
NASALITY AND NASALIZATION IN ÀBÈSÀBÈSÌ: CASE STUDY OF AKPES

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ABSTRACT: *The issue of nasality and nasalization has been subjected to serious debate among phonologists. Some of them are of the opinion that vowel adjacent to nasal consonants do assimilate nasal quality from the contiguous consonants. This is evidence in the situation whereby the oral vowel occurs at syllable final position with a nasal consonant. However, another school of thought is of the opinion ‘the source of nasal vowel in syllable final position’ must have developed from history. In essence, it assumed that the realization might be a resultant effect of the deletion of the nasal consonant in question. This paper aims at contributing to this discussion using Akpes data. Agoyi (2008) suggested the name Àbèsàbèsì for the four variant forms of the Akpes language cluster¹. We argue that Akpes attests nasalized as well as nasal vowels. The nasalized vowels are realized after the deletion of the contiguous nasal consonants. Earlier scholars proposed deletion to account for such phonological phenomenon in Benue-Congo languages. In addition, Akpes features nasal vowels in word initial position. The paper argues that the language has nasal vowel phonemes as well as nasalized vowels motivated by the occurrence of the vowels in a contiguous nasal element environment.*

KEY WORDS: nasal, nasalization, Akpes, assimilation, deletion, syllable

INTRODUCTION

Phonological study reveals that sounds produced when “air is allowed into the nose by lowering the velum, the soft palate at the back of the mouth” are “nasal sounds”. This nasal feature is one of the phonetic features that readily assimilate the place of articulation in most languages of the world. Elugbe B (1989) observes that the Edoid languages are very rich in nasal phones and

¹Agoyi (2008) used phonological features and acceptability among the eight communities of speakers to suggest the name Àbèsàbèsì for the four mutually intelligible variants of the language known in literature as Akpes. The researcher used the phonological phenomenon observed in the language to group the speech form of the speakers to four lects namely, Akpes, Èkiròmì, Ìluḗni and Ọ̀ṣùgù. This paper adopts the grouping to enable an in-depth comparative study of the speech variants. It is pertinent to state that Àbèsàbèsì language development group has approved Agoyi (2012) proposed orthography for the language; currently, the language development group is working on a digital dictionary of the language using a multidialectal principle.

nasalization. Scholars such as Agoyi (2013), argue in favour of the classification of Àbèsàbèsì as Edoid, while Elugbe 2012 proposition is that the Edoid, Àbèsàbèsì (Akpes clusters) and Ukaan should be reclassified as Akedoid within the Niger-Congo phylum. The suggestions of the two scholars need to be further investigated to see how close the phonological nasal and nasalization phenomena in the languages are closely related. Therefore, the paper attempts to interrogate the phenomenon of nasalization in Àbèsàbèsì focusing the Akpes variant of the language as a contribution to the discussion and as an attempt to account for the linguistic classification of the language. This study adopts a descriptive method to investigate the nasal phenomenon in Akpes. Two communities, Akunnu (Akoko North East) and Ìlúdòtun (a community in Àjowá Akoko North West) in Ondo State Nigeria, speak Akpes variant of Àbèsàbèsì (Akpes cluster). Akpes (ibe) is spoken in the south West Nigeria. The multilingual nature of the Akpes speaking communities as well as 2006 NPC projection for only local government areas in Nigeria make it difficult to state the actual number of the speakers. In 2006 NPC population gazette, 179,092 and 211,867 are the population figures for Akoko North East and North West local government respectively. The figures for Akoko North East include Akpes speakers in Akunnu while the Akoko North West population figure include Akpes speakers in Ìlúdòtun Àjowá. In 1991 NPC Akunnu has a population of 8,289 including none Akpes speakers, Ajowa figure including Akpes speakers in Ìlúdòtun is 12,119 (NPC 1991). There also speakers in diaspora in search of greener pasture, consequently, projecting the number of speakers in not visible in this study. The paper focuses on nasality, which is a phonological feature of sounds determined by passage egressive/ingressive airflow through the nasal cavity in sound production. In essence, nasality includes the study of nasal sounds and the nasalized sounds. Nasalization on the other hand, can be understood from Walker 19981's view as a phonological phenomenon that takes place "when an underlying nasal segment" spreads its nasal quality to "an adjacent .segment". The nasalization effect may be on only the adjacent segment or on a string of segments. The paper examines available literature on nasal phenomenon in languages of the world, most especially Niger-Congo languages in section 2. Section 3 presents observable nasal data in Akpes. The data is subjected to discussion in section 4. Sections 5 will present an Optimality account of the nasal phenomenon, while section 5 will discuss the findings and conclusion before making suggestions for further study.

