

ANALYSIS OF PHONEMIC REALIZATION OF FREE VARIATION IN KORU ASHE AND ENGLISH: AN IMPLICATION FOR L2 KORO ASHE LEARNERS OF ENGLISH

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DOI: 10.13140/RG.2.2.30520.83203

Abstract

This paper undertakes a contrastive study phonemes realization and distribution in Koro Ashe and in English at the segmental level with the view of helping ESL Koro Ashe learners of English to improve their performance and communication in English. The phonological features of both English and Koro Ashe languages differ significantly at the segmental and supra segmental levels, thereby posing serious communication challenges to the study population. Contrastive Analysis (CA) is the model employed to carry out this investigation. CA contrasts the phonological features of two different languages, which have practical objectives of showing in what respect the two languages differ from or resemble for improved pedagogy. Oral Production Test (OPT) was the instrument used gathering data for this investigation. The findings of this investigation shows that, (1) the consonants; [s] and [ʃ]; [f] and [hw]; [z] and [ʒ]; [r] and [kp]; [p] and [kw] are in free variation in Koro Ashe but they are not in English; However, the pairs of the sounds; /ai/ and / i: / in ‘either’; /e/ and /ei/ in ‘again’; /a:/ and /æ/ in ‘pasta’; the realizations of aspirated [p^h], released [p] and unreleased [p̚] in the English words ‘map’ [mæp^h], [mæp] and [mæp̚] and the free variation in the realization of the word ‘contribute’,

where the stress can be in the first syllable (' ...) or in the second syllable (. ' ...) are in free variation in English but they are not in English. The above results reveal that Koro Ashe and English have great differences with regard to their phonological free variation. It is in consonance of this that CA model maps these areas of difficulties for improved pedagogy with regard to the study populace.

Keywords: Phonemic, Contrastive Analysis, Free variation, English Language, Koro Ashe.

Introduction

The word 'Koro' refers to the 'people' and the 'language', hence the Koro are one of Nigerian's middle belt languages of the Kwa group of the Benue -Congo sub linguistic group, whose origin is traced to the then great Kwararafa kingdom (Igube 43).

The word 'Koro Ashe' in this paper refers to both the 'people' as well as the 'dialects' of Koro. Hence, this paper focuses on Koro Ashe, one of the dialects of Koro spoken in both Karu and Kagarko Local Government Areas of Nasarawa and Kaduna states. Blench (1) identifies two standard varieties of Koro Ashe; they are Koro Ashe *Itorn* /itōr/ and Koro Ashe *Ncheck* /ntʃɛk/. Below are the words that distinguish the two varieties:

Itorn /itōr/ Dialect	Ncheck /ntʃɛk/ Dialect	Gloss
Ufa	Uhwa	'drink
I me izeme	I me izeme	'I am tired'
oʃume	osome	'my eye'

Figure 1.1: showing the two standard varieties of Koro Ashe

The twenty first century has attracted attention of scholars to work on the phonology, grammar, orthography and the morphological, historical and the grammatical aspects of Koro Ashe. it was in consonance to this that this paper aims at doing a contrastive study of free variation in English and in Koro Ashe with the hope of helping the study population (Koro Ashe learners) to improve in their listening, speaking, reading and writing skills.

English language on the other hand, which is a Germanic language that was first spoken in the early Medieval England, is now a global lingua Franca, named after the Angles, one of the Germanic tribes from England. English is the third most spread language in the world after standard Chinese and Spanish (Jatau 2 cited in Ethnologue 10). English is said to be the most commonly spoken language as a mother tongue in the United Kingdom, United States, Canada, Austria, Ireland, Newzealand, and it is widely spoken in some

areas of the Caribbean, Africa, and South Asia (Jatau 2 cited in Banjo 62). It is also the co-official language of the United Nations (UN), and many other worlds and regional and international organizations such as the European Union (EU), Common Wealth Nation (CWN), and International Monetary Fund (IMF), to mention but a few.

