

MUTUAL INTELLIGIBILITY: A STUDY OF EFIK AND IBIBIO

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Abstract

The Efik and Ibibio languages are lower cross languages spoken in Cross River and Akwa Ibom States respectively. This study examines the types of mutual intelligibility, the similarities/linguistic distance in pronunciation and vocabulary of both languages, using the Historical Linguistics theory as a theoretical frame. Words from Swadesh's list (1955), Gudschinsky's (1956), sentence list drawn from the Thomas' (1992) compilation which was based on Greenberg's List of Words for African languages and Meussen's Bantu Supplement were used to elicit data. Thirty native speakers were selected for this study using random sampling technique. Finding shows that both languages are symmetric, linguistic distance in the consonant of both languages is that Efik has the glottal fricative sound [h] which occurs in free variation with the voiced velar fricative /ɣ/ which are absent in Ibibio, vowels as in / ii, ə, ʌ, ee, aa, uu, oo, ɔɔ/ are absent in the Efik language. The Efik mid close front vowel [ɛ] does not exist in the Ibibio vowel inventory. The basic syllable structure of Efik and Ibibio languages are [V or N, CV, CVC]. All other structures are modifications from these basic forms. Efik and Ibibio has two distinctive tones: high [´] and low [˘]. Results further show that Efik and Ibibio have a higher degree of cognates at 71.7%, non-cognate at 11.9%, and near cognates at 16.3%. The higher degree of cognates establishes the fact that both speech forms are dialects of a language that are mutually intelligible to a large extent. The study recommends that a historical linguistics study on the Efik and Ibibio languages should be carried out.

KEY WORDS: Mutual intelligibility, Efik, Ibibio, lower cross languages, linguistic distance.

1. Introduction

Mutual intelligibility refers to a situation in which speakers of two or more languages or closely related varieties can understand each other (Richard, 2018). It reflects linguistic relatedness and exists on a continuum, with varying degrees rather than clear boundaries. Mutual intelligibility can be symmetrical, where speakers understand each other equally, or asymmetrical, where one group understands the other better. Asymmetry may arise due to differences in exposure, language attitudes, sociocultural dominance, and linguistic distance between the languages.

Linguistically related languages often share vocabulary inherited from a common ancestral language. Although cognate words (words with shared origins) may differ in form, their similarities are usually systematic and recognizable. Research shows that the percentage and similarity of cognates strongly influence mutual intelligibility (Gooskens, 2007; Tang & van Heuven, 2015). Bahtina and ten Thije (2013) distinguish between inherited intelligibility and acquired intelligibility. Inherited intelligibility refers to the understanding that exists between related languages at first contact, without prior learning, and depends solely on linguistic similarity. Because adults are rarely unexposed to neighboring languages, this condition

is best tested using young children or simulated computational models (van Heuven, 2008). Acquired intelligibility, on the other hand, develops through exposure, interaction, and learning, shaped by social contact rather than structural similarity.

A major determinant of intelligibility is linguistic distance, which measures how different languages are across levels such as phonology (sounds), lexicon (vocabulary), and grammar. The greater the distance, the lower the intelligibility. However, language contact and exposure can compensate for distance; regular interaction increases familiarity with another language's sounds, vocabulary, and structure. Cognate density also plays an important role—high percentages of shared vocabulary and grammatical similarity reduce linguistic distance and improve understanding (Jan et al., 2007).

Mutual intelligibility also affects language vitality. A widely understood variety is more frequently used, strengthening its status and maintenance, while poorly understood varieties risk reduced usage and possible language shift. Mutual intelligibility is commonly found in dialect continua, in which neighboring varieties are mutually intelligible, but comprehension decreases with geographical and linguistic distance (Crystal, 2006).

In Nigeria, Efik and Ibibio are examples of closely related languages within the Niger-Congo family. Efik belongs to the Lower Cross sub-group of Delta-Cross and is spoken mainly in southern Cross River State, with over 2 million first-language speakers and 3.5 million second-language users. It has significant social presence in media, education, and public communication (Faraclaus, 1989; Mensah, 2010). Ibibio, spoken primarily in Akwa Ibom State, belongs to the Benue-Congo branch under Niger-Congo and has between 4 to 10 million speakers (Greenberg, 1963; Essien, 1990; Ethnologue, 2018). Both languages form part of the Lower Cross language cluster, alongside Anaang (Connell, 1991), and share strong linguistic similarities in phonology, vocabulary, and structure. Despite their mutual intelligibility, speakers often regard Efik, Ibibio, and Anaang as distinct languages rather than dialects of one another.

This study explores the degree of mutual intelligibility between Efik and Ibibio by analyzing shared pronunciation patterns, vocabulary cognates, and areas of linguistic divergence. Limited knowledge of mutual intelligibility levels can negatively affect language policy, classification, education, and intergroup communication. Understanding the degree of intelligibility between languages such as Efik and Ibibio is therefore essential for informed linguistic planning and language development strategies.

