the learners of the two languages especially the Igbo learner of Ijo who only has pure nasal syllabic structure.

Contrastive analysis, a theory of language teaching, is central in a research that focuses on second language teaching and learning. For one, teaching materials are provided from the Contrastive Analysis Hypothesis (CAH), and the teacher mainly focuses on the problem areas so as to facilitate the learning abilities and processes of second language learners.

Irrespective of its shortcoming, CA remains a good method for predicting the potential difficulties of an L₂ learner, (see Mukattson (1994:354). Spada & Lightbown (2002) observe that present-day research shows that L₁ influence is a subtle and evolving aspect of L₂ advancement. Even though transfer is inevitable in L₂ learning, learners do not simply transfer all patterns from the L₁ to the L₂. There are changes over time as learners come to know more about the L₂ and thus to recognize similarities between L₁ and L₂ that were not evident in earlier stages of L₂ acquisition.

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