English language in Nigeria is an official language used as a medium of communication in the domains of government, the law, the media, international commerce, record keeping, and educational system. English also serves as a unifying factor, a lingua franca, a mark of elitism, a license for the acquisition of profitable and prestigious jobs and admissions into most tertiary institutions Nigeria. In fact, one would say that English language comes to stay in Nigeria and it has been favored over our indigenous languages.

Despite the significance and prestige accorded to English language in Nigeria, learners of English as a second language (L2) and the Koro Ashe learners of English in particular have pronunciation difficulties pronunciation largely attributed to the phenomenon of negative transfer the features of L1 (Koro Ashe) to the target language (English).

At the segmental level there are certain phonemes of English that are conspicuously absent in the phonemic inventory of Koro Ashe language and there some phonemes of Koro Ashe which are absent in the phonemic inventory of English couple with the differences in which the sounds in the two languages are realized and distributed. For instance, the phonemes /s/ and /ʃ/ contrast in the English words; ‘shoe’ [ʃu:] and ‘sue’ [su:]. The distribution of the sounds /s/ and /ʃ/ contrasted in English. Thus, substituting one of the sounds for the other will result in semantic contrast between the two words. However, the sounds; /s/ and /ʃ/ in words [osu:] and [oʃu:] are in free variation in Koro Ashe, two sounds occupied the same environment and they do not bring about contrast in meaning.

Likewise, the realizations of the English the vowels sounds [i:] and [e] in the word ‘economic’ are in free variation in English. The word ‘economic’ is realized [i:kənəmɪk] or [ekənəmɪk]. Thus, substituting the vowels sounds [i:] and [e], does not result in semantic contrast, but are termed as the different realizations of the word ‘economic’.

At the supra segmental level, the word ‘contribute’, the stress can be in the first syllable (‘ ...) or in the second syllable (. ‘ ...). The two stress patterns are in free variations in English and thus not change the meaning of the word. These and many other variations pose a serious challenge in the learning and mastering of English by the Koro Ashe learners of English. The fact that, most Koro Ashe and other L2 speakers of English first acquired their L1 and became fairly proficient in it before they were taught English in

schools and couple with differences between the sounds of Koro Ashe and English compounded the problem. It is in consonance of this that this study was conceived using CA model to map out these areas of difficulties for improved pedagogy with regard to the study populace.

This paper aims at contrasting phonological free variation in English and Koro Ashe in order to see the differences and the similarities between the two languages for improved pedagogy with regard to the study population. .

The paper will help to give more insight on the areas of differences and similarities between the realizations of free variations in English and Koro Ashe. The paper will also serve as a reference materials to scholars of comparative and contrastive linguistic studies of English and Koro Ashe. Essentially, the outcome of this study will be of benefit to curriculum planners/designers, syllabus compilers textbooks writers to come up with suitable learning materials that will be of immense benefit to Koro Ashe learners of English.

This paper looks at free variation in English and Koro Ashe at both the segmental (sounds) and supra-segmental (stress) levels. Also, the study will limit its investigation on Koro Ashe dialect being spoken in Karu Local Government Area, Nasarawa State.

Literature Review

Concept of Free Variation

Free variation has been defined variously by different scholars; among them we have the view of Stewart and Vaillette who sees free variation as a situation in which more than one pronunciation of a given sound in the same phonetic context (74). Alagbe (13) sees free variation as a set of items that have several pronunciations without changing in meaning. That is to say items in free variation do not contrast. For instance, the word 'direct' can be realized [dairekt] or [direkt], thus the [ai] and [i] in this context are free variation.

For Cruttenden, free variation as a situation in which a speaker produces noticeably different pronunciations e.g., 'cat' by exploding or not exploding the final /t/, the different realizations are said to be free variation (45). John also sees free variation as a situation in which two more sounds appearing in the same environment without change in meaning and without being considered incorrect by native speakers (117). Phones in free variation occur in the same phonetic environment or context, without having effect on meaning (McGregor 46).

