

**A STUDY of ASSIMILATORY AND NON ASSIMILATORY PROCESSES
IN IGALA**

BY

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MASTER OF ARTS (M.A) DEGREE IN LINGUISTICS.**

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DECLARATION

I hereby declare that, this work is done by my effort and is conducted under the supervision of Prof. Lawan Danladi Yalwa, and has not been written and presented anywhere for the award of any certificate.

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CERTIFICATION

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DEDICATION

I dedicate this work to my parents, Hajiya Jamila Adamu and Alhaji Adamu Hassan, for their great contribution and prayers for the success of my life.

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ABBREVIATIONS

alv. - alveolar

bk. - back

c. - consonant

cons. - consonantal

cor. – coronal

glot. – glottal

fric. - fricative

lab.- Labial

pal.- Palatal

rd. – rounded

son. –sonorant

syll. – syllabic

v. – vowel

vd. –voiced

vl - voiceless

hi- high

SYMBOLS

/ = slash used to show environment of occurrences.

{ } = braces, which indicate occurrence of sound change.

/ / = oblique stroke used to put phonemes.

[] = square brackets, which indicate phonetic sound.

[] = large square brackets, which encloses phonetic features.

= hash, which shows sound/morpheme boundary.

+ = plus sign showing presence of a certain term within a particular Sound.

- = negative sign showing absence of a certain term within a particular sound.

→ = Arrow, used to indicate transformation of sound to another.

“ ” = quotation mark, which enclose words in direct speech and title of an article or dissertation.

^ = circumflex which shows a falling tone.

˘ = grave accent which shows a low tone.

= hash which indicates bounda

ABSTRACT

This research work discusses some assimilatory processes in Igala language. It also employs the theory of Generative Phonology (GP) within the framework of Generative Grammar. The data of the research is drawn from primary sources, through intensive fieldwork using a deliberate unstructured interviews and conversations between the researcher and the targeted informants. And secondary sources which discusses some aspects of assimilation, like progressive and regressive forms, palatal, as well as labial assimilation. The study discovers the processes of secondary articulation as well as the phonological conditions for the assimilations in the language. The secondary articulation involves palatal assimilation which is a phonological process by which consonants acquire secondary palatal articulation or shift their primary place to or even close to the palatal region. It happens under the influence of an adjacent front vowel. Also labial assimilation in Igala refers to the lip position of a rounded secondary articulation onto the consonant. Finally it is observed that regressive assimilation is more common compared to progressive which occurs on few words as exhibited by the data.

CHAPTER ONEs

GENERAL INTRODUCTION

1.0 Introduction

According to Yule (2007:3) “Language is a unique attribute to human, which he uses to expresses his thoughts, feelings, wishes and desires by using some organs of speech to produce meaningful sounds”. Chomsky (1968:13) gives a general overview of a language, where he says that “for the language to be natural, it must have a finite number of sounds in it though there may be a lot of infinite distinct sentences in the language, and each sentence can be represented as a finite sequence of the sounds”. Also, Adamu (2003:1) describes language as “a system by which infinite sets of sounds or utterances, which have meaning, are used by human beings to communicate with each other”. Phonology as a linguistic subfield “is dealing with the organisation of speech in a particular language” (Sani 2005:1) This means that language consists of sounds and each language has a particular way of organizing speech sounds, no two languages are found to have the same phonological system. Therefore, this research work is set to analyse Igala phonology with focus on some phonological processes of assimilation in the language.

1.1 Background of the Study

The big tree of Nigerian languages indicates that Hausa, Yoruba and Igbo are still the major languages spoken in Nigeria, following the adoption of National Education Policy since 1981. Omachonu (2000:2-3) asserts that:

“These major languages have been suggested and zoned for studies in Nigerian Education System with regard to mother tongue Education. However next to these three languages, there are languages which by the nature of their population of their native speakers and recognition are dominants in their respective areas, thus they are regarded as second main language and Igala is among this category.”

From the available records, it is very clear that Igala is one of the languages in Africa that has not been fully researched into, in spite of the rapid and tremendous progress being made in developing African languages (see Emenanjo (1991), Ikekeanwu (1992), Bamgbose (1995), and Omachonu (2001)). The only attempts are the ones done by some scholars in some Nigerian universities like the Department of Linguistics, Igbo and other Nigerian languages, University of Nsukka, University of Ibadan and Kogi State University, Ankpa.

1.2 A Brief Historical Background of Igala People

According to Capo (1989:10):

” The name Igala refers to the people as well as their language. The language has also been classified alongside with Itsekiri and Yoruba as forming the Yoruboid group, from Defoid, a substrate of the New Benue Congo family of languages, under the Niger-Congo. Also, historical linguistic research works have shown the close genetic relationship between Igala and Yoruba. The Igala people are found all most east of the area of these rivers. The land is bounded on the west by River Niger, in the Enugu state, the South by Anambra state, on the North Benue and Nassarawa states. (Isah 2013:18).

The language is spoken by people located within the triangle formed by the confluence of the rivers, Niger and Benue in Kogi State of Nigeria. According to Boston (1968:15):

“The central geographical location of the Igala people has made them to be exposed with a wide variety of linguistic and cultural influences from other ethnic groups in the country. Some of them are Igbira, the Igbo, the Hausa, the Idoma and the Yoruba ethnic groups. However, the most significant relationship, by far is that between the Igala and the Yoruba people.”

Also the language has dialects which include Ebu, Idah, Ankpa, Dekina, Ogugu, Ibaji and Ife. Recent finding has shown that, ethnic family of Igala exceeded to Idoma and Nupe to the North (Lillian 2008:4-6).

Omachonu (2012:32) gives a list of various locations in other parts of Nigeria where Igala is spoken outside Kogi State: Ebu in Delta, Olohi in Edo, Iga in Asaba and Iha in Anambra states. According to him “The language is spoken by over two

million natives and non-natives who live on the eastern part of Kogi. Igala people are found to practice different religions, including Animism, Islam and Christianity. The language is studied at various levels of education and so many scholars write on it.”

1.2.1 Grammatical Sketch of Igala

The sketchy description of grammar of Igala is indispensable to the linguists interested in further investigating in particular aspects of grammar in the language. The grammatical sketch of the language can be divided into two periods: early studies and present study. The history of early works on Igala is contained in Miachi and Armstrong (1986). British and American missionaries, especially and a few other scholars have made significant contributions to the early studies. These works include John Clarks (1848) *Specimens of Dialects*, Koilie’s (1854) *Polyglotta Africana*. Also according to them, Capo published a book : *A Short Study of Igala* (1855), Comer was reported to have written a book entitled *Igala Printer* in (1867), Philpot (1934) published *A Comparative Word Lists of Central Yoruba, Yoruba of Togo and Igala*, among others. Beyond this focus of earlier linguists of the grammar, there is a dearth of adequate data and analysis on a comprehensive grammar of the Igala language. Linguistic descriptions of the language have been limited majorly to the aspects of the phonology. In recent times however, works have also appeared on the morphology, syntax and

semantics with no particular depth with regard to the comprehensive knowledge of the grammar of this language. Also the issues for the present study of grammar of Igala is that though works exists on some aspects of Igala grammar majority descriptive levels, there is no existing literature that counts for the major linguistic structure and proceeded to link the descriptive levels, even though it is true that there is no level of linguistic insulated from influence from other levels.

1.3 Statement of the Problem

As earlier stated, the researcher's interest in phonology of Igala language is as a result of the fact that human language begins with the speech sounds. Premised on that, we have chosen assimilatory and non assimilatory processes. Also many scholars like Elizabeth, (2012) Lillian, (2008), , Sunday (2010) among others, have done research work pertaining the phonology of Igala, still there is need for further research in the language. This stands out as a motivating factor for this research.

1.4 Aim and Objectives of the Research

The aim of this research is to describe the phonological processes of assimilation in Igala language. The objectives of the research are basically three (3). They are:

- a. To discover and analyse assimilatory processes (Palatal, labial, and Nasal).
- b. To find out and analyse the types of Regressive assimilation.
- c. To identify and examine non - assimilatory process

- d. To identify the factors responsible for such phonological processes.

1.5 Research Questions

This research intends to answer the following questions:

- a. What are the types of assimilatory processes in Igala?
- b. How does regressive assimilation occur in Igala?
- c. What are the non assimilatory processes in the language?

1.6 Significance of the Research

Making research on how different languages organize their sounds becomes necessary, particularly at this era when indigenous native languages are being used as medium of teaching and learning in our schools. The significance of this research include the followings:

- (a) To contribute in the linguistic field, by coming up with the detailed explanation of one aspect of the phonological processes.
- (b) It will help in preserving the language from extinction, and add to the few research works available in the language on phonology.
- (c) To make available a very useful source of reference to the students of linguistics in the area of assimilation.

It will help the upbringing researchers to learn the strategies of undertaking studies in similar and other areas so as to boost Igala linguistic studies.

(d) It will also help the native speakers of the language who are also linguists to have a chance of analysing their language properly.