2. Literature Review

2.1 Concept of Mutual Intelligibility

Mutual intelligibility, in linguistics, refers to the relationship that exists between languages or dialects in which speakers of different but related varieties can readily understand each other without prior familiarity or special effort (Trudgill, 2003; Crystal, 2008). Sometimes, to distinguish a language from a dialect, linguists employ the mutual intelligibility criterion (Weinreich, 1953; Chambers & Trudgill, 1998). When speakers of one variety understand more of the other than vice versa, the relationship is said to be asymmetric; conversely, when understanding is relatively equal, it is considered mutual (Gooskens, 2007). Mutual intelligibility exists in varying degrees among many related or geographically proximate languages

of the world, often within the context of a dialect continuum (Hinskens & Auer, 2019). To measure distance, linguistic distance is calculated to determine how different languages are from one another—the higher the linguistic distance, the lower the mutual intelligibility (Levenshtein, 1966; Nerbonne & Heeringa, 1997).

Trudgill (2000) introduced the intelligibility criterion, and this has become the standard—or at least the primary—criterion among many linguists. According to this definition, dialects are mutually intelligible varieties, whereas languages are so linguistically different that their speakers are unable to understand each other. From this it follows that a language is a collection of mutually intelligible dialects.

Intelligibility can be tested by means of opinion testing, whereby subjects are asked to indicate—either with or without speech fragments—how well they think they understand the language at hand (Gooskens, 2007, p. 446). It may also be determined experimentally through functional tests, which typically express the degree of intelligibility as the percentage of input that is correctly recognized by the subject (Heeringa & Gooskens, 2003, p. 257). These approaches yield numerical values that indicate how well subjects can understand a given language variety, demonstrating that intelligibility is a matter of degree (Gooskens, 2007, p. 447). It is therefore difficult to determine when mutual intelligibility between two varieties is sufficiently high for them to be regarded as dialects of the same language rather than separate languages.

The fact that intelligibility scores are a matter of degree reflects the situation in many dialect areas. Traditional dialectologists represent the geographical distribution of dialectal features, such as specific word forms or pronunciations, by drawing isoglosses—lines separating linguistic features on a map (Chambers & Trudgill, 1998, p. 89). A dialect division is considered major when several isoglosses coincide, forming isogloss bundles. However, isoglosses rarely align perfectly, resulting in transition zones or dialect continua (Trudgill, 2003, p. 59). A well-known example of such a continuum is the Dutch–German dialect area, where speakers historically could travel across regions without encountering abrupt breaks in mutual intelligibility (Gooskens & Heeringa, 2004, p. 532).

Intelligibility measurements thus serve as a means of expressing linguistic distance between language varieties on a single, one-dimensional scale. Since language varieties differ across multiple linguistic levels, factors such as speaker attitude and linguistic experience also significantly influence intelligibility outcomes.

2. 2 Linguistic Factors Influencing Mutual Intelligibility

Mutual intelligibility between languages or dialects is shaped by several linguistic factors, notably those at the lexical, phonetic/phonological, and morphosyntactic levels (Gooskens, Heeringa, & Beijering, 2008).

2.2.1 Lexical Factors

At the lexical level, linguistic distance is commonly expressed as the percentage of non-cognates between two language varieties. Generally, the greater the proportion of non-cognates, the lower the level of intelligibility (Gooskens, 2007). However, lexical distance predicts intelligibility only to a limited extent, as the influence of individual lexical differences is difficult to anticipate. A single non-cognate word in a sentence or text can significantly lower intelligibility if that word represents a central concept. For instance,

in an investigation of mutual intelligibility between Swedish and Danish, Delsing and Lundin Åkesson (2005) found that the Danish word *frø* and the Swedish word *groda* (“frog”) reduced comprehension of an entire text about frogs. Conversely, non-cognate words with low semantic content or clear contextual cues exert a much smaller influence on intelligibility.

2.2.2 Phonetic and Phonological Factors

At the phonetic or phonological level, the relationship between phonetic distance and intelligibility has been shown to be significant at an aggregate level—that is, across larger stretches of speech (Gooskens et al., 2008). In their study of 17 Scandinavian varieties, Gooskens, Heeringa, and Beijering (2008) examined the role of consonant and vowel operations such as insertions, deletions, substitutions, lengthenings, and shortenings. The results revealed that **consonant substitutions** have a stronger effect on intelligibility than vowel substitutions, likely because they alter the structural “framework” of words.

Phonetic details can also affect the intelligibility of cognates between related languages in complex and sometimes unpredictable ways. As Gooskens, van Bezooijen, and van Heuven (2015) demonstrated in their study of German and Dutch children with no prior exposure to the test language, certain words with identical phonetic transcriptions in the Levenshtein algorithm were nevertheless not recognized by many participants. This suggests that phonetic similarity can be overridden by the presence of competing lexical “neighbours” in the listener’s language. When such competing forms are more similar to the stimulus, they tend to be preferred, resulting in reduced intelligibility—particularly in the absence of contextual support.