Similar to John's definition is that of Rogers who sees free variation as a situation in which two sounds occur in the same phonetic environment without causing differences in meaning (46). Aze Linguistics YouTube defines free variation as a situation in which two sounds appear in the same phonetic environment without creating a semantic contrast between the two words in question. Richard and Schmidt see free variation to refer to situation when two or more linguistic items (sounds) occur in the same phonetic environment without any apparent change in meaning (212).

Aboderin et al define free variation as a situation where a sound is capable of changing meaning, now merely replaces others without affecting any change in meaning. He provides a guide on how to identify some phonological items on free variation, to include; such items should be qualified to be regarded as full phonemes in their own right, they are not allophones of any phoneme and switching the items (sounds) should not result in the change of meaning (26).

Phonological free variation is well known Phonological phenomenon that occurs when two (or more) phonemes replace each other in the same position in a word without any change in meaning. For instance, the word 'again' is realized [əgain] or [əgen]. The vowel sounds [ei] and [e] in this context are in free variation (Moupean 1).

Free Variation in English and other Languages

Given the example of free variation in English and in other languages,, Aboderin et al, assert that, the word 'educate' may be pronounced as; /edju:keit/, /edʒu:keit/, edjukeit/, or edʒukeit/. Here, the items /dju:/, dʒu:/ /dju/, and /dʒu/ in the above examples are in free variation. Also, the English word "pasta" may have two acceptable ways of pronouncing; we have [p^ha: stə] and [p^hæstə] which refer to the same thing. Thus, the [a:] and the [æ] in this context are in free variation and switching them does not affects the meaning (27). Also, Haggins discovers that the phones /e/ and /æ/ contrasted in English as we can see the minimal pairs in words like 'Ben' [ben] and 'ban' [bæn]. But in Turkish, /e/ and /æ/ are in free variation as it is seen in the words; [ben] or [bæn] both refer to 'I' (64). However, in Koro Ashe the words [ben] or [bæn] does not exist in Koro Ashe; and they are neither in free variation nor in contrast.

Rogers also submits that in English, both [p] and [p^h] occur in word final position in the words [sip] or [sip^h]. Thus, the alternation does not create different words, but they are allophones of the same phoneme /p/ (46). Finegan also explains that, the unreleased [p[!]] and the un-aspirated [p] that occur at the end of the word 'map' [mæp] and are in free variation (115).

Talking about free variation in English and Gooniyandi, McGregor maintains that, the word ‘slab’ [slæb] might be pronounced with either a final released [b] or unreleased [b̚], thus the phone [b] and [b̚] are in free variation in English (46). Aze Linguistics in its YouTube puts that, sounds in free variation appear in the same phonetic environment as in the English words; ‘either’ which could be pronounced as [aiðə] or [i:ðə]; ‘economics’ could be pronounced as [i:kənomiks] or [ekənomiks]; ‘Colorado’ pronounced as [ka:lərədou] or [ka:ləra:dou]. Thus the sounds [ai] and [i:]; [i:] and [e]; [a:] and [æ] in the above examples are in free variation. However, the sounds [ai] and [i:] are not in free variation but in contrast, for instance, [ʊfai] ‘start’ and [ʊfi:] ‘farm’.

In English too, Waya and Kwabehar also confirm that, the word ‘data’ could be pronounced; /deɪtə/ or /dætə/, hence /ei/ and /æ/ are in free variation. Thus, substituting the vowel /ei/ for /æ/ in the above pronunciations does not affect the meaning of the word (ibid). However, the sounds /ei/ and [æ] contrast in Koro Ashe in words; [aʃei] ‘absent’ and /æ/ [aʃa] ‘lungs’.

Also, Stewart and Vaillette point that the realizations of aspirated [p^h], released [p] and unreleased [p̚] in the English words; [mæp^h], [mæp] and [mæp̚] are in free variation and these different realizations above do not contrast the meaning in the word ‘map’ (91). However, the realizations of aspirated [p^h], released [p] and unreleased [p̚] in the English words; [mæp^h], [mæp] and [mæp̚] are not features of Koro Ashe phonology.