LITERATURE REVIEW

Welmers (1971:30) observes that 'phonetic nasalization is fairly common among West Niger-Congo languages'. To him 'a frequent pattern of nasalization occurs with vowel of a morpheme'. Nasality may start from a preceding nasal consonant and spread to the end of the morpheme². Syllabic nasals as pronominal morphemes are said to be a common feature of Niger-Congo languages. Welmers (1971:67) observes that the syllabic pronouns are most often first person singular pronoun, sometimes third person singular and in few cases second person plural.

² Welmers (1971) discusses example of this phenomenon on Kpelle language.

Some of the Kpelle examples cited Welmers (1971:67) are:

1	ńpòlu	‘my back’	ńpáa	‘kill me’
	ńtia	‘my taboo’	ńtẹ́	‘send me’
	ńkọ́	‘my foot’	ńkáa	‘see me’
	ńkpìj	‘myself’	ńkpé	drive me away’
	ńfèla	‘my wage’	ńfili	‘cheat’
	ńsũa	‘my nose’	ńsọj	‘catch me’ (Welmers 1971:67)

In essence there are diverse opinion on the status of nasalization in languages of the word. Some other scholar contribute to the discussion on nasalization in Niger Congo language. Among such discussions are Atóyèbí (2011) contributes to the discussion on Nasal and nasalization in Niger-Congo languages. He argues in support of the school of thought that says that ‘nasalized vowels in languages could only have derived from (vN) sequences’; vN in this instance implies a vowel followed by a nasal element.

Other scholar in their research on Yoruba have shown that Nasalization occur in Yoruba. However, the direction of nasal spread is controversial. While a school of thought argues that the language does not allow nasal spread anticipatorily (Awobuluyi and Oyebade (1995); this presupposes that the direction of nasal spread in the language can only be only rightward. However, Abiodun M. A. (1999) used data from Ekiti dialect of Yoruba to argue in favour of a bidirectional nasal spread in Yoruba. Oyebade (2001) says that when a vowel segment with nasal quality is deleted in Yorùbá the nasal quality most often than not is not deleted; it shows up on the nearest vocalic element. Eg.

2 kǎ́ ekpo → kǎ́kpo

from the above example, the first contiguous vowel V₁ is deleted but the nasal quality is transferred to the next vowel available vowel segment V₂. Note that scholars in Yoruba studies opine that the language does not nasalized the mid high vowel [e, o] even if the vowels occur in a nasal environment. Oyebade (2001) argues that the constraint that disallows the deletion of nasal quality even if the nasal bearing element is deleted makes it possible for the speakers to transfer the floating nasal quality to the contiguous auto-segment bearing element which in the production of kǎ́kpo. The above analysis presupposes that vowel /e/ in

mǎ́ èdǎ́ → mǎ́dǎ́

mǎ́ èlò → mǎ́lò

the tone and nasal segments on the deleted high back vowel /u/ are expected to surface on the nearest available tone and nasal bearing segments. The above process, if applicable will produce

mǎ́ èdǎ́ → [mǎ́dǎ́]

mũ èlò → mǎlǎ

phonetically. However, another nasal vowel constraint stipulates that a [+round, +back, +high] vowel should be deleted with its nasal quality. This rule accounts for the phonetic production of mǎlǎ and méjì in example 2. Consequently, mũ òfo becomes mófo after the deletion first contiguous vowel/ũ/. Note that only the tone segment on the deleted nasal high vowel surfaces on /o/ the nearest tone-bearing unit. Example 2 raises controversial issue on the status of /ẽ, or ò/ as vowel phonemes in the language. Because the two sounds, behave as transparent and opaque to nasalization depending on the environment of occurrence. These issues need investigation in the laboratory to confirm the behaviour of the two sounds behaviour in the environment of sounds with nasal quality. Although, the status of the two phoneme under discussion here are not the main focus of this paper, The investigation of nasal and nasalized elements in Akpes a niger-cong language may through light on the prop another paper. This paper endavours to investigate nasal If the two sounds, do not