2.2.3 Morphosyntactic Factors

At the morphosyntactic level, differences in word order and morphology also influence mutual intelligibility, although to varying degrees. Hilton, Gooskens, and Schüppert (2013) conducted an experimental study on Danes’ comprehension of Norwegian to determine whether certain grammatical constructions impede understanding. Their findings revealed that word order differences hindered comprehension more than morphological differences. Nevertheless, non-native phonology was found to pose an even greater obstacle to understanding than morphosyntactic variation. The role of morphosyntax in intelligibility may therefore depend on the extent of morphological and syntactic variability within a given linguistic area; regions with greater variability tend to exhibit stronger morphosyntactic effects on comprehension.

2.2.4 Intelligibility as a Measure of Linguistic Distance

Languages may differ across multiple linguistic parameters at each level. For instance, vowel distances may diverge from consonant distances, while the proportion of shared loanwords may differ from that of inherited words. In this context, **intelligibility testing** provides an effective means of determining how similar or distinct two languages or varieties are. High mutual intelligibility implies small linguistic distance, whereas low mutual intelligibility reflects larger linguistic distance, unless moderated by extra-linguistic factors (Gooskens et al., 2008).

To validate objectively measured linguistic distances, Gooskens, Heeringa, and Beijering (2008) assessed the intelligibility of 17 Scandinavian language varieties and standard Danish among young speakers from

Copenhagen using a translation task. Linguistic distances were calculated both lexically—as percentages of cognates—and phonetically, through Levenshtein distances, a dialectometric technique that computes distances between paired segment strings. Their findings showed significant positive correlations between intelligibility scores and linguistic distances, with phonetic distance proving a more reliable predictor of intelligibility than lexical distance.

Similar evidence was reported by Tang and van Heuven (2008) in their investigation of mutual intelligibility among 15 Chinese dialects using both word and sentence intelligibility tasks. Their results confirmed that objective distance measures correspond closely, though not perfectly, with experimental intelligibility results. Consequently, opinion testing, which involves asking participants to rate how well they believe they understand a language, can serve as a quick and efficient alternative for estimating intelligibility levels when large-scale functional tests are impractical.

3. Research Methodology

The research design used for this study is survey research design. The research area for the study is Calabar South Local Government Area of Cross River State and Nsit Ubium Local Government Area in Akwa Ibom State. The sample consists of thirty (30) males and females, native speakers of Efik and Ibibio languages, randomly selected from the areas in Nsit Ubium LGA, Akwa Ibom State and Calabar South Local Government Area of Cross River State. The Ibibio data used in this research work were obtained from Ibibio native speakers (the use of 15 persons will be done to ensure validation of data), and the data for Efik came from Efik natives made up of 15 persons. The researcher adopted a simple random sampling to give every member of his/her population equal and independent opportunity of being selected. The main instrument used for data collection was a questionnaire designed by the researcher. The questionnaire was divided into four main sections. Section A was designed to collect Meta Data on the language and information about native speakers of Ibibio and Efik languages. Section B consist of the words from Swadesh's list (1955), and from Gudschinsky's (1956) list. Section C consists of sentence list drawn from the Thomas' (1992) compilation which was based on Greenberg's List of Words for African Languages and Meussen's Bantu Supplement. Section D is the comment section for respondent's view about Efik/Ibibio languages. Recording tape were also used to record interview sessions with informants. The questionnaire was administered in each of the sample areas. The respondents were informed of the exercise and the essence of giving objective responses to the items. They were also told to be honest in their responses to the items as the information obtained would be treated with all amounts of confidentiality and used as data for the research only. The questionnaire was administered personally by the researcher. The data were collected and analyzed qualitatively and descriptively. The data will be analyzed using the lexicostatistic method in comparing both languages. This will enable us to determine the degree of relatedness between their cognates. In calculating the degree of mutual intelligibility, Ethnologue's method of calculation is employed through simple percentage.

4. Theoretical Framework

Historical linguistics theory is adopted for this study and the comparative method is used. Historical linguistics is the branch of linguistics that investigates the evolution, development, and interrelatedness of languages over time. It seeks to explain how linguistic forms change, reconstruct earlier language stages,

and establish genetic relationships among languages (Campbell, 2013). Unlike descriptive linguistics, which examines language at a particular point in time, historical linguistics adopts a diachronic approach, analyzing languages across different historical periods to identify structural, phonological, and semantic transformations (Trask, 2000).