Base on the definitions of scholars above, sounds in free variation occupy the same phonetic environment without a change in meaning and without being termed as incorrect realizations by the native speakers. They are variants that exist according to the pronunciation of the native speakers of the language, and are considered as phonemes on their own right.

Empirical Review

Phonological free variation has often been considered as a phenomenon affecting individual (or small set of) words. This may be the reason why it has so far received little empirical attention in English. However, researches in phonological free variation phonology and phonetics have continued to attract scholars. Gimson 1969 did a two corpus – based analysis of spoken speech that aimed at uncovering whether free variation was more common in polysyllables than monosyllables.

More recent studies consists in several surveys of pronunciation preferences carried out by written questionnaires to discover which of the variants for a given set of words the informants preferred. These studies include Walls’s three survey of BrE for the author’s

Longman Pronunciation of English –LPD for short (see e.g., Wells 1999, 2008 or Shitara's (1993) survey for AmE (Moupean 3).

Waya and Kwambeh study the phonemic systems of English and Tiv submit that, the phones [l] and [r] are in free variations in Tiv and according to them, the factor responsible for this free variation is dialectal e.g., the words; '*rwan*' and '*lwan*' both refer to food (14). Moupean 2008 also did a study on pronunciation preferences using corpus based study of BrE which focus on actual usage as well as the productions of the individual items exhibiting phonological free variation The study was aimed at uncover rates of usage of different free variants for a given set of ten (10) lexical items (Moupean 4).

The existence of phonological free variation is caused by different types of factors. Moupean (1) explains the different phonological factors to include: the ongoing sound changes (e.g., /ʃuə/ - /ʃɔ:/ for 'sure' in BrE representing the replacement of /uə/ by /ɔ:/ in the system) or the phonetic or phonological processes such as assimilation, dissimilation, epenthesis or liaison (e.g., /febjuəri/ or /februəri/ for 'February', due to the dissimilation of the two nearby /r/s). The socio-cultural aspect such as the speaker's awareness and knowledge or beliefs about the relationship between the spelling and pronunciation in L1 is also a fruitful source of free variation (e.g., /'weɪstkəʊt/ or /'weskit/ for 'waist coat' in attempt to follow closely regular spelling/ sound correspondences).

Phonological free variants can be related to societal professional group to which the speaker belongs (e.g., /raʊt/ for 'route' in BrE army usage and /ru:t/ for generally) or the speakers' accent (e.g., AmE /təmaɪtəʊ/ for 'tomato' vs BrE /təma:təʊ/). Age is another relevant factor that causes phonological free variation (e.g., /mɔ:l/ for 'mall' shopping center preferred by younger speaker to /mæl/ preferred by those born before 1953 (Wells 2008 cited in Moupean 1) . Free variation could be diaphonic, a phonological situation associated with a group, and variety, or a region; for example the word 'schedule' could be realized as [skedʒʊl] or [ʃedʒʊl] (Alagbe 3).

Differentiating between free variation and minimal pairs, Aboderin et al maintain that, when a sound which is capable of changing meaning now merely replaces other without affecting any change in meaning, such situation as called free variation. But when a sound is being switched with another which results in a change meaning, such situation is called minimal pairs (25).

Theoretical Model (Framework)

Usually, in every academic research there is a theory used in backing it up. Thus, the theoretical framework of this paper is Contrastive Analysis (CA) model. Contrastive Analysis henceforth (CA) as an approach that was developed in the 1950's and 1960's as an application of structural linguistics to language teaching and is based on the assumption that, the main difficulties in learning a new language are caused by interference from the first language, these difficulties can be predicted by contrastive analysis and teaching materials may make use of contrastive analysis studies to reduce the effects of interference.

Therefore, the difficulty in mastering certain structures in a second language depended on the differences between the learners L1 and the L2 they are trying to learn. It was expected that once the areas of potential difficulty had been mapped out through CA, it would be possible to design language courses more efficiently. Wilkins cited in Ashikeni and Akoshi assert that contrastive analysis is one of the few investigations into language structure that has improved pedagogy (224, 105).