In Jenewari study of Ijoid, specifically Ijò and Defaka: V and CV syllable structure; he observes instances of words with nasalized vowels and nasal stop such as:

3	ómbú ‘navel’	ìnjì	‘fish’
	éndé ‘four hundred’	ìngó	‘riches’
	ángbò ‘millipede’ Jenewari (1989:112)		

He suggests that homorganic nasal segments as in 3 can be accounted for either as an underlying nasal segment or as epenthetic element between a phonologically nasalized vowel and a stop.

It is pertinent to note that the source of nasal vowels cross linguistically have been very controversial. Scholars such as Greenberg argues that the nasalized vowels are derived ‘from the earliest state of an oral vowel following in proximity with nasal consonant. While other scholars such as Hyman (1972:171) and Williamson (1973:115) feel that the phenomenon may be as a result of the present of historical CNV sequence. In essence, CṼ syllable structure, may have be traced to a historic presence of CVN in the proto form of such language.

Ian Maddieson (2019) observes that ‘the pattern of nasal and nasalization’ was one of the first phonological topic to receive attention in the search of universal phenomena the study of languages of the world³. He illuminated on Ferguson’s (1963)’s discussion of primary consonants where Ferguson says that a language may feature only one or two nasal consonant /n/ or /n/, /m/ respectively. Maddieson cited the example of Tawana as one of languages that may not feature primary nasals yet attest nasalization in some loanword as well as voice stops that feature optional pre-nasalization, to him ‘nasal also occur when two voiced stops abut and the first is dissimilated to nasal. There some languages with ‘contrastive nasality in their vowel system’ but can be

³ Ian Maddieson opinion is obtained for from www.google.com on 3/6/2009

analyzed as lacking nasal consonant' though they attest phonetic nasal consonants. Maddieson observes that instances 'of consonants which appear as voiced or pre-nasalized plosives before oral vowels that are pronounced as plain nasal in nasalized vowel contexts in West Africa including Kru languages such as Klao, Jukunod languages such as Kpan, and Igboid such as Ikwere. In addition, South American languages spoken in Costa Rica, Isaka, a Sko language of Papua New Guinea' are also listed among languages with such pattern.

Nasality in Edoid.

Elugbe (1989:31) states that Edoid language family is rich in nasals. He observed that in some of the languages some of the nasal elements are allophones of the non-nasal phonemes. Edoid nasals are assumed to either have voiced or breathy voiced (murmured) features. Emahe an Okpamheri dialect cluster features breathy voice nasals. In addition, Elugbe observed a tapped alveolar nasal in many Edoid languages. Nasal sound Edoid languages attest include [m, mh, n, nh, ɲ, ŋ^w, a tap alveolar /ɲ/. Generally speaking, /r/ nasal /r̃/, the labialized velar nasal /ŋ^w as well as voiced palatal nasal /ɲ̃/ (Elugbe 1989:31). The status of nasal vowels in Edoid languages are not predictable because most vowels with nasal qualities occur after or in the environment of nasal consonants, which makes it impossible to distinguish the nasal vowels from the nasalized ones. (Elugbe 1989:40). Furthermore Elugbe observes that in the Edoid languages the feature of C₂ in a construction may be probably a development from what the consonant in question does as determined by its 'place of articulation' in the environment it occurs. To him, 'no Edoid language has a segmental reflex for the velar -N-. But many retain actual reflexes of PE bilabial, alveolar, palatal, -C₂' (Elugbe 1989:115).

Nasality in Ukaan

It is worthy of note that Nkaimigbo (2014) observes that Igbo attests consonant nasalization such as [ɟ̃] and [ʒ̃]. Unguru (2010) says 'Edoid languages like Bini and Urhobo have nasal vowels'. She observed in most Edoid languages and Ika Igbo all the oral vowels can be nasalized⁴. Aziza (2002) shows how oral and nasal vowels contrast in Urhobo⁵.