Central to historical linguistics is the assumption that languages are not static systems but undergo continuous change driven by internal and external forces. These changes may occur at multiple linguistic levels, including phonology (sound systems), morphology (word structure), syntax (sentence structure), semantics (meaning), and the lexicon (vocabulary) (Hock & Joseph, 2009). The field operates on the premise that systematic correspondences between languages indicate genetic relationships, forming the basis for language family classifications such as Indo-European, Afro-Asiatic, and Niger-Congo (Campbell, 2013).

4.1 Major Theoretical Models

4.1.1 The Comparative Method

The comparative method is a systematic procedure used to compare related languages in order to reconstruct features of a common ancestral language, known as a proto-language (Hock & Joseph, 2009). Through the identification of regular sound correspondences and cognates—words sharing a historical origin—linguists can reconstruct unattested forms, such as Proto-Indo-European **pātēr* (father) from English *father*, Latin *pater*, and German *Vater*. This method remains the most robust tool for establishing language relatedness and historical reconstruction.

4.1.2 Internal Reconstruction

While the comparative method relies on cross-language data, internal reconstruction works within a single language to hypothesize earlier linguistic forms by analyzing irregularities and structural alternations (Campbell, 2013). This approach is especially valuable when related languages are unavailable for comparison.

4.1.3 Neogrammarian Theory

The Neogrammarians, active in the late 19th century, introduced the principle that sound change operates according to regular, exceptionless phonological laws unless altered by analogy (Osthoff & Brugmann, 1878; cited in Hock & Joseph, 2009). This principle contributed significantly to scientific rigor in historical linguistics by emphasizing systematic rather than random sound change.

4.1.4 Wave Model vs. Family Tree Model

The family tree model conceptualizes language evolution as a branching process whereby a single proto-language diverges into daughter languages (Schleicher, 1863). In contrast, the wave model (Schmidt, 1872) proposes that linguistic features spread outward geographically, similar to ripples on water, accounting for overlapping innovations across neighboring languages. Both models are used complementarily in historical linguistic analysis.

In conclusion, Historical linguistics theory provides a systematic scientific framework for understanding how languages evolve, relate, and diverge. Through established theoretical models such as the comparative method, internal reconstruction, and the tree and wave models, the discipline offers powerful analytical tools for reconstructing linguistic histories and explaining structural variation. Its relevance extends beyond theoretical linguistics, offering insights into culture, cognition, and human history.

5. Data Presentation

5.1 Types of Intelligibility between Ibibio and Efik

Intelligibility would be tested on utterances to ascertain the type of intelligibility. This sentence list is drawn from the Thomas' (1992) compilation which was based on Greenberg's List of Words for African Languages and Meussen's Bantu Supplement and from Swadesh's list (1955), and from Gudschinsky's (1956) list.

Sentence	Efik (Language A)	Ibibio (Language B)	Degree of Mutual Intelligibility (Assymetric/Symmetric)
1. The book is thick	Nwedemiodobi Book that heavy	Nwed ado odoppo Book that heavy	Symmetric
2. The book is white	Afia nwedadi'emi (White book is it) or Nwedemiediafia White book is this	Afia nwed ado mi (White book is it) or Nwedami ado afia Book this is white	Symmetric
3. The pot is black	Eso emiediobubit Pot that is black	Asio/esioami ado abubit/obubit Pot that is black	Symmetric
4. My gown is on the table	onyonyo mi mmo do keokpókóró	ewira mmi m-mo aba keakpókóró	Symmetric
5. Her gown is like mine	onyonyo/ɔfɔŋesieabieteke'mi	ewiraámó aba nteadanyiené	Symmetric
6. His food is cold.	Udia esieabit	Ndiaammoadeŋe	symmetric
7. Their song is nice	Ikwømmœnem	Ikwømmœnem	Symmetric
8. Our village is small	Iduŋnyinediekpri	Iduŋnyin ado etak	symmetric
9. Its tail is long	Isim esieoniŋ	Isim œmmo ado anyan	symmetric
10. Your (plural) stories are interesting	Mbukmbufoenem	mbakmfoenem	Symmetric
11. He ate a lot.	Enye adiankpoetieti	Anye anekedia	symmetric
12. She has few goats	Enye eyenemkpataebot	Anye ayiemmentokebot	Symmetric
14. They ate little	mmoediaekpri	mmoediaetak	symmetric
15. He has an old dog	Enye enyeneakaniebua	Anye ayieakaanewa	Symmetric
16. I am eating mango	Ami ndia mango/ndia mango	Ami ndia mango/nsukndia mango	Symmetric

17. Ruth ate the mango in the bus.	Ruth ama adia mango orokeesit̩b̩s	Ruth akedia mango keesit̩b̩s	Symmetric
18. Come in	duk̩ di	ɗak̩ di	Symmetric
19. If you will hit me I will cry	Akpemianyetua	Akpemmianyatua	Symmetric
20. What is your name?	Akere didie? Nsoidienyiŋfo?	Akere die? / enyiŋfo ado nso?	Symmetric