(e) The outcome of this kind of linguistic investigation will help to fill the yawning academic gap that exists in the study of Igala as a result of the dearth of research materials in the language.

Looking at the significance of the issue, the research will conclude with the statement made by Ikekeanwu (2007:12) who says “ this is the time more than ever before for linguists, literary scholars and teachers of Nigerian Languages to become more resourceful in their approach to propagation of the indigenous languages to reach as many people as possible”

1.7 Scope and Delimitation of the Research

This research work will focus its attention on the phonology of Igala language. The processes which the research intends to discuss are: assimilatory and non assimilatory processes only. It should be noted that, the concern here is speech not writing. The work also has some limitations. Also the work does not cover all aspect of assimilatory and non-assimilatory processes, only few are treated because doing this at masters level will be too cumbersome and economically difficult for

the researcher, for it involves travelling to all the states where the language is densely spoken. The researcher has been deliberately selective (restricted) to some areas like Okene, Ankpa, Kogi and Kano.

1.8 Basic Assumption

In the course of this research work it is strongly assumed that:

- a. Labial assimilation is found to take place in the language.
- b. Palatal assimilation takes place in the language.
- c. Nasal assimilation process is found in the language.
- d. There are number of non- assimilatory processes in the Igala language.
- e. Some of the assimilatory processes are obligatory while some are optional.

1.9 Summary

In conclusion this chapter introduces the research topic under general introduction. Also among the aspects treated are the historical background of Igala language, statement of problem, research questions, aims and objectives of the research, significance, as well as the scope and limitation of the research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

In this chapter, we discussed the views and contributions of scholars on assimilatory processes in general and the development of the study of phonology in Igala language. As noted earlier in chapter one, the language suffers dearth of reference materials, particularly those of phonological aspects.

2.1 Phonology and phonological processes

The term phonology is defined as the study of sound systems. That is the study of how speech sounds function in a particular language (Hyman, 1975:12). Sani (2005:1) explains that “phonology deals with the way in which sounds of a particular language operates. Every natural language is found to have a unique phonology. The way one language organises its sounds may not be completely the same as that of another language”. According to Fromkin and Rodman (2011:226), “phonology tells you what sounds are in your language and which ones are foreign, it also tells you what combinations of sounds could be an actual word, and what combinations could not be actual sounds.” Also phonology explains why certain phonetic features are important to identifying a word and allows us to adjust our pronunciation of a morpheme. In short phonology is concerned with how speech sounds come together in an acceptable format to give meaning in a particular

speech.” Langacker (1972:11) defines phonological processes as “regularities that hold not just for individual lexical items but for all the lexical items of the language for at least for a whole class of items and not all the phonological rules are fully general.” Schane (1973:49), remarks that “when morphemes combine to form words, the segment of the neighboring morpheme becomes juxtaposed and sometimes undergoes change. This process is referred to as phonological process.”

The major function of a phonological rule is that it changes the value of segment. This it does through the various ways which Hyman (1975:13) lists as: Assimilation, Coalescence, Insertion, Deletion, and metathesis.

Bagari (1986:67) explains that:

“.....irin canje-canjen da ke faruwa ga sautuka a lokacin da suka haxu da juna a cikin kalma ko jumla, ana kiransu da tsarin hulxa ko dokokin sarrafa sauti.”

Meaning:

“.....changes that are found to occur when sounds combine together in a word or sentence are called phonological processes or rules”. He added that there are three basic phonological processes namely:

- a. Assimilatory processes.
- b. Syllable structure rules.
- c. Neutralization.

“In most cases when two morphemes come together, changes are found to take place. The segments of various sounds may influence each other in different ways and this is regarded as phonological processes” (Sunday, 2000:49-50).

From the above definition we can understand that, changes occur in the place where two morphemes combined in a word, the simple one can be found to assimilate the hard one in terms of articulation.

2.1.1 What is Assimilation?

Bollinger (1968:93-4) explains the term assimilation using some examples, where he says that :

*“Our phonetic habits often lead to making sounds resemble each other, In **grandpa** for example, there was first loss of /d/ resulted to **granpa**, when brought together, the /n/ molds itself on the /p/, giving an [m], {**grampa**”. Two sounds made with the lips are easier to pronounce, than one made with the tongue and another organ /n/ and the other made with the lips /p/. This kind of change is called Assimilation.”*

Hyman (1975:32) explains that “assimilation is a process by which sound acquires the features of the neighboring sound and can either be articulatory (place of articulation) or acoustic (state of glottis) in nature, depending on the features which are being assimilated”.

Jones (1975:105) says:

“Assimilation is defined as the process of replacing a sound, by another sound under the influence of a third sound which is near to it in the word. The term may also be extended to include cases where a sequence of two sounds coalesce and give place to a single new sound different from either of the original sounds. This type of change may be termed ‘coalescent assimilation.’”

Wilson (1978:132) considers assimilation as the process which justifies the term and the phonetic form they finally adopt. He claims that, the simplest example of the need to allow for divergence between phonological and phonetic representation. Fromkin and Rodman (2011:232) are of the opinion that “assimilation rules for the most part are caused by articulatory or physical processes. There is a tendency when we speak to increase the ease of articulation, this ‘sloppiness’ tendency may be regularised as rules of the language”.

Zagga (1985:61) defines assimilation as “the process where a sequence of phoneme in a particular word creates a tendency for one sound to assimilate the other sound”

Lyons (1992:207-9) explains assimilation as “a process found to occur either as a result of sound change or as a result of ‘lexicon grammatical change’”.

Matthews (1993:101) explains the term assimilation as “a process that matches another sound that preceded or follows it. Fagge (1997:10-11), defines assimilation as “a phonological process where one sound influences the articulation of another sound in terms of point of articulation or state of glottis to become identical”.

Sani (1999:27) defines the term assimilation as: “The process of change of one sound into another in view of phonetic environment. Assimilation is essentially an anticipatory change and can operate in either direction”. According to Yule (2007:115), assimilation can be described “as a process by which two phonemes occur in sequence and some aspect of one of the phoneme is included into the other phonemes”. Sunday (2000:19) explains that “In assimilation a segment takes on features from the neighboring segment. This may be situations where consonant takes on vowel features or vowel taking on consonant features. Consonants may assimilate consonant features and vowels may assimilate vowel features.”

All the above works cited are directly related to the field of my research work. Each one of them has given a clear definition of the concept of “assimilation” as one of the phonological processes and this research is going to give a full description of assimilation in relation to Igala language.

2.1.1.1 Types of Assimilation

Assimilation is characterised and described according to the direction of changes and modifications, i.e. whether the first or second sound is modified, or according to its place of occurrence in a word, i.e. initial, medial or final position of a word. It is very important to note the specific features and places where the process of assimilation is found to occur in any natural language. Linguists like Crystal (1980), Musa (1982) and Sani (1999) have classified assimilatory processes as follows: palatalisation, labialisation, and nasal assimilation among others.

2.1.1.2 Palatal Assimilation

“The most common of the secondary articulation produced by the body of the tongue is palatalisation, which involves a rising of the body of tongue to a high point, assumed in the articulation of the vowel” (Kisserberth,1970:18). Sani (1989:14) defines the term as “a process whereby a palatal sound is added to a non-palatal sound under certain circumstances.”

Matthews (1997:90) says “palatalisation is a process of secondary articulations in which a stop or fricative articulated elsewhere, is accompanied by approximation of the tongue toward the hard palate. Also in palatalisation the tongue position is superimposed on an adjacent consonant, as a result, the pronunciation of the word involved is affected.” Some linguists like Alhassan (1983:18), Busa (2012:29) are

on the opinion that palatalisation and labialization are closely related to each other. They go further to say that, “the two terms are one and the same thing, thus they are used as sub-topics interchangeably.

2.1.1:3 Labial Assimilation

The word labialization according to Sunday (2010:9) “is a process where a lip rounding is super-imposed on a non-labial sound under particular circumstances.”

Kenstowics (1979:32) describes labialisation as “rounding formed by rounding and protrating the lips as the same gesture that is utilised in rounding vowels”

.Sani (2005:45) describes labialisation as “a process that involves secondary articulation in which lip-rounding is added to a sound as in the case of the articulation of /k^w/, /q^w/ and /g^w/.”

Matthews (1997:18) says “labialization can be described as a lip-rounding and secondary articulation e.g. /ʃ/ in *shoe* is phonetically labialized in many languages. e.g. in the Caucasus labialized or rounded velar /k^w/ contrast with non-labialised.”

2.1.1:4 Nasal Assimilation

According to Gieoberich (1992:18) “sounds are classified into two phonetically: oral and nasal. Oral are those produced when air escapes from the mouth, while nasals are the ones which air escapes from the nasal cavity. /m/ and /n/ are regarded as nasal sounds and all vowels are voiced, they may also be nasalised,

this brings about nasalisation.” Sani (1999:21) says, “nasalisation is a process whereby a nasal sound is added to a non-nasal sound under a particular circumstance.”