Nasality in Àbèsàbèsì: Akpes Cluster

Àbèsàbèsì is made up of four languages namely: Akpes, Èkiròmì, Ìluẹ̀nì and Ọ̀şùgù⁶ The language attests nasality and nasalization⁷. Data analyzed in this paper are mostly primary data

⁴ See Uguru J. O "Nasal Vowel's in Ika Igbo" in *Journal of West African Languages* XXXVII,2 (2010:18-19) for more details.

⁵ Aziza Rose "Nasality in Urhobo: An Autosegmental Perspective" in *Journal of West African Language* XXIX.2 (2002:14-15)

⁶ Èşùkù is otherwise known as Ọ̀şùgù within the community. Agoyi 2008 suggests that the speech form of Daja and Èşùkù should be classified as Ọ̀şùgù. This suggestion is adopted in this paper for a better understanding of the language description.

⁷ The data is presented using IPA symbols.

collected by the researchers as well as Structure of a Nigerian language students' practical work. In the next sub-section, Akpes nasal consonants is presented for discussion.

Akpes Nasal Phonemes

Data collected from Akpes reveal that the language attests nasal consonants as well as nasal/nasalized vowels. The nasal consonant phonemes identified in the language so far are: /m, n, ŋ, ɲ/ phonemes. Examples of the manifestation of each of the sounds are presented in examples 4a) to 4d. The place of articulation is used as the bases for the presentation of the data starting from the labial nasal.

a. labial nasal: /m/ in:

4i.	m̃	'be full'
	m̃	'say'
	m̃s/m̃	'fry'
	moŋ/moŋĩ	'fried without oil'
ii.	àmũ	'language'
	òlèmũ	'orange'
	ìmũ	'name'
	emũ	'money'
	imũ	'hunger'
	im̃si	'sleep' (Noun)
	ím̃ɲ	'melon'
	om̃ɲã	'knife'
	om̃s/om̃si	'king'
	ímoŋĩ	'melon'
	imũda	'smoke'
	tam/ tamĩ	'remember/remind'
	m̃	'full'
	'támi na	'remember/remind me'

	mǎŋǎ	‘to brow’
	mĩf^	‘sleep’
	mũs	‘fold/close hand’
	kòm	‘to make soud’
ii.	òsòm	‘soup’
	enam	‘meat’
	akpom	‘load’
	yom	‘to price’
	iyum	‘400’
	ƒum	‘to break’
	gum	‘to bury’
	isum	‘work’
	sum	‘to chop’
	àdòm	‘moon’
	ƒum	‘to break’
	ìsòm	‘soup’
b.	Alveolar nasal /n/	
5.	nũ	‘was there/went there’
	onũ	enu ‘mouth’
	nõ	‘my’
	hině	‘help to keep’
	íƒeněƒ	‘seven’
	ànãníŋ	‘eight’
	nãsinã	‘dream’
	nũnò	‘meet’
	hině	‘assist’

	kinà~kinè~kinò	‘has not’		
	kòn//kònĩ	‘to fight/uproot’		
c.	Palatal Nasal /ɲ/			
6.	ɲi	‘water’		
	ɲò	‘female’		
	àdʒa/àɲa ɲi/imi	‘pot for fetching/storing water’		
	àdʒa/àɲa ɔ̀sòmi	‘pot for cooking soup’		
	ɲom/ɲomĩ	‘wet grass’		
	ahalà tʃí ɲom/ɲomĩ íkudẽ	‘the grass is wet this morning’		
	ɲã	‘red’	Olú fe òli ɲã	‘olú is dressed in a red robe’
	ɲõ	‘snake’	ɲõ tí okpo	‘there is a snake on the path way.’
	ɲum/ɲumũ	‘be sweet’	òrombó idĩ ɲum	‘these oranges are sweet’
	ɲom/ɲomĩ	‘to fade’	ɲĩ kòkó ɲom/ɲomĩ òlí no	‘my dress faded because cocoa juice’
	òɲúmɛɲume	‘a type of sweet flower’		
d.	Velar Nasal: /ŋ/			
7.	ŋõ	‘drink’	ŋõ ɲĩ	‘drink water’
	ètɛŋ	‘fish’		
.	ɛŋã	‘new’	òli ɛŋa	‘new cloth’
	bòŋõ	‘bend down’		
	mòŋõ	‘lend/borrow’		