5.1.1 Data Analysis Ontypes of Intelligibility between Ibibio and Efik

Mutual intelligibility could be symmetrical or assymmetrical. It is symmetrical when language A is intelligible to native listeners of language B as the other way around. It is assymetric when language A is unintelligible to native listeners of language B, but language A understands language B. In this case, the linguistic distance is wider in terms of sounds, vocabulary, sentence structure and meaning. From the above data, language A and B are symmetric languages in that words, sounds, meaning and sentence structure are similar. This is as a result of nearness of linguistic continuum as both languages share the same boundary and history. Data shows that the structure of sentences is the same and their meaning. Differences exist on the usage of vowels where the Ibibio speaker uses /a/ in place of /e, o/ for some words that begins with /e, o/ in the Efik language, example; obubit (Efik) becomes abubit (in Ibibio), etc. and also replaces /u/ with /ʌ/ in Efik. Also, Nouns usually precedes articles before other element in the sentence or an adjective can precede noun to qualify the noun itself. For example; the book is white could be said as 'Afia nwedadi'emi or Nwedemediafia' in Efik, likewise in Ibibio as in; Afia nwed ado mi (White book is it) or Nwedami ado afia (Book that is white). It can be seen that definite article 'the' does not exist in Efik and Ibibio languages rather demonstrative articles are used; 'emi' (this), oko/oro (that), nd̩s̩k̩ (some), ék̩n̩ (other), 'edi' (it is) in Efik. In Ibibio; ado (that), ami (this), ubaak (some), aken/afen (other) are demonstratives used as articles. The third person pronoun in English (She/he/it) is referred as 'enye' (in Efik) and 'anye' (in Ibibio) whether the subject is a boy or a girl. In this light, a speaker of Efik language can converse easily with an Ibibio speaker and both parties reach mutual intelligibility among themselves, however, the diverse in vocabulary usage is not much to impede communication, as such, both are symmetric languages.

5.2 The Similarities/Linguistics Distance in Pronunciation between Ibibio and Efik Languages

5.2.1 Phonology

Phonology is the study of the sound system that occurs in a particular language. Phonetically, Efik has twenty-three (23) consonant sounds which are classified as thirteen stops /p, b, t, d, k, kp, k^w, m, ŋ, n, ɲ, ŋ^w/ comprising seven oral stops (plosives) /p, b, t, d, k, kp, k^w/, six fricatives /β, f, s, ʃ, h, ɸ /, six nasal stops /m, ŋ, n, ɲ, ŋ, ŋ^w/, one trill /r/, one tap /ɾ/ and two approximants /j, w/ and 9 phonetic vowels /a, e, ε̩, i, ɔ, o, ʉ, u/ which are all significant sounds in the language. While Ibibio has sixteen occurring phonetic vowel /i, ii, ə, ʌ, e, ee, a, aa, uu, u, oo, o, ɔɔ, ɔ, ʉ/ which includes short and long vowels and twenty-one phonetic consonants /p, b, t, d, k, kp, ŋ, m, n, ɲ, ɲ, ŋw, β, f, s, j, r, r^w, ɸ, / . In these consonants, six are oral stops, six nasal stops, and one syllabic nasal stop, one trill, one tap, three fricatives and one approximant.

The linguistic distance in the consonant of both languages is that Efik has the glottal fricative sound [h] which occurs in free variation with the voiced velar fricative /ɣ/ while the Ibibio does not have. The voiced velar fricative /ɣ/ occurs in words as in;

[diyi]	~	[dihì]	‘trample’
[ídíyé]	~	[ídíhé]	‘it is not’
[tíyá]	~	[tíhá]	‘shoot/kick’
[údiyìukòt]	~	[údihiukòt]	‘stairs/steps’
[fèhé]	~	[fèyé]	‘run’

In terms of vowels, vowels as in / ii, ə, ʌ, ee, aa, uu, oo, ɔɔ/ are absent in the Efik language. For example;

[ii]	-	[fiik]	‘press down’
		[síit]	‘cork’
		[bíidé]	‘reversive form of spread a mat’
[ee]	-	[déép]	‘scratch’
		[kpéeb]	‘teach’
		[nèèm]	‘crack’
		[kèèt]	‘one’
		[béék]	‘remove from cob’
Final		[kpéé]	‘plead/sorry’
[aa] – Final		[káá]	‘go’
		[náá]	‘lie down’
Medial		[bààk]	‘be afraid of’
		[ibààn]	‘women’
		[fáák]	‘wedge between two objects’
		[jààrá]	‘remove from head’

[ʌ] – It is a half-open centralised vowel with very slight lip rounding. Its distribution is restricted mainly to the interconsonantal position as in:

Medial	[bʌk]	‘gossip’
	[kʌp]/[fʌk]	‘cover’
	[ɔkʌk]	‘money’
	[bʌŋ]	‘break into pieces’