2.1.1.5 Regressive Assimilation

According to Musa (1982:27), “regressive assimilation on the other hand is characterized by the movement of a sound, in such a way that the sound uttered is modified by the approaching sound, this is the opposite of progressive assimilation.” “The sound in the right hand side exerts its influence on the articulation of the sound in the left hand side.” (Sani, 1999:30).

2.1.1.6 Progressive Assimilation

Progressive assimilation “is a situation where features are borrowed from a preceding sound onto one that followed it. The features borrowed there moves onto the borrowed segment” (Lewis, 2008:13). Also Sani (1999:12) explains that

“in Progressive assimilation, sound in the left hand side exert influence on the preceding sound”

2.2 Non- Assimilatory Processes

Other phonological processes here have to deal with what Bagari (1986:67) calls

‘the syllable structures rule’ and Oyeade (1998:57) classifies them as “non-assimilatory processes.” Among them are deletion and insertion processes. Chomsky and Halle (1968:32) state that, “rules of insertion and deletion serve the function of making syllable structure more natural”. The deletion of vowels as well as vowel insertion forms the subjects of discussion in this sub-section.

2.2.1 Deletion Process

Crystal (1980:18) defines deletion as “the omission of sounds in connected speeches”. He also explains that “a vowel, a consonant or even a syllable can be deleted depending on the reason and situation for the elision”. He continued that “it could be economical, stylistic or phonological.” Oyeade (1998:69) explains that “the process of deletion involves a complete loss of segment in a word; it could also involve vowel or consonant.” According to Sunday (2000:49), “deletion is a process where sound segment get deleted in normal speech. Vowels as well as consonants undergo this process but deletion of a vowel is referred to as elision.”

2.2.2 Insertion Process

This concept has attracted some scholars’ definition. Among them are Sunday (2000:17) who defines the term as “a process of inserting a segment to break unallowed cluster to make the word borrowed into the language to conform with the syllable structure of the phone tactics of the host language”. Sani (2003:26) says,

“Insertion is a process where sound segment is put in a syllable of a word to break a cluster.”

2.3 Igala Consonant Sounds

The following chart shows the consonants of standard Igala (SI) writing i.e. orthographically and not with phonetic symbol. The sounds are also given in parenthesis following the explanation of each

IGALA CONSONANTAL CHART

Place	Labial	Alveolar	Palatal	Palato/labio alveolar	Velar	Labial velar	Labialised velar / glottal
Manner							
Nasal	m	n	ɲ	mʲ	ŋ		ŋ ^w
Plosive	p b	t d		pʲ bʲ	k g	kp gb	k ^w g ^w
Affricate				tʃ dʒ			
Trill		r					
Fricative	f			fʲ			h
Approximant		l	ʝ	l ^ʝ j		w	

(1). Stops/ Plosives:

/p/	voiceless	bilabial	plosive	[p]	e.g. pu - bend
/b/	voiced	bilabial	plosive	[b]	e.g. bu - dilute
/t/	voiceless	alveolar	plosive	[t]	e.g. ta - sell
/d/	voiced	alveolar	plosive	[d]	e.g. da - pour
/k/	voiceless	velar	plosive	[k]	e.g. ka - pluck
/g/	voiced	velar	plosive	[g]	e.g. ga – sew
/k ^w /	voiceless	labialised -velar		[k ^w]	e.g. kwa – shout
/g ^w /	voiced	labialised - velar		[g ^w]	e.g. gwa – dig
/kp/	voiceless	labio –velar		[kp]	e.g. akpa- maize

(2). Nasals

/m/	voiced	bilabial	nasal	[m]	e.g. mo – drink
/n/	voiced	alveolar	nasal	[n]	e.g. no – grind
/n ^y /	voiced	palatal	nasal	[ɲ]	e.g. nyi – wear
/ŋ/	voiced	velar	nasal	[ŋ]	e.g. ngoche – repair
/n ^w /	voiced	labio –velar	nasal	[nw]	e.g. nwa – measure

(3). Fricatives

/f/	voiceless	labio –dental		[f]	e.g. afe – shirt
/h/	voiceless	glottal	fricative	[h]	e.g. hi – cook

(4). Affricates

/j/ voiced palato – alveolar [dʒ] e.g. je – eat

/ch/ voiceless palato – alveolar [tʃ] e.g. oche – soap

(5) Lateral

/l/ voiced alveolar lateral [l] e.g. la - buy

(6). Trill

/r/ voiced alveolar trill [r] e.g. ra – blessing

(7). Semi Vowel

/y/ voiced palatal semi vowel [j] e.g. yo - rejoice

/w/ voiced labialised –velar [w] e.g. wu - uproot

The distribution of the consonants sounds in Igala as explained by Sunday (2010:12), shows that, they do not occupy word final position except the velar nasal / ŋ / , although the sound is written as letter /n/ orthographically. The actual production of the letter makes it to be a nasal velar because of the following velar sound which makes it to be velarised .

2.4 Igala Vowel Sounds

According to Crystal (1980:14) “a vowel is a speech sound produced without a closure in the vocal tract or a degree of narrowing that would bring about audible friction.” There are seven (7) vowel systems in Standard Igala (SI), as asserted by

Sunday (2000:7). The phonetic realisation of these vowel sounds can be explained in the following chart:

	Front	Central	Back
High	i		u
Mid High	e		o
Mid Low	ɛ		ɔ
Low Front	a		

(8). /i/ High front unrounded e.g.

bi - open

ifi - chick

/e/ Mid-high front unrounded e.g.

be - bay

eti - ear

/ɛ/ Mid-low front unrounded e.g.

be - chip

ete - root

/a/ Low-front unrounded e.g.

ba - scoop

	ate	-	bed	
/ɔ/	mid-low back rounded		e.g.	
	bo	-	mould	
	obe	-	knife	
/o/	mid-high back rounded		e.g.	
	bo	-	cover	
	obo	-	soup	
/u/	High back rounded		e.g.	
	bu	-	cut	
	ubi	-	back	(Sunday,2007:7)

2.5 Igala Syllable Structures

Ejeba (2009:8) asserts that, “there is a unanimous agreement by scholars on the existence of four syllable structure types in the Igala language. They are: a vowel (V), consonant and vowel (CV), consonant, vowel and another vowel (CVV) and vowel, consonant and vowel (VCV)” as in the following examples:

	<i>Syllable</i>	<i>Word</i>	<i>Gloss</i>
(9)	<i>V as in</i>	<i>o</i>	<i>neck</i>
	<i>CV as in</i>	<i>mo</i>	<i>noise</i>

CVV as in *bie* *seven*

VCV as in *ubi* *ba*

(Ejebe,2009:8)

Also Salem (2016:28) explains that, “the syllable nasal in the language is restricted to ideophone and persuasive statements, thus it is not regarded as among the main syllable structure. And the language does not accept a consonant cluster as well as consonant word final position. Besides most noun class words in the language are vowel initials whereas most verbs are consonant initial,” as can be seen in the following examples:

Noun	Verb
(10) <i>.oji</i> <i>head</i>	<i>je</i> <i>to eat</i>
<i>eta</i> <i>animal</i>	<i>gbo</i> <i>to hear</i>
<i>one</i> <i>person</i>	<i>mo</i> <i>to drink</i>
<i>iji</i> <i>firewood</i>	<i>ba</i> <i>to give</i>
<i>ubi</i> <i>back</i>	<i>bi</i> <i>to give birth</i>

(Salem,2016:28)

2.6 Igala Tone Patterns

According to Sunday (2007:19) :

“Igala is highly a tonal language, because the tone system carries a great burden of lexical, morphological, and syntactical information. Igala is one of the tone languages in the world and therefore makes use of voice pitch to determine the meaning of words. Every syllable of a word is contrasted by voice pitch, the misapplication or misuse of tone usually leads to a realisation of a different word, other than the one intended by the speaker. This is the greatest problem faced by the learners of Igala as a second language. Where tone is misapplied in Igala the implication is usually misinformation and total breakdown in communication.”

Also, “The language operates a register tone system with the basic tonemes as attested by Armstrong (1965) Emenanjo (1978), and Sunday (2010), which consists of high tone (H), usually represented with acute accent [/] , low tone (L), usually represented with grave accent [\], and mid tone (M), usually unmarked [-], because it is the most common. These basic tone marking diacritics are used contrastively in Igala, as shown in the examples below:

(11) *né* - to carry (load).

bí - to deliver (baby).

nè - to get (have).

bì - to beg

ne - to remove .

bi - to open (door)

Adopted from Sunday (2011:5)

Similarly, there is an indication of rising tone as explained by Kadiri (2011:19) ‘this tone can only operate in some words that are used to show expression or surprise and has a length quality.’

2.7 Some Studies in Igala Phonology

Armstrong (1955) makes a comparative research between Yoruba and Igala, with the view to establish the point of convergence and otherwise between the two languages. Also the work elaborates some linguistic evidences that show the close relationship that exists between Yoruba and Igala. His work though remarkable could not be regarded as a detailed and comprehensive study of the two languages, but it champions the pioneer study of Igala language study. This research is related to the work as it deals with the study of Igala language .