Data in examples 4-7 show that Akpes attest four nasal phonemes: labial /m/, alveolar /n/, palatal /ɲ/ and labiovelar /ŋ/. Each of the attested nasal consonant phonemes can occur: word initial, mid, and ‘final’ position. Data that attest consonant final has underlying vowel final (Agoyi 2015). In essence all the data presented with consonant final/close syllable are indeed open syllable. The phenomenon of syllable nasal is the subject of discussion in the next section.

Akpes Syllable Nasal

Data collected from all Àbèsàbèsì dialects show that the language attests syllable nasal as lexical items. The lexical item has a semantic meaning as first person singular object pronoun. The tone on the syllable is however, a low rising as in example 8 below.

- | | | |
|----|---------|-------------------|
| 8. | ń sà | ‘I know/new’ |
| | ń je | ‘I see/saw’ |
| | ń dò | ‘I want/wanted’ |
| | ń sɛmẽ̃ | ‘I greet/greeted’ |
| | ń dɛ o | ‘How are you?’ |

Phonetically the syllabic nasal has allophones, which are common phonological phenomenon in in Languages of the world⁸. Example of such variant in Àbèsàbèsì is in 9 below.

- | | | |
|----|-----------------|------------------------------|
| 9. | [m̩ bā] | ‘I come/came/arrive/arrived’ |
| | [j̩ jāj̩ ɪmūt̩] | ‘I sell/sold palm oil’ |
| | [j̩ kō ōhūm̩] | ‘I sing/sang song’ |

Note that the syllabic nasal assimilates the features of the initial consonant of the verbal lexical item.

Nasalized Vowels

Data collected from Àbèsàbèsì indicates that nasalized vowels occur in different word (initial, mid, and final) positions. The phenomenon is examined in the next sub-section of this paper.

Nasalized vowels at word initial position. Àbèsàbèsì attests morphemic syllabic nasals.

Examples of such occurrence is in the second person plural pronoun àń “you pl”. Example of the occurrence of the lexical item in a syntactic structure is in

- | | | |
|-----|----------|--------------------------|
| 10. | àń sɛmẽ̃ | ‘you (pl) greet/greeted’ |
| | àń sà | ‘you (pl) know/knew’ |

⁸ Kenstowicz M (1994:66) sees “Allophone of the same underlying sound (phoneme)” as the “product of systematic rules that modify the segment depending on the context in which it finds itself”.

àń je	‘you (pl) see/saw’
àń dò	you (pl) want/wanted’
àmĩ sà	‘he/she know/knew’
àmĩ ba	‘he/she come/came’

It is possible to argue that the nasal feature in 10 is from the occurrence of a syllabic nasal consonant phoneme. However data in 8 shows that the meaning of the syllabic nasal defers from the meaning in 10. The presumption is that nasality in data 10 is a feature of the vowel ‘a’. The implication therefore is that the vowel is a nasalized low vowel /ã/ with a low rising tone. In 8, /ń/ is a first person singular object pronoun, while /ã/ is second person plural object pronoun for human element⁹. The third person example suggests a VCV word structure. In *àmĩ* ‘he’ it is obvious that the vowel of the second syllable is nasalized. The nasal quality in the nasal consonant /m/ motivated the nasal feature in the contiguous high vowel. However, there is no evidence of similar process in data 11 below in that the occurrence of the nasalized vowels in *Àbèsàbèsì*. Example 11 shows a cross section of the feature of nasalized vowels in all the lects AgoyiT. O (2008) suggests.

	Akpes	
1.	itfũ	‘head’
	ahũ	‘nose’
	onũ	‘mouth’
	inãjì	‘tongue’
	imĩ	‘water’
	àmĩnã	‘finger nail’
	òkpònãmĩ	‘bone’
	ìdẽ	‘those’

In 11 above, the motivation for the nasal quality on each nasalized vowel is traceable to the adjacent preceding nasal consonant. However, the research come across nasal vowels that the above argument may not be able to trace. Vowels in the category mention above are examined in section three of this paper.