[ə] – It is a half-close vowel with lips in the neutral position. It occurs in closed C-C syllables and in free variation with [o] as shown below:

	[kəp]	~	[kəp]	‘hear’
	[wət]	~	[wət]	‘kill’
	[dəp]	~	[dəp]	‘be quiet’
	[nək]	~	[nək]	‘push’
[uu] –	[túúk]			‘touch’
	[fúúk]			‘cover (frequentative)’
	[bùúk]			‘bury’
[oo] -	[kóót]			‘call’
	[tòòro]			‘praise’
[ɔɔ] –	[dóók]			‘climb’
	[ɔ!bóóŋ]			‘chief’

[bòrò] ‘respond’

The Ibibio vowels /ii, ee, aa, uu, oo, ɔɔ/ show length and occur in C-C syllables except /aa/ and /ee/ that occurs both in C-C structure and in open syllables as seen in the above examples.

The Efik mid close front vowel [ɛ] does not exist in the Ibibio vowel inventory. It occurs in word initial position, usually functioning as a concord marker representing the third person singular/plural subjects as in;

	[ɛnɛ]	‘he/she/it’
	[ɛsjɛ]	‘his/her own’
	[ɛmi]	‘this’
	[diá] → [ɛdjä]	
	eat (sg.)	eat (pl.)
M̀m̀ò ɛ́m̀áé́día?		‘they hadeaten’
M̀m̀ò ɛ́namnso?		‘What are they doing?’

[ɛ] is an allophone which occur in free variation or complementary distribution with [e] as in ;

Initially	[ébót]	‘goat’
	[èbé]	‘husband’
Medially	[èdèm]	‘back of the body or anything’
	[bét]	‘wait’
Finally	[èté]	‘father’
	[èkèbé]	‘box’

5.2.2 Syllable

The basic syllable structure of Efik and Ibibio languages are [V or N, CV, CVC]. All other structures are modifications from these basic forms. It is important to note that an open syllable ends with a vowel, while a closed syllable ends with a consonant. A CV syllable structure thus has a core with a zero coda while a CVC structure has core with a vowel peak and a coda. The Efik and Ibibio languages have many open syllables and few closed syllables, and its syllable structure is therefore made up of the following combinations as in;

i)	N	[n̄-dó]	‘marriage’
ii)	V	[i-nó]	‘thief’
iii)	CV	[sé]	‘look’
iv)	CVC	[sak]	‘laugh’
v)	CGV	[afja]	‘white’
vi)	CGVC	[fjak]	‘twist’
vii)	VCV	[èbè]	‘husband’
viii)	VCVC	[ùsàn]	‘plate’
xi)	CVCV	[sáná]	‘be clean’
x)	CrV	[bre]	‘play’

The only syllable structure that does not exist in Efik is CVVC structure which is prevalent in Ibibio as in; [túúk] ‘touch’, [fík] ‘press down’ [dééb] ‘scratch’. This words in Efik could be seen as; [túk] ‘touch’ [fík] ‘press’ [wai] ‘scratch’ which is mutually intelligible by both speakers of the languages.

5.2.3 Tones in Efik and Ibibio

Efik and Ibibio are tonal languages. Their tonal structure is described as ‘terraced level’. Tones are relative pitch on sounds. In majority of African languages, tones are contrastive and thus phonemic. Robbins (1980, p. 165) says “tone should be analysed as a separate upper layer in their own right and mostly of longer extent than the consonants and vowels”. Tones are very relevant because in both languages, consonants and vowels are not significant as the tones. The segments as shown below are not contrastive except tones are superimposed on them, example:

- i. [ɔbɔŋ]
- ii. [ɔbɔŋ]
- iii. [ɔbɔŋ]

When tone features are superimposed on words; they come out with different meanings’. This is true of Efik and Ibibio languages as in;

- i. [ó!bóŋ] ‘chief’
H H
- ii. [óbóŋ] ‘mosquito’
H H
- iii. [óbòŋ] ‘cane’
H L,

Efik and Ibibio languages are registered tone language with two level tones which are the acute or high tone (H) represented as High [´] and the grave or low tone [L] represented as [˘]. Other tones are modifications of the high and the low tone sequences, which result in contour tones.

5.3 Similarities in Vocabulary between Ibibio and Efik Languages

The following are deduced from Swadesh’s list (1955), and from Gudschinsky’s (1956) list.