Fresco (1969) makes a comparison between Yoruba and Igala tone, and notes that Igala nouns do not begin with a mid tone and that Igala disyllabic nouns have vowel consonants vowel syllabic structure. This generalisation has contrasted with recent findings of Ejeba (2000) who concludes that mid tone is found in a disyllabic words in the languages: **agba** “sorry” and **ugbo** “where”. All other words do not have clear evidence. Though it treats tone aspects in Igala, the

findings will be of great importance to this work especially in marking tones of the words cited.

Akinkugbe (1976) in a comparative study of Yoruba, Igala and Itsekiri, observes that there exists a closer linguistic affinity between Yoruba and especially Igala in terms of syllable structure, tone and phonemic distribution. As this work deals with comparative analysis of two languages my work is mainly on Igala phonological processes of assimilation.

Miachi (1978) focuses essentially on segmental phonology of Igala and explains the issues of allophones and distinctive feature theory. He then concludes that Igala is like other Niger-Congo languages that has four distinctive tones namely high, low, falling and mid, though variation among the dialects may also be regarded on the actual use of these tones. This study is germane to my work as they both discuss some issues concerning phonology of Igala language.

Emenanjo (1978) makes a survey of functional tone in Igala. His work posits that there are some words that can change their tone patterns either as noun, adjective or verb and those that do not change. They are, hence classified into two groups, those that change their tone when they occur as initial words of associative construction as Tone Group 1, and those that do not accept the change of tone

pattern as Tone Group 2. This work has a lot to contribute to my work, especially in marking tone in the examples of words given.

Ejeba (1982) discusses the issue of syllable pattern, tones and neutralisation processes in Igala language. In the work, he points how tone marking and syllabification become so conflicting and so confusing among the scholars, such that speakers of the language can make change of a tone in the language without any distinction. He then brings suggestions on the other phonological processes like metathesis and vowel length. This work will be a guide to my work as it discusses some non-assimilatory processes in Igala.

Armstrong (1986) has made a description on Igala dialects and was among the first scholars to deal with tone phenomena in the language. In the work, he suggests that nouns in Igala language never take mid tone. Also the mid tone is not so common as other tones in the language. His work and mine are all on phonological aspects in Igala language. This restricted itself on tone only while mine will treat assimilatory and non assimilatory processes.

Achama (2000) brings up a contrastive analysis of English and Igala segmental phonemes where the focus in this study is on pronunciation errors arising from articulator difficulties suffered by the Igala native learners of English Language. He establishes that two factors are responsible for these errors. One, according to

him, is the absence of contrastive consonants units like /v, θ, s, z, ʃ/ as well as the absence of long vowels and diphthongs in the language. The second factor is lack of proper drilling and poor teaching of oral English in our schools. This work, though a step in the right direction, is found with some weaknesses, such as the use of outdated International Phonetic Alphabet's chart (IPA), the 1989 edition, inconsistent use of diacritic marks and mixed symbols. This work can be relevant to and valuable to this research as they share similar approach.

Omachonu (2000) discusses the distinctive sound segments in Igala language and points out that Igala has several dialects. Another thing which the work discovers also are some phonological processes, like nasalisation process, elision among others and lastly makes suggestions on how the study of Igala can be developed. This work, though a breakthrough in phonology of Igala, fails to bring comprehensive explanation of the processes, and focuses on Ankpa central dialect neglecting other dialects. For this reason, my work aims to build on the work by giving examples of assimilatory and non-assimilatory processes where available from all dialects.

Ayegba (2009), studies Igala tones and their classifications which are: lexical, syntactic tone, floating and gliding tone. He also explains that changes of tone in Igala can even distinguish between statement and question. The study also remarks that scholars give emphasis on the three basic tones namely: lexical, floating and

grammatical tones, but the issue of floating tone receives less attention compare to remaining tone. This study is related to this work as it views tone in the language, especially on how certain changes affect it.

Williamson (2011) discusses some issues concerning morpho-phonological processes in Igala language. The work explains the H-reduplication and provides the evidence of occurrence of a [-high] rather than a [+high] in the reduplicated syllable. This process is more available in lower Cross languages. Though this study examines nature of tones in morphophonemic dimension, it will also be of great importance in shaping this work by making reference on Igala phonemes.

Elizabeth (2012) conducts her research work on Comparison of Phonological Systems of Igala, Yoruba, Owe and Olukumi languages. The study concludes that, there is a strong relationship among these languages, with the discovery of some common lexemes. However, the research discovers that the languages are mutually unintelligible except for Owe language that has a degree of contact, as each group has experienced relationship and contact with different people and languages. This study is relevant to this work for the fact that it makes a comparative study on phonological processes of four languages. My work is on phonology of one of these languages.

2.8 Summary

The literature review started with a highlight on the relevant research materials. Even though, Igala language suffers dearth of reference materials, the few that are related to this research were reviewed (Fresco 1969, Akinkugbe 1978, Miachi 1978, Emenanjo 1978, Ejeba 1982, Armstrong 1986, Achama 2000, Omachonu 2000, Ayegba 2009, Wlliamson 2011 and Elizabeth 2012). Finally, it is clear from the forgoing that there are many research works on Igala phonology, but still there is need for additional explanation of phonological processes like among others assimilatory and non-assimilatory processes so as to fill in the gaps and enrich the language.

CHAPTER THREE

RESEARCH METHODOLOGY AND THEORETICAL FRAMEWORK

3.0 Introduction

This chapter will describe the research methodology which includes the following sub-headings; sample selection, data collection procedure, data identification method and theoretical framework adopted for data presentation and analysis.

3.1 Methodology

The method adopted in this research is descriptive in nature which mainly concentrates on the data collection for the purpose of describing and explaining the existing phenomena, conditions found for the changes to occur to particular sounds. In a nutshell, the purpose of this research is to systematically describe the data, and analyse how certain changes affect sounds under specified conditions. It requires direct interaction with Igala native speakers and linguists.

3.2 Method of Data Collection

As mentioned earlier this research is descriptive in nature; therefore the investigator relies on both primary and secondary data. The primary data are obtained through the Ibadan wordlist of 400 Basic Items”, NYSC Handbook (2014/15): *A Hand Book of (Igala) Language Study*, and a list of Igala words by Salem (2016). The compilation of the words is jointly conducted by the researcher

and his informants selected from various places within and outside Igala area. Also the researcher gets some useful information by interviewing some resource persons who are native speakers of this language. The secondary sources used in this research are: books, journals, magazines, as well as library and internet. Random sampling is adopted for selecting the data for analysis. Also during the fieldwork subject

Were selected that are 18 years and above. Some were asked to read the words phrases or sentences selected loudly, which were use as examples in the presentation.

Finally, data from these sources were recorded on cassettes and transcribed by the help of the informants. Also the data was presented to the Igala linguists in order to have a better perception of the processes. Therefore, the researcher played a participant observation role and the result obtained from the study is hoped to be quite valid and reliable.

3.3 Method of Data Analysis

The data obtained from the various sources consulted is presented simultaneously; each example cited is followed by a gloss and in some places phonological rules are presented. With regard to tones, high tone would be marked with acute accent [/]. Mid tone will be left unmarked because it is the most common tone in the language. Low tone on the other hand is marked by a grave accent [\] .

3.4 Descriptive Framework

The theoretical framework of this research work will be based on the theory of Generative Phonology which was developed by Chomsky and Halle (1968) and the theory is still being maintained and adopted by many linguists and scholars. This theory focuses its attention on providing basic principles for pronunciation of word segments, phrases and sentences. These principles can operate in all natural languages, and comprises two basic general rules. These are:

- (a) The structure of the phonology shows the linguistic competence of the individual native speaker’.
- (b) The competence has to be studied through scientific method.

The phonological description must include the following:

- (1)The representations have to be organised into sequences of segments and boundaries.
- (2) The segments are to be identified in terms of distinctive features.

3.5 Summary

This chapter highlights methodology of data collection and the theoretical framework employed for the analysis and interpretation of data. Also the chapter

discusses description of the sample selection, method of data collection, and method of data identification.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.0 Introduction

This chapter will focus on some phonological processes of assimilation in Igala. The study intends to find out the factors responsible for such process to take place and its proper documentation. In other words the researcher tries to examine the assimilatory and non assimilatory processes in Igala.

4.1 Phonological Processes

Schane (1973:49) asserts that, “When morphemes combine to form words, the segments of the neighbouring morphemes juxtaposed and sometimes undergo changes”. This process is what Schane refers to as phonological process. Also this change can be realised within word or across word boundary. Wherever it occurs ,the segment affected can be realised phonetically as different segments or it can be retained under specified conditions. In Bagari (1986::67) three categories of phonological processes are classified. These include, the assimilatory processes, syllable structure rules and neutralization. Some assimilatory processes as well as non-assimilatory processes are earmarked for discussion in this chapter. The non-assimilatory processes are referred to as syllable structure rules.