⁹ Agoyi (2001) argues that Èkiròmì feature inflection for number. While changing the initial vowel to ‘a’ indicates more than one [+human] noun, changing initial vowel for ‘l’ marks more than one [-Human] noun.

Nasal Vowels

Data collected from all Abèsàbèsì speaking communities suggest that Abèsàbèsì especially Akpes and Ìluẹ̀nì variants, features nasal vowels. The presumption here is based on the premise that nasality on the vowels cannot be traced to the occurrence of nasal element in the environment of the occurrence. For the purpose of the argument, the nasal specification is represented at syllable initial position as N in two Àbèsàbèsì lects that attests the feature in data 12.

	Akpes	
12.	àNgò onũ	‘lower jaw’
	ìNkɔf	‘feather’
	iNgbagbà	‘chin’
	iNbeyi	‘breat’
	àNkù	‘stomach’
	iNkèrè	‘chochrous’
	èNtarà	‘pepper
	aNgodu	‘kneel’
	iNfo àgò onũ	‘beard’
	iNsuwò	‘saliva’
	àNtà	‘vagina’
	iNfuwò	‘palm wine’
	aNsù	‘ear’
	èNkú	‘liver’
	èNděđě	‘penis’
	èNgè?	‘door’
	iNbi	‘oil’
	aNfa	‘leaf’
	òNkò	‘navel’ ¹⁰

¹⁰ Note that the initial syllable in 12 defers from the one Welmers (1971:67). See in example 1 of this paper. Note that most of the lexical items in 12 are root morphemes.

From data 12, it is observed that nasalized vowels occur in word initial position of all Àbèsàbèsì lects except Ekiròmì. In the data under consideration, there is no obvious accountable nasal feature in the preceding consonant. The perceived production of the consonant sounds in the lexical items do not suggest the presence of an underlying nasality. Therefore the plausible explanation for the perceived nasal feature in word initial position in data 12 is that Akpes attests nasal vowels. It is worthy of note that Akpas and all other languages in Akpes cluster (Àbèsàbèsì) attest vowel initial nouns. The implication is that all nominal elements in the language feature V shape syllable the word initial position. Borrowed names are always produced by inserting a High vowel /i/ if such lexical item has a C-shape initial element in the source language. Example of such borrowing is show in 13 below

13	Jimoh	Ijímọ	Muslim name
	Sikrat	Isíkírá	Muslim name
	Rafat	Iráfaátù	Muslim name
	Yekini	Iyèkínì	Muslim name
	Samuel	Isámúèlì	Christian name
	John	Ijòṣúnú	Christian name
	Mary	Imèrí	Christian name

In essence nominal root morphemes in the language feature V-shape element in the word initial position at the underlying representation, which accounts for the phonetic perception of such V-shape elements. Consequently, in 12, above, all the lexical items are V-shape initial. Interestingly the vowels in the word position have nasal quality which the research have not been able to trace to the occurrence of a preposition or postposition nasal or nasalized element that could initial nasal spread either progressively or regressively. The argument is that if the preceding (which is not applicable in this instance) or proceeding contagious sound has no nasal feature, then it may be difficult to account for the featuring of nasalized vowel at word initial position by assuming a regressive nasal spreading¹¹. The phenomenon in question is deferent from the Paraguayan Guaraní nasal spreading which is motivated by the contiguous nasal consonant [m, n, ɲ, ŋ] allophone replacement of [ᵐb, ᵐd, ᵐdʒ, ᵐg] respectively to indicate the presence of +nasal (Kaizer Eden 2008:285-286). In that Akpes features /m, b, n, d, ɲ, dʒ, ŋ, g/ consonant phonemes.

The only possible account in this researcher's view, is to propose that Akpes attests nasal vowels as well as nasalized vowels. In that nasality in the nasalized vowels are traceable to the nasal

¹¹ Abiodun (199) argued in favour of a regressive nasalization process in Yoruba. However, the phonetic motivation for production of the nasal feature in the data Abiodun examined is traceable to a contiguous nasal element in the lexical item.

2009:5-8 *Dol:10.13140/Rg.2.2.28818.662641*: Montpellier

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