Table 2

Gloss	Efik	Ibibio	Cognates
Hair	ídèt	ídèt	cognates
Body	idem	idem	Cognates
Eye	ènyìn	ènyìn/anyen	Cognates
Breast (female)	ébá	ébá	Cognates
Mouth	ínùá	ínùá	Cognates
Tooth	èdèt	èdèt	Cognates
Tongue	édémè	édémè	Cognates
Jaw	mbáŋ	mbáŋ	Cognates
Chin	Ébèk	Ébèk	Cognates
Back	edem	edem	Cognates
Arm	úbòk	úbòk	Cognates
hand	úbòk	úbòk	Cognates

vagina	éták/ítít/íkòkò/	ítít	cognates
leg	Ukot	Ukot	cognates
knee	édóṅ	édóṅ	cognates
body	idem	idem	cognates
skin	Ikpa-idem	Ikpa-idem	cognates
bone	òkpó	akpó/ òkpó	cognates
blood	iyip	iyiip	Cognates
saliva	Etap	Etap	cognates
urine	Ikim	Ikim	cognates
faeces	Ifuo	Ifuo	cognates
plantain	Ukom	Ukom	cognates
Water	mmṵṅ	mmṵṅ	Cognates
soup/sauce/stew	Efere	Afere/efere	Cognates
Meat	Unam	Unam	cognates
Fat	Ubom	Ubom	cognates
Fish	Iyak	Iyak	cognates
Oil	aran	adan	cognate
Salt	inuṅ	inuṅ	Cognate
thread	Uduk-òfṵṅ	Uduk- òfṵṅ	Cognate
Banana	Mboro	mboro	cognates
orange	Sokoro	sokoro	cognates
groundnut	Mmaṅsaṅ	Mmaṅsaṅ	cognates
Kolanut	ibṵṅ	ibṵṅ	cognates
tobacco	ikṵṅ/uwṵṅ	ikṵṅ/uwṵṅ	Cognates
thorn	nkukim	nkukim	cognates
stick	Eto	eto	Cognates
firewood	Ifia	Ifia	Cognates
charcoal	ṅkaṅ	ṅkaṅ	Cognates
Fire	ikaṅ	ikaṅ	Cognates
Smoke	Nsuṅ-Ikaṅ	Nsuṅ-Ikaṅ	Cognates
ashes	ntṵṅ	ntṵṅ	Cognates
waterpot	Abāṅ- mmṵṅ	Abāṅ-mmṵṅ	Cognates

cooking pot	EsioEsio-utemnkpo	Esio-utemnkpo	Cognates
calabash	abaṅ	abaṅ	Cognates
mortar	Uruṅ/uduṅ	uduṅ	cognates
knife	Ikwa	ikwa	Cognates
hoe	uduṅ	uduṅ	Cognates
Matchet	efit	efit	cognate
spear (war)	eduat	eduat	cognate
bow (weapon)	utigha	utigha	cognate
arrow	idaṅ	idaṅ	cognate
iron (metal)	ukwak	ukwak	Cognate
basket	Akpasa	Akpasa	Cognate
bag	ekpad	ekpad	Cognate
rope	uruk	Uruk	Cognate
thread	Uduk-ṛfṅ	Uduk- ṛfṅ	Cognate
Cloth (material)	ṛfṅ	ṛfṅ/afṅ	Cognate
robe/gown/smock (man's)	nsine	Nsine/ewira	Cognate
hat/cap	itam	itam	Cognate
thread	Uduk-ṛfṅ	Uduk- ṛfṅ	Cognate
Cloth (material)	ṛfṅ	ṛfṅ/afṅ	Cognate
robe/gown/smock (man's)	nsine	Nsine/ewira	Cognate
hat/cap	itam	itam	Cognate
sea	akpa	akpa	cognates
Boat	ùbom	ùbom	cognates
stone	itiat	itiat	Cognate
sand	ntan	ntan	cognate
dust	ntṅ	ntṅ	cognate
Mud	mbat	mbat	cognate
wind	ofum	ofum	cognate
rain	edim	edim	cognate
sunshine	utin	utin	cognate
sun	eyo	Eyo	cognate

moon	ofion	ofion	cognate
star	Ntanta-afion	Ntanta-afion	Cognate
day	usen	Usen	Cognate
darkness	Ekim	ekim	Cognate
sleep	idap	idap	Cognate
work	utom	utom	Cognate
war	ekon	ekon	Cognate
Fear	ndik	ndik	Cognate
hunger	bion	bion	Cognate
year	isua	isua	cognate
rainy season	ùkwò édim	ùkwò édim	cognate
Dry season	ndà éyò	ndà éyò	cognate
Song	ikwò	ikwò	cognate
Word	ikò	Ikò	cognate
lie(s)	Nsu	Nsu	cognate
Thing	Nkpo	Nkpo	Cognate
animal	unam	unam	Cognate
Goat	ebot	ebot	Cognate
sheep	éròṅ	éròṅ	Cognate
cow	énàñ	énàñ	Cognate
horse (donkey)	énàñmbàkàrá	énàñmbàkàrá	cognate
donkey	énàñmbàkàrá	énàñmbàkàrá	Cognate
chicken	únên	únên	cognate
cock	èkíkò únên	èkíkò únên	cognate
duck	únênmbàkàrá	únênmbàkàrá	cognate
egg	Nsen-unen	Nsen-unen	Cognate
wing	mba	Mba	cognate
feather	ntaṅ	Ntaṅ	Cognate
monkey	ebòk	ebòk	Cognate
tortoise	Ikit	Ikit	Cognate
snake	Urukikot	Urukikot	Cognate
lizard	ekpòk	ekpòk	cognate