Williams concurs with the view above and further explains that contrastive analysis procedure makes it possible to identify the pronunciation difficulties in (a) sounds articulation (b) distinguishing between phonemes of the mother tongue (L_1) and the target language system. The result of such comparison aims at yielding insights which are relevant to the compilation of syllabuses, teaching materials, tests etc (80).

Justification of the Theoretical Framework

Considering the topic of this paper "...Contrastive study of free variation in English and Koro Ashe", CA model is the most suitable theoretical framework for the investigation. One of the reasons for the choice is that, this investigation involves contrasting the phonological features of two different languages, with practical objectives of showing in what respect the two languages differ from or resemble each other for improved pedagogy for L2 (Koro Ashe) learners of English.

Methodology

The paper employs descriptive research design to carry out this investigation. The population of this investigation is the Koro Ashe speakers, who can communicate fluently in Koro Ashe dialect. Out of the thirty three (30) villages and hamlets of Koro Ashe in Karu Local Government Area, Nasarawa state, ten (10) were randomly selected to carry out the investigation. And out of these ten (10) villages, one (1) respondent was randomly selected to carry out the study, thus, we have a total of ten (10) respondents selected for the investigation.

Oral Production Test (OPT), which was developed by Educational Testing Service (ETS) was the instrument employed to carry out this study. The instrument has been used and validated by researchers to be effective tool. The respondents were asked to speak for two (2) to three (3) minutes in Koro Ashe on issues relating to religion, politics, education, Agriculture, culture and belief, commerce, proverbs, etc., while their oral speeches were tape – recorded, played several times, listened, transcribed and studied carefully, noting the phonological feature (free variation) in Koro Ashe and further contrast the findings with English. This will help to ascertain the areas of differences and similarities between the two languages for improved pedagogy.

Data Analysis

The phones [f] and [hw] in the data below are in free variation in Koro Ashe

Data:

i. [fa] (H) ‘Drink’	[hwa] (H) ‘drink’
ii. [fêŋ] (H) ‘to know’	[hwêŋ] (H) ‘to know’
iii. [ifei] (H-H) ‘Fingers’	[ihwei] (H-H) ‘fingers’
iv. [utofei] (L-L-L) ‘Seven’	[utohwei] (L-L-L) ‘seven’
v. [ifei] (L-H) ‘Garden egg’	[ihwei] (L-H) ‘Garden egg’

A close examination of the distribution of the phones [f] and [hw] in the set of data above shows that the two phones occupied the same phonetic environment without change in meaning and without considered as incorrect by native speakers of Koro Ashe. The sounds [f] and [hw] are in free variation as it is seen in words like; [ofea] “Greetings” and [ohwea] ‘greeting’; [fer] ‘Dig’ and [hwer] ‘dig’ [utofei] ‘Seven’ and [utohwei] ‘seven’ etc. Thus, switching the sound [f] for [hw] do not create a semantic contrast. Therefore, the phones [f] and [hw] are allophones of their separate phonemes /f/ and /hw/ and it is dialectal.

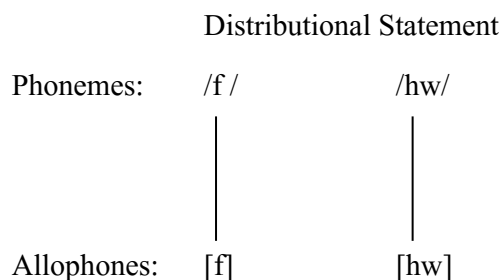


Figure 2 showing the phonemes /f/ and /hw/ and the allophones [f] and [hw] in free variation

The phones [s] and [ʃ] in the data below are in free variation in Koro Ashe

- | | |
|--------------------------------|----------------------------|
| i. [asagwɛ] (L-L-L) ‘Lungs’ | [aʃagwe] (L-L-L) ‘lungs’ |
| ii. [usai] (L-H) ‘Start’ | [uʃai] (L-H) ‘start’ |
| iii. [suʃe] (H-L) ‘Beauty’ | [ʃuʃe] (H-L) ‘beauty’ |
| iv. [usuhu] (L-L-L) ‘Charcoal’ | [uʃuhu] (L-L-L) ‘charcoal’ |
| v. [usoka] (L-L-L) ‘Stand up’ | [uʃoka] (L-L-L) ‘stand up’ |