4.2 Assimilation

“Sounds have a tendency to slur into one another when they are produced in a string. The process by which a sound takes on the features of sounds in its environment is what is referred to as assimilation” (Oyebade1998:57). “This often happens because the speaker’s brain conceptualises entire sentences and tries to produce each sentence by expending as little energy as possible in sequence, the phonetic feature of sounds spread to adjacent sound.”(ibid)

4.3 Assimilatory Processes in Igala

There are different types of assimilation in Igala. However, in this thesis only regressive, palatal, and labial, as well as nasal assimilation are going to be discussed.

4.3.1 Regressive Assimilation

This is the opposite of progressive assimilation. The sound in the right hand side gets its influence on the articulation of the sound in the left hand side. This process is the most common in Igala language, and it is categorised according to the nature of the sound affected. Consider the following examples:

	UR		SR	Gloss
(13) a	/gó/ /ába/	→	[gáabá]	look at a dog
	look dog			
b.	/kô/ /áne/	→	[k ^w áanè]	leave ground
	leave ground			
c	/mà/ /énu/	→	[méen ^w u]	brilliant
	Know something			
d.	/ùla/ /éla/	→	[uléela]	python fat.
	Fat python			
e.	/to/ ikeleku	→	[tiikeleku]	rat urine.
	urine rat			
f.	/ko/ /iba/	→	[k ^w iibá]	leave side off.
	leave side			
g.	/óbó/ /íkaji/	→	[óbíikàdʒi]	cocoa yam soup
	Soup cocoa yam			
h.	/ebi/ /ùjenu/	→	[ébùudʒenu]	hunger for food.
	hunger food			
i.	/bi/ /ùcha/	→	[bùutʃà]	back of pot
	back food			
j.	/íli/ /úgba/	→	[ilúugbá]	root of beans
	beans root			

k. /li/ /úbi/ → [lúubi] see a cobra
 see cobra

From the examples (13a and b) above we can understand that a mid back rounded vowel /a/ assimilates to low unrounded vowel across word boundaries, and it is captured in the following phonological rule:

$$(14) \begin{bmatrix} +\text{syll} \\ +\text{mid} \\ +\text{rd} \end{bmatrix} \longrightarrow \begin{bmatrix} +\text{low} \\ +\text{bk} \end{bmatrix} / \text{---} \# \begin{bmatrix} +\text{syll} \\ +\text{low} \\ +\text{bk} \end{bmatrix}$$

A mid rounded vowel /o/ becomes, low back /a/ before the mid rounded vowel.

A low vowel in the (15c and d) assimilates to a mid low in the environment where it precedes the mid-low front vowel. Consider the following rule:

$$(15) \begin{bmatrix} +\text{syll} \\ +\text{low} \\ -\text{bk} \end{bmatrix} \longrightarrow \begin{bmatrix} +\text{mid} \\ -\text{low} \end{bmatrix} / \text{---} \# \begin{bmatrix} +\text{high} \\ -\text{low} \end{bmatrix}$$

A low back vowel /u/ changes to mid low/o/ before high low.

In (15e, f and g) a mid back rounded vowel assimilates to high unrounded front in the environment where it precedes the high, as in the following phonological rule:

$$(16) \begin{bmatrix} +\text{syll} \\ +\text{mid} \\ +\text{bk} \\ +\text{rd} \end{bmatrix} \longrightarrow \begin{bmatrix} +\text{high} \\ -\text{rd} \end{bmatrix} / \text{---} \# \begin{bmatrix} +\text{md} \\ -\text{rd} \end{bmatrix}$$

A mid back rounded vowel /i/ becomes high before mid vowel

In (13h, i,j and k) a high front vowel assimilates to high back rounded vowel in the position where it precedes the high back rounded vowel, s shown in the phonological rule below:

$$(17) \left[\begin{array}{c} +\text{syll} \\ +\text{high} \\ -\text{bk} \end{array} \right] \longrightarrow \left[\begin{array}{c} +\text{high} \\ +\text{bck} \\ +\text{rd} \end{array} \right] \quad \# \quad \left[\begin{array}{c} +\text{hi} \\ +\text{bk} \\ +\text{rd} \end{array} \right]$$

A high back vowel becomes become rounded before the high ack vowel

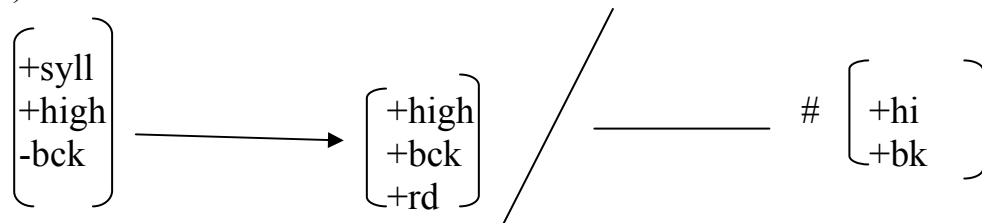
4.3.2 Total Assimilation

This process, as the name shows, is a situation where the totality of the features of sound are assimilated. Sani (2005:13) explains that, “it is a process whereby all features of a sound are assimilated. This also concerns the assimilation of the whole features of preceding sound when they appear in sequence.” In Igala, it involves two nouns appearing in sequence. With regard to examples the researcher is able to find only two examples, despite heavy consultation with some Igala linguists. The examples are shown below:

UR		SR	Gloss
(18) /ubi/ /ùbi/	→	[ùbùubuí]	further back.
back back			
/ómi/ /ùcha/	→	[ómùuɸä]	flowing waters
water flowing			

In the above examples, we find that a high front vowel /a/ assimilates to high back rounded vowel /u/ in the position where it precedes the back vowel /u/, (regressively) as indicated in the following phonological rule:

(19)



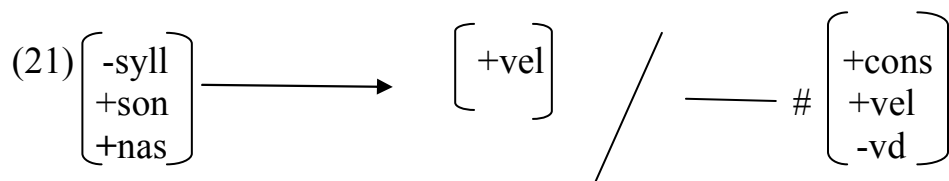
A high vowel front vowel /i/ becomes rounded before the high.

4.3.3 Partial Assimilation

Partial assimilation is a situation where only part of the features of the neighbouring sound is assimilated. In Igala this process is found, and a few examples can be cited below:

UR	SR	Gloss
(20) /āṅkpá/	→ [āṅkpá]	maize.
/egwánká/	→ [εgwánká]	have knowledge.
/ònká /	→ [òṅká]	one
/ìnkúlumi/	→ [ìṅkúlumi]	camel

From the above example we can understand that an alveolar nasal /n/ becomes similar in its place of articulation with the voiceless velar consonant /k/, and is captured in the following phonological rule:



A nasal sound /n/ becomes velar before the velars

4.3.4 Palatalisation of Labial Sounds

This process is said to occur when a different sound is articulated simultaneously with a palatal feature. In Igala, consonants that are affected under this phenomenon are bilabials. In this instance, a bilabial voiced atop is found to be palatalised when it is followed by a high front vowel. Consider the following examples:

(22)	UR /ábiá/	→	SR [áb ^j ía]	Gloss dog
	/ébié/	→	[èb ^j ie]	seven
	/èbiè/	→	[ɛb ^j iɛ]	blood
	/obié/	→	[ób ^j ié]	clever
	/ ibié /	→	[ib ^j ié]	hiss
	/opió /	→	[óp ^j io]	real
	/epió/	→	[ɛp ^j ió]	mud
	/opia /	→	[óp ^j ia]	machete

Rule: A /b/ voiced bilabial stop becomes palatalised before high front unrounded vowel /i/. This is represented in the following rule:

(23)
$$\left[\begin{array}{c} +\text{cons} \\ +\text{lab} \\ -\text{nas} \end{array} \right] \longrightarrow \left[+\text{pal} \right] \quad / \quad \text{---} \# \left[\begin{array}{c} +\text{hi} \\ -\text{bk} \end{array} \right]$$

A labial sound becomes palatal before high vowel /i/

With regard to /p/ which is voiceless bilabial stop, it becomes palatalised before high front unrounded vowel /i/. As can be seen in the following phonological rule:

$$(24) \begin{bmatrix} +\text{cons} \\ +\text{lab} \\ -\text{nas} \end{bmatrix} \longrightarrow \begin{bmatrix} +\text{pal} \end{bmatrix} \quad \text{---} \quad \# \begin{bmatrix} +\text{hi} \\ -\text{bk} \end{bmatrix}$$

A labial sound changes to palatal before the high vowel

4.3.5 Labialisation of Velars

This is a process whereby a non labial speech sound is articulated with a labial obstruent. This process is found in Igala language as a secondary articulation, and is a situation where vowel is assimilating consonant features. Velars /k/ and /g/ adopt the feature of lip rounding before a mid back vowel /o/, as in the following examples:

	UR		SR		Gloss
(25)	/gó/	→	[g ^w ó]		swear
	/go/	→	[g ^w ó]		great
	/ko/	→	[k ^w ó]		beat
.	/ kó/	→	[k ^w ó]		carry

The rule is represented below:

$$(26) \begin{bmatrix} +\text{cons} \\ +\text{bk} \end{bmatrix} \longrightarrow \begin{bmatrix} +\text{labial} \end{bmatrix} \quad \text{---} \quad \# \begin{bmatrix} -\text{high} \\ -\text{low} \\ +\text{bk} \end{bmatrix}$$

A back consonant becomes labial before back vowel /o/

4.3.6 Progressive Nasal Assimilation

The process is clearly manifested in nasalisation process. In Igala a vowel as well as consonant undergo this process. A process whereby consonant or vowel preceding or following nasal consonant becomes nasalised in that environment.