crab	isobo	isobo	cognate
frog	ikuot	ikwod	cognate
Snail	ekwōη	ekwōη	Cognate
Housefly	nsuη	nsuη	Cognate
bee	ókwoók	ókwoók	Cognate
mosquito	óbóη	óbóη	Cognate
louse	idaη	idaη	Cognate
bird	Inuen	Inuen	cognate
vulture	utere	utere	cognate
hawk	Nkukwo-ino	Nkukwo-ino	Cognate
Bat	mkpekpem	mkpekpem	cognate
Person	Owo	Owo	Cognate
Father	Ete	Ete	Cognate
Mother	Eka	Eka	Cognate
In-law	Ukot	Ukot	Cognate
White	Afia	Afia	Cognate

The data in 5.3 shows that cognates that exist in Efik and Ibibio languages are mutually intelligible. From the above sample words, it can be deduced that both speech forms are dialect of a particular language as numerous words meaning are similar and are spelt the same.

5.3.2 Table 3: Near Cognates in Both Languages

Gloss	Efik	Ibibio	Cognates
head	Ibuot	Iwuot	near cognates
nose	Íbùó	iwuo	Near cognates
beard	ntáηèbèk	ηwaebek	Near-cognates
belly (external)	Idibi	idip	Near cognates
stomach (internal)	idíbi/ákpa	ikpa	Near cognates
thigh	ifùhi/ifihì	ifukkō	Near cognates
food	Udia	Ndidia	Near cognates
beans	okoti	akóti	Near-cognates
Oil palm	Aran	Adan	Near-cognates
grinding stone	Ìtiát-úbânmbàkàrá	Itiatukōknkpo	Near-Cognates

needle	ábiàbôn	ábiàawuen	Near-cognates
show	Wid	wot	Near-cognates
money	Okuk	akak	Near-cognates
wall (of house)	ebibene	adibene	Near-cognates
mountain	Obot	abot	Near-cognate
night	okoneyo	akonayio	Near-cognate
he goat	òkpó- ébòt	Akpo-ebot	Near-Cognate
rat	Eku	Ekpu	Near-cognates
Name	enyij	anyij	Near-cognate
Female	Aṅwan	nnwaan	Near-cognate
Woman	Ñwán	owowan	Near-cognate
Wife	Wan	aṅwan	Near-cognate
Senior/older	akamba-owo	Ekamba-owo	Near-cognate
Child	Eyen	Ayen	Near-cognate
Guest (stranger)	esienowo	asenowo	Near-cognate
god	Mme abasi	abasi	Near-cognate
One	kiet	keed	Near-cognate
Six	Itiokiet	itiokeed	Near-cognate
Black	Obubit	Abubid	Near-cognate
Old	akani	ḡkaan	Near-cognate
New	obufa	Adufa/ufa	Near-cognate
Heavy	ndodobi	ndopo	Near-cognate
Full	oyoho	ayohó	Near-cognate
Strong	okpòsɔŋ	nsɔŋ	Near-cognate
hard	okpòsɔŋ	nsɔŋ	Near-cognate
story	mbuk	mbak	Near-cognate
Mother's brother	éyénèkà èkà ereneowo	Ayeneka eka awuden	Near cognate

Near cognates here are words that are similar in meaning but are distinct due to a sound change (vocalic and consonantal alteration), thus giving rise to a slight differences in pronunciation. This sound change is caused by vowel alternation and stylistic variation by speakers of the speech form so as to show that their speech form is unique and a language. Linguistically, these words have the same meaning in both languages, as such it is a proven fact that they are from a common ancestor and are dialects.

5.3.3 Table 4: Linguistics Distance in Vocabulary between Ibibio and Efik Language

Gloss	Efik	Ibibio	Cognates
nail (finger or toe)	mbàràùbòk	mbai	Non-cognates
buttocks	mbómbóm	Efut	Non-cognates
penis	èkpòrò	mfet	Non-cognates
wine/beer/(general word)	mmin	ukòd	Non-cognate
palm wine	Afia mmin	Ukòdnuṣṣ	Non-Cognate
maize`	Ebikpod/ibòkpòd	Abakpa/adukpa	Non-cognates
Pepper	Ntókón	ntuen	Non-cognates
okro	Etighi	atiké	Non-cognates
cotton	ɔfɔŋ	afɔŋ	Non-cognates
seed	Mkpasip	ŋkwa	Non-cognates
leaf	Ikoŋ	Mfaŋ	Non-cognates
root	etak	adɔŋ	Non-cognates
axe	ekuri	ekit	Non-cognate
mat