A close examination of the distribution of the phonemes [s] and [ʃ] in the set of data above shows that they are in free variation in Koro Ashe. A close look at the data above shows that the two phones occupied the same phonetic environment without change in the meaning in data above. The two pronunciations are acceptable by native speakers of Koro Ashe and it is dialectal. However, the phonemes [s] and [ʃ] contrast in English, thus, switching [s] for [ʃ] in words like; ‘sort’ [sɔ:t] and ‘short’ [ʃɔ:t] will amount to semantics contrast.

The phones [z] and [ʒ] are in free variations Data below in Koro Ashe

- | | |
|----------------------------------|------------------------------|
| i. [izê] (L-H) ‘Foolishness’ | [iʒê] (L-H) ‘foolishness’ |
| ii. [ezekik] (H-H-H) ‘Happiness’ | [eʒekik] (H-H-H) ‘happiness’ |
| iii. [izeme] (H-H-L) ‘I’m tired’ | [iʒeme] (H-H-L) ‘I’m tired’ |
| iv. [kozâi] (H-LH) ‘Ripped’ | [koʒâi] (H-LH) ‘ripped’ |
| v. [nizame] (L-H-L) ‘Myself’ | [niʒame] (L-H-L) ‘myself’ |

Examining the distribution of the phonemes [z] and [ʒ] in the set of data above reveals that the two phonemes occupied the same phonetic environment without resulting to semantic contrast in Koro Ashe. Hence, the phonemes [z] and [ʒ] are in free variation in Koro Ashe. The factor responsible for phonological free variation is dialectal. However, the sounds [z] for [ʒ] are not in free variation in English.

The phones [f] and [hw]; [kw] and [p]; [kw] and [kp]; [w] and [h]; [ʃ] and [j]; [ã] and [ẽ]; [i] and [u] in the data below are in free variation in Koro Ashe.

- | | |
|-----------------------------------|--------------------------------|
| i. [fa] (H) ‘Drink’ | [hwa] (H) ‘drink’ |
| ii. [fêŋ] (H) ‘to know’ | [hwêŋ] (H) ‘to know’ |
| iii. [Kwer] (L) ‘to slap’ | [per] (L) ‘to slap’ |
| iv. [ankwai] (L-L) ‘fresh’ | [ankpai] (L-L) ‘fresh’ |
| v. [uwakpa] (L-L-L) ‘guinea corn’ | [uhakpa] (L-L-L) ‘guinea corn’ |
| vi. [uʃokpo] (L-L-L) ‘shift’ | [ujokpo] (L-L-L) ‘shift’ |
| vii. [itēŋgaʃe] (L-H-H-H) ‘Lord’ | [itāŋgaʃe] (L-H-H-H) ‘Lord’ |

viii. *[ikirigbok]* (L-L-L-L) ‘tortoise’

[ukurugbok] (L-L-L-L) ‘tortoise’

Examining the distribution of the phones; [kw] and [p]; [kw] and [kp]; [w] and [h]; [ʃ] and [j]; [i] and [u]; and [ē] and [ā] in the set of data above show that the phonemes occupied the same phonetic environment and are in free variation in Koro Ashe. Thus, contrasting one phoneme for another in the pairs of phonemes above will not result in semantic change. This process might not be exactly the same in English as it is in Koro Ashe. For instance, the pair of phones; [w] and [h]; [ʃ] and [j]; may contrast in English as it in the words; ‘why’ [wai] and ‘high’ [hai]; ‘year’ [jiə] and ‘sheer’ [ʃəi]; respectively. Thus, switching the sounds [w] for [h] and [ʃ] for [j]; in English will result in semantic change. Likewise, the sounds [kw] and [kp]; [ʃ] and [j]; are not in free variation in English. A cursory look at some sounds in Koro Ashe, are conspicuously absent in the phonemic inventory of English.