Consider the following examples:

UR		SR	Gloss
(27) /ami/	→	[ámi]	amen
/umi/	→	[úmi]	rest
/omá/	→	[omá]	son
/éné/	→	[éné]	man
/onú/	→	[onú]	king

The examples cited above indicate a situation where a nasal consonant t/m/ precedes an oral sound and the following vowel is found to be nasalised. This is progressive nasal assimilation. It can be understood that the initial vowel is not affected, the reason is that, as earlier explained in chapter two, in Igala language it is only the vowel sounds that can form the nucleus and the peak of syllables, hence it can have a single vowel sound forming a syllable in the language. For that, all the vowels in the initial position of a word cannot be nasalised but the other ones that serve as peak of the syllable (nasals) can have nasal features as can be seen in

the examples cited above. The process assimilation can be represented in the phonological rule below:

$$(28). V \longrightarrow \left[\begin{array}{c} +nas \end{array} \right] / \left[\begin{array}{c} +cons \\ +nas \end{array} \right] \text{ ————— } \#$$

The rule states that vowel acquires some features of nasal sound when it is preceded by it.

UR	SR	Gloss
(29). /angele/	→ [aŋedʒee]	tortoise
/ango/	→ [aŋo]	skin
/ngo/	→ [iŋo]	bee
/engini/	→ [eŋini]	today
/anganga/	→ [oŋaŋa]	a kind of bird
/okochangeli/	→ [okwochangeli]	sword
/anyi/	→ [áŋi]	laugh
/anyela /	→ [ápélá]	horse

The examples cited above are another forms of progressive assimilation of the segment, but this affects consonants. “The nasal consonant abuts with non-nasal, the preceding consonant is said to be nasalised progressively. The rule of nasalization is said to be found in many languages in the world. It is also a natural rule because it is more difficult to prevent nasalizing a vowel before a nasal consonant than it is to nasalise it in context.

Below is the phonological rule of example given above:

$$(30). \left[\begin{smallmatrix} +\text{cons} \end{smallmatrix} \right] \longrightarrow \left[\begin{smallmatrix} +\text{nas} \end{smallmatrix} \right] / \# \longrightarrow \left[\begin{smallmatrix} +\text{con} \\ +\text{nas} \end{smallmatrix} \right]$$

Consonant changes to nasal before nasal consonant /n/

4.3.7 Coalescent/Reciprocal Assimilation

“This is when two contiguous segments at the underlying representation disappear at the surface phonetic level, to be replaced by a third segment which shares features from both of the segments that disappeared. In this situation, the contiguous segments are said to have coalesced into one.” (Oyebade, 1998:68)

There are few cases of coalescence in Igala language. The few examples are as follows:

UR	SR	Gloss
(31) a, /adu # ójó/	→ [ádʒɔɖʒɔ]	name of person
slave god		
b. /oladu # okwú/	→ [ɔladʒɔkwú]	name of person
case death		

an alveolar sound /n/ changes to palatal when it is preceded by a back rounded vowel /o/

As said earlier this process is very rare in Igala, hence only two available examples this work is able to get. The alveolar segments merge with high back vowel to

produce a plato-alveolar voiced. Thus coalescing the palatal and alveolar features of two consonants and vowel segment.

4.4 Non- Assimilatory Processes

Other phonological process in this chapter have to do with what Oyeade (1998:63) calls them “the syllable structure rule” and classifies them as non-assimilatory processes. These are deletion and insertion processes. Chomsky and Halle (1968:27) state that “.....rule of insertion and deletion serve the function of making syllable structure more natural “. The non-assimilatory processes will be the subject of discussion in this section.

4.4.1 Elision/Deletion

Elision is defined by Crystal (1980:34) as “the omission of sounds in connected speeches.” He goes further to say that “a vowel, a consonant or even a syllable can be elided depending on the reason and circumstances for the elision.” “The deletion that involves vowels is referred to as elision” (Oyeade1998:63). In Igala vowels and consonants undergo this process.

The first form of vowel elision or deletion in Igala occurs when the first morpheme surrenders its final vowel together with its tone at the same time. Here

the final vowel or the first morpheme disappears totally without trace, as shown in the following examples:

UR	SR	Gloss
(32) /d ú ò hi / →	[dòhi]	to answer
/d é ò m ó/ →	[dòmo]	is there
/j é ò je/ →	[dʒòdʒe]	eat food
né ùmà →	[nùma]	have knowledge
l à òli →	[lólì]	buy tree
gbà ókò →	[gbókó]	collect money

This can be represented by adopting the following rules:

$$(33) \quad V_1 \longrightarrow \theta \quad \# \quad V_2$$

A vowel get deleted when it precedes a back rounded vowel /o/

The second form of vowel deletion in Igala language is realized when the preceding vowel disappears leaving the following vowel with a new tone. This means that the second morpheme receives a compromising tone with the features of both tones. The coming together of these two tones produce contour tones [ʌ] falling and [˥] rising tone. Consider the following examples:

UR	SR	Gloss
(34) /òl à one/ →	[olõne]	gossips

/òlà odà/	→	[olõda]	commandment
/òjè àne/	→	[odʒâne]	super
/òdò ábia /	→	[odâbjia]	dog's liver

Mid tone stands midway between high and low, whereas contour tone is a combination of both high and low or low and high as shown in the above examples. This can be captured using the following rule:

$$(35) V_1 \longrightarrow \theta \quad \bigg/ \quad \longrightarrow \# V_2$$

Another form is consonant deletion. In Igala vowels form the peak of prominence of syllables and bear tone, for that reason, consonant deletion is rare. The data below reveals that consonants after the first or second syllable can be deleted in fast speech:

UR	SR	Gloss
(36) /igbèlé/	→ [igbée]	young girl
/odúdú/	→ [odú]	morning
/áwá/	→ [áá].	form of greeting (singular)
/bábá/	→ [báá]	father
/mévà/	→ [méà]	form of greeting (plural)
/óchochí/	→ [ótĩ]	truth

$$(37) V_1 \longrightarrow \theta \quad \bigg/ \quad \longrightarrow \# V_2$$

4.4.2 Vowel Lengthening

This is a process whereby sequences of two identical vowels with similar tones occur in the same position in a word (Omachonu 2000:55).

UR	SR	Gloss
(38) /dú/	→ [dúu]	everyday
/ámá/	→ [ámáa]	but
/ákò/	→ [ákòò]	pig
/ékute/	→ [ekutéé]	plenty, much

From the above data one can understand that short vowel changes to long when making reference to a particular object or making emphatic to the object talking about.

[a] → /aa/, [u] → /uu/ and [o] → /oo/

4.4.3 Vowel Harmony

Vowel Harmony is a very common in African languages and European languages, as asserts by Oyeade (1998:72). Also Williamson (1984:22-23) views vowel harmony as:

“The system whereby in many languages the vowels are divided into two sets; ‘wide’ and ‘narrow’ in such a way that vowels from the same sets normally go together in the same simple word.”

She divided vowels into two sets as shown below:

Set 1: undotted or wide vowels : a e i o u

Set 2 : dotted or narrow vowels :: a e i o u

Vowel harmony according to Essien (1985:52) “occurs in a language if the vowels of the language are so constrained that all the vowels in a simple word must have some property or properties in common.”

Igala displays only partial or incomplete harmony because it has seven vowels. Examples of the partial vowel harmony as it exists in Igala languages are shown below as one converts the following verb into noun:

Verb	gloss	Noun	gloss
(39) /dó/ → [dó]	dwell settle	/òdò/ → [òdò]	settlement
/gbo/ → [gbò]	to be weak	/egbo/ → [egbò]	weakening
/jé/ → [dʒé]	eat	/oje/ → [odʒo]	food
/ mé/ → [mé]	borrow	/ome/ → [omé]	debt

From the above data, one can notice that a fairly consistent harmony of e - o and e – o harmony.

4.4.4 Vowel Insertion

A language may insert a segment to break up an unallowed cluster to make a foreign word borrowed into the language to conform to syllable structure of the borrowing language. Borrowed words from Arabic, English and Hausa receive the insertion process in Igala language. It is observed that consonant insertion is not

very common in many languages as asserted by Oyebade (1998:67). Consider the following examples in Igala language:

English	Igala	Gloss
(40) /teibl/ →	[itebulu]	table
/bɔ:l / →	[ibolu]	ball
/sku:l/ →	[ichekulu]	school
/baibl/ →	[ibaibulu]	bible
/brɛd/ →	[iburedi]	bread
/dʌktə/ →	[idokita]	doctor

Arabic/Hausa	Igala	Gloss
(41) /sadaka/ →	[ohidaka]	sacrifice
/lafiya/ →	[olafiya]	health
/gaskiya/ →	[ogecha]	truth
/Hussein/ →	[ocheni]	name of person
/Hassana/ →	[achana]	name of person

From the above data it is observed that the insertion of vowel /o/ is either replaced with /h/ or /tʃ/ sounds because Igala language does not have /s/ in its sound system.

Also vowel insertion word initially as shown above is caused by the fact that the language does not permit a consonant initial sequence for noun class words.

4.5 Summary

This chapter we discuss some assimilatory and non-assimilatory processes in the Igala language. Also phonological rule and explanation are attached to each example given

CHAPTER FIVE

5.0 Introduction

This chapter is going to discuss the summary of the entire research work, the finding and suggest some way for further research in the language.

5.1 Summary

This work discusses some assimilatory and non – assimilatory processes in Igala language. It also employs the theory of Generative Phonology (GP). The data of the research is drawn from various sources, like intensive fieldwork using an unstructured interviews and conversations between the researcher and the targeted informants. It discusses some aspects of assimilation, like progressive and regressive forms, palatal, as well as labial assimilation.

5.2 Conclusion

The study discovers the processes of secondary articulation as well as the phonological conditions for the assimilations in the language. The term palatal assimilation denotes a phonological process by which consonants acquire secondary palatal articulation or shift their primary place to or even close to the palatal region. It happens under the influence of an adjacent front vowel. Also labial assimilation in Igala refers to the lip position of a rounded secondary articulation onto the consonant. It is observed that regressive assimilation is more

common compared to progressive one which occurs on few words as cited in the examples given.

Also the research has answered some questions from the introduction section. Igala language is like other African Languages where many processes of assimilation are found. Labial, palatal assimilation are found to take place in the language, also some processes are obligatory while some are optional.

5.3 Recommendation

We discussed some assimilatory and non-assimilatory processes in Igala language. In this discussion we observed that progressive form of assimilation is not common compared with other forms of assimilation. In the non-assimilatory process, deletion, insertion, vowel harmony and lengthening are selected. Vowels as well as consonants are deleted in the language for quick and easy articulation. The insertion process selected and discussed in this research is the one pertaining to Arabic/Hausa and English loanwords into Igala language. We have also seen how these words are made to conform to the syllable structure of the language through insertion of the vowels to break consonant cluster or for the substitution of some sounds which are not present in the language.

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APENDIX 1

Abuse (n)	ìnâ
Abuse (v)	bú
Admireable	tʃe ùtéc
Animal	éla
Anxiety	édécwùlù
Argument	ìŋ ^w â
Armpit	éfija
Arrive	dà ódzi
Ashes	élúlú
Ask	té ènè
Axe (n)	ákéké
Back	ùbì
Bad (adj)	bjéne
Bag	ikpà
Banana	égédé
Bark (of a tree)	àlìfc
Bassa	àbatʃà
Basket	àgbâ/àlìgada/ìkatʃa
Bat	ìdc
Beans	ég ^w à
Bear (a child)	bì éma
Beard	ìlc àgbà
Beat (drum)	g ^w ó/nù
Beat (a person)	g ^w ó
Beat (in a competition)	dù
Beauty	àlèfija
Bee	ìŋc
Big	nàna/lile
Bird	éwe
Blameless (fault)	àle/éhi
Blood	éb ^j é
Blow (of wind)	fu/dzù/fé
Blow (with the mouth)	fa

Body	éla
Boil	nà
Bone	àtʃik ^w û
Bow (weapon)	évc
Bow (v)	dà ódзи lс
Bracelet	úde
Bread	ìkpàkpa
Branch (n)	été
Branch (v)	ná
Break (snap)	g ^w ú...tʃé
Break (smash)	kpa...fс
Build	kс
Burn	g ^w ú...dzó
Bury	ojì
Bush	óko
Café	òwò
Calabash	úkpátʃì
Call	dé
Camel	ìṅàkulumi
Carry (a load)	du
Carry (loads)	kó
Carve	gbé
Cassava	àbátʃà
Eat	ébàlà
Catch	mú
Cereal	ókâ
Chalk	áfu
Chew	ic/nú
Chicken	ádзúwe
Chief	igágo
Child	óma
Children	àma- éma
Chin	àgbà
Chop	gé
Choose	tu

Christianity	éla édzé
Climb	té g ^w ù
Close (artifact)	ré
Close (body part)	jì...dé/kpa...m á
Cloth	úkpô
Cock	àjiké
Cocoyam	ikàtʃi
Cold (of water or climate)	ùjidédé
Come	wá/l è wá
Community (city, town, village)	èwô
Compound	òkòlò
Cook (v)	ji
Corpse	èg ^w ú
Corrupt (moral)	éfùléfù
Cotton (plant)	òwú òtùtú
Count (reckon)	iò
Count (numbers)	kà álukà
Covenant	á-lô
Cover (n)	ùtʃi
Cover (v)	bò...má
Cow	ók ^w unc
Crab	ikálakála/ ikáakála
Craving	éŋé
Crocodile	óŋé
Dance (n)	ìdó
Dance (v)	ta ìdó
Darkness	é-tʃúbi
Daughter	óma ónobúe
Dawn	édzé ŋ ^w á
Day	ódzé
Death	ú-k ^w ú
Debt	ómê
Deceit	é-g ^w é
Deceive	gwé...é-gwé
Defecate	tʃu è-tʃu

Delay 9n)	ìṅèlèbù
Delay (v)	dà..hi
Descend	g ^w érú
Describe	jìwe
Description	ú- jìwe
Desolation	àlàtʃε
Die	k ^w ú
Dig	g ^w à
Disperse	bìja
Divide (v)	kpé
Doctor	òb ótʃì
Dog	ábʲá
Door	óná
Drink (v)	mc
Dry	gbε
Dry season	ùwô
Duck (n)	ìdàgbé
Dust	èbùtù
Ear	èti
Earth 9soil)	ékété
Egg	ége
Eight	édzc
Eighteen	ég ^w á édzc
Eighty	égbé mc élé
Elephant	àdagbà
Eleven	ég ^w a òkâ
Empty	ákpókpo
Enter	g ^w údu
Epoch	ékpàràtʃi
Expert	ókà
Extinguish	kpa...lu
Face	ètʃu
Fall	ṅ ^w á
Famine	ùkpéta
Farm (n)	útʃé

Farm (v)	lo útǵé
Fat (substance)	ùlà
Fat (attribute)	jó ó-jó
Father	àt á/áda
Fear	òkpò
Feather	ìwé
Female (of human)	ónobùle
Female (of non-human)	óle
Fetish	ébc
Fifteen	ég ^w á élú
Fifty	ódze
Fight (v)	òdzà
Fight (n)	ù-dzà
File (v)	odzà
Find (look for)	fě édzú
Find (search, spy)	tú
Finish	tà kpa
Fire	úná
Firewood	ìdzi
Fish	édza
Five	élú
Fly	wì/wù
Food	ćdzé/ù-dze éŋ ^w u
Forest	óko dzim
Forget	gbéŋć
Fortune teller	ákémà
Forty	ćgbć mc édzi
Four	élé
Four hundred	úlú ćkć
Fourteen	ég ^w á élé
Fried	ónúk ^w u
Frog	ćbànaá
FronD	ìŋmâ
Fry	dé
Gather	pka má

Girl	éma ónobùlɛ
Give	du
Go	lɔ
Goat	éwó
God	édzɛ
Gold	édzámálìjǎ
Good	ɲɛ
Gourd	étʃǎ
Grass	égbé
Grate	dzá
Greet	g ^w á ú-g ^w â
Grind	nc
Grinding stone	òk ^w úta ù-nc éɲ ^w u
Ground	áné
Groundnut	ɛpá
Grumble	dze éminì
Hair	ìlc
Hand	éwɛ
Hard	nc
Hat	ùkàtǎ
Hausa	àkétʃì
Hawk	údzì
He-goat	òbùkɛ
Head	òdzì
Heap	úgbúdù
Hear	gbɛ
Heart	édɛ
Heavy	wódzì
Hoe	úkétʃé
Hoe	lo
Hold (in hand)	múné
Hold (with hand)	g ^w ó éwɛ ɲú=ú
Horn	ìgbà
Horse	àɲà éla
Hot	kpà únà

House	úṣì
Housefly	átítíjì
Hundred	égbé mé élú
Hunger	ébi
Hunter	á-dze éde
Igbo	ìgbé
Ignorance	ùgbòdù
Inheritance	óg ^w ú
Interpretation	òmúdétíjì
Iron	ébìdzé
Jar	òtùbé
Jaw	àgbà/ìkpàkó
Jewelry	éṣwu ìdzága
Kill	kpa
King	ónú
Kite	údzi lákàp'ò
Knee	òk ^w úk ^w ù
Knead	nù
Kneel down	dàṣék ^w ú
Knife	ébe
Know	mà
Knowledge	ù-mà
Knot	kwù
Ladder	àg ^w ùbé
Last	òtítalá
Left	àwóhì/àwójì
Leg	éré
Leopard	édzé
Lick	fá...nà
Lie (down)	dà tíjì
Lie (falsehood)	éla èmi
Light (of weight)	fújé
Like	fà édcé
Lizard	àbùtá
Log (of wood)	òtì ìdzi

Long (of stick)	gbòlo
Loose (sth)	tù
Louse	àhìmà/àjìmà
Maize	âkpà
Make	tʃe
Male (non-human)	ćkc
Male (human)	ćnekélé
Man	ćnekéle
Matchet	ćp ^j à
Measure	éŋ ^w à
Meat	éla
Medicine	óg ^w ù
Millet	ókodú
Mix	fć
Money	ćkc
Monkey	ógè
Moon (also month)	ótʃù
mortar	à-g ^w ù
Mosquito	ìmú
Mother	ije
Mould (pot)	bć
Mourn	dà ajìdć
Mourning	àjìdć
Mouth	àlu
Mud slush	ép ^j ć
Multitude	ćwć óné
Mystery	òfili
Nail (of finger or toe)	àṇìgá/àgá
Name	òdú
Navel	úkó údo/údo
Neck	ćić
Need	ék ^w ù
Needle	ébìdzé ù-gá éŋ ^w u
New	étitć
Night	òdu

Nine	éíá
Nineteen	ég ^w á éíá
Ninety	égbé mé éíé ég ^w á
Nonblack race	énefu
North	ópátá àte
Nose	imé
Obtain	ne
Oil	ékpo
Oil palm	épké
Okra	écé
One	ókâ
Paddle	òtíè
Paganism	òg ^w ùtíék ^w é
Palm wine	cté épké
Parboil	wé
Pay (for something)	ra
Pear	cdà
Peel	bé
Penury	ùb ^j é
Pepper	ákcké/ákpc
Person	oné
Pestle	éma àg ^w ú
Pierce	g ^w ú ñú
Plait	mú
Plains	ègbili
Plan (v)	ìò ì-ìò/kpé ì-ìò
Plan (n)	ì-ìò
Plan (clandestine)	éñ ^w à
Plant (v)	gbé
Plantain	àgbé
Plate	úgbà
Play (game outdoor)	rc
Play (game on board)	ta
Pot (cooking)	útíà
Pound (in mortar)	g ^w ú

Pound (on sth)	nú
Pour	dà
Poverty	àle
Pray	gć úle/tǵe àduwa
Prayer	ùle/ àduwa
Precious	àkoko
Puff adder	ćfànurj ^w a
Pull	fa
Rabbit (hare)	áfolo/àdédzì
Rain (v)	ic
Rain (n)	ómi ódzì àié
Rainy season	ćicdzi
Rat	ikélé ^w u
Rat (giant specie with white rail end)	àkóto
Recent	rà álu
Reconcile	ǵc...rú
Red (n)	ékpikpa
Red (adj)	kpikpa
Refuse, reject	kć
Remember	réwá
Remind	ré...wá
Replacement	á-kodzì
Reply (v)	du òji
Reply (n)	òji
Report	àjinć
Represent	kodzì
Return	dà odzì
Right (side)	àwćtc
Ring	èliká
Ring warm	úǵ
River	ádzi
Road	ćnà
Roast	rc
Room	èǵi
Rooster	àjikc

Root	ìlì
Rope	ì-k ^w û
Rot (v)	tʃé
Rotten	é-tʃé
Rubbish	ódzì ètìtà
Saddle	òfìdì
Sand (white)	élánì
Sand (ordinary)	ékété
Say	kà
Sea	òhìmìnì
Secret	òfìlì
See	lì
Seed	éjé
Seedling	ùgbé
Select	tù
Sell	tà
Selling price	ádzá= ŋ ^w u
Semen	à-té
Send (an errand)	kpé ùtʃé
Seven	èb ^j e
Seventeen	ég ^w à èb ^j e
Seventy	égbéc mé éta ɲú ég ^w á
Sew	gá
Shade	òlùbéc
Sheep	álá
Shelter	èbú
Shoe	éd à
Shoot	ta...kpa
Short (of stick)	kpì
Show (something)	ɲà
Sibling	éma ìje
Sign	ù-jìwe
Silver	àdzifa
Sing	kc
Sister	éma ìje ónobùle

Sit down (for singular entity)	g ^w ù g ^w ù áné
Sit down (for plural entity)	ojoné
Six	éfá
Sixteen	cg ^w á éfá
Sixty	égbé mé éta
Skin	ánc éla
Skin (flay)	nà
Sleep (n)	ólu
Sleep (v)	lé ólu
Sleeping mat	úlóko
Slice	bε
Small, short	rê
Smoke	ódudu
Snail	ìgbì
Snake (gen.)	édzô
Snatch	dzàdò
Sneeze (n)	ìh ^j a
Sneeze (v)	h ^j ì ìh ^j a
Son	éma énekéle
Song	éli
Sop	mc nù éla
Sorghum	ókoli
Soup	óbó
Soup (okra)	ércé
South	épátá éganeé
Sow (plant)	gbé
Spear	ék ^w é
Spit	tc
Spittle	ìté
Split	kpa...nà
Spoon	ùkcdε
Squirrel	étfá
Stand (up)	dágo
Star	ilé àwò/àwò
Steal	dzi

Stick	ólì
Stir	dé
Stomach	éfû
Stone	òk ^w úta
Story	àjàka/àh ^j áka
Stong	gbìtì
Suck	mje
Suck (breast	mc éṅâ
Sun	ólù
Sunshine	ólù
Surpass	tù...lè
Survive	je
Swallow (v)	mì
Sweep	gbá
Tail	ótìhì
Take	gbà
Take off (cloth, shoe, ornament)	g ^w ́c
Taste	dzá...má
Tear	kpa...nà
Ten	ég ^w à
Thief	ódzì
Thigh	úta
Thing	éṅ ^w u
Think	pké ìbe
Thirst	òlùgbε
Thirteen	ég ^w á éta
Thirty	óg ^w á ég ^w á
Thorn	ìkéké
Three	éta
Throat	́cfa
Throw	rc ìkpóló
Tie (rope)	dzì
Toad	àkéké
Tobacco	àtábâ
Tongue	ùkpálu

Tooth	éṇì
Tortoise	áṇédze
Touch	du éwé kádó
Tower	édégc
Tree	ólì
Trumpet	ékàk àtḽì
Trumpet (short local trumpet)	ékpana
Trumpet (long local trump)	àlikìà
Turn around	rì...dâ
Twelve	ég ^w á èdzi
Twenty	óg ^w ù
Twenty-one	óg ^w ù nù mé kâ
Twenty-two	óg ^w ù nù mé èdzi
Twist	dàlc
Two	èdzi
Two hundred	ég ^w á ékéc
Untie	tù
Urinate	té ì-té
Vain	éwaje
Vagina	òbù
Vehicle (boat, car, train)	ékc
Vomit	ré
Vow	ódzi

APENDIX 11

Below is the list that contains the information of the informants / scholars interviewed :

1. Name: Prof. Sunday Omachonu.

Address : Kogi State, Ankpa.

Age: 59

Occupation: A visiting lecturer, Nasarawa State University.

2. Name: Alex Abiodu Ikani.

Address : No 221, No Man's Land Nassarawa local Government.

Age: 28

Occupation: A Service station, Oando Filing Station BUK Road.

3. Name: Sunusi Atadogu.

Address : Na'ibawa 'Yan lemo, Kumbotso Local Government Kano State.

Age: 31

Occupation: A student in Social studies Department, Sa'adatu Rimi College of Education, Kano.

4. Name: Kadiri Isah.

Address : Kogi State, Ankpa.

Age:42

Occupation: A Lecturer in Kogi State University. Ankpa.

5. Name: Rahamat Abiodun

Address : Okenne Local Government, Kogi State.

Age: 25

Occupation: A student in Federal College of Education Okenne, Kogi State.

6. Name: Israel Alex

Address : ‘Yan Kaba, Nassarawa local Government, Kano.

Age: 27

Occupation: An English Teacher at Bennie International School, State Road, Kano.

7. Name: Miss. Laurat Kadiri

Address : Kogi State

Age: 24

Occupation: A Librarian in Linguistics Department, University of Nsukka, Enugu State.