Conclusion

The paper contrasts the phonological free variation in English and Koro Ashe, thereby single out the differences and the similarities between the two languages for improved pedagogy. The finding revealed that the pairs of the sounds; [z] and [ʒ]; [s] and [ʃ]; [f] and [hw]; [kw] and [p]; [gw] and [gb]; [r] and [kp]; [kw] and [kp] are in free variation in Koro Ashe, they occupied same phonetic environment or context in Koro Ashe words without resulting to semantic contrast. However, this not applicable in English where some sounds in Koro Ashe are absent in the phonemic inventory of English.

However, the pairs of the sounds; /ai/ and /i:/ in ‘either’; /e/ and /ei/ in ‘again’; /a:/ and /æ/ in ‘pasta’; the realizations of aspirated [p^h], released [p] and unreleased [p̚] in the English words ‘map’ [mæp^h], [mæp] and [mæp̚] and the free variation in the realization of the word ‘contribute’, where the stress can be in the first syllable (‘...) or in the second syllable (.’...) are in free variation in English but they are not in English. The above results reveal that Koro Ashe and English have great differences with regard to their phonological free variation. It is in consonance of this that CA model maps these areas of difficulties for improved pedagogy with regard to the study populace.

Works Cited

- Aboderin, Yemi et al. "Problem of and Used of English in Nigeria". *NCE/DSL Course Book on English Language Cycle 4*. National Teachers Institute, 2000.
- Ashikini, Thomas Ogah and Akoshi Amos. *Aspects of Applied Linguistics for School and Colleges*. Aboki Publishers, 2009.
- Aze Linguistics. *Distribution of sounds: Contrastive Distribution February 20*, 2019. <https://www.Youtube.Com/audiolibrary>.
- Banjo, Ayo. Overview of English Language Nigeria. Ibadan: University Press, 1996.
- Cruttenden, Alan. *Gimson's Pronunciation of English*. 6th Edition: London, Arnold, 2001.
- Finegan, Edward. *Language: its Structure and Use*. 6th Edition; Micheal Rosenberg, 2012.
- Gimson, A.G. A Note on the Variability of the Phonemic Components of English Words. *Brno Studies in English* 1969: 8, 75- 79.
- Haggins, Ewa Czaykowska et al. *Phonology: the Function and Patterning of Sound* in O'Grandy, Williams's et al. *Contemporary Linguistics: An Introduction*. Pearson Education Limited, 2011.
- Igube, Dogara M. *The History of Koro*. Sir Kuf Ventures Nigeria Company, 2005.
- Jatau, Stephen. Phonological Deviation amongst Koro Ashe Speakers of English in Panda Development Area, Nasarawa. A Masters of Arts English Dissertation, Nasarawa State University, 2012.
- McGregor, William B. *Linguistics; an Introduction*. Bloombury Academic, 2013.
- Mompean, Jose A. Phonological Free variation in English: An Emperical Study. Online Conference Paper PDF. Dol 36505/ExLing: 2008/02/0043/000102. www.research gate
- Roger, Blench. *The Ashe Language, Itorn Dialect in Central Nigeria*. Cambridge CBI 2 AL. May 19, 2009.
- Stewart, Thomas W. and Nathan. Vaillette. *Language Files; Material for an Introduction to Language and Linguistic* (ed). Ohia State University Press, 1998.
- Waya, D.T. and Kwambechar, S. T. "A Phonemic Contrastive Analysis of Tiv and English Segmentals." *Innovare Journal of Social Science*, Vol 2, Issue 1, 2004, pp 12 –
- Williams, D. *English Language Teaching in Nigeria*. University Press of Ibadan, 1996.
- Yari, Kaura G. et al. *Iletaa ni Isheu Ashe*. Ashe. Translation and Language Deelopment Projecy. Sil International, 2001.
- Alagbe, A. Adewole. *English Phonetics and Phonology*. Wukari- Taraba, Siloam publications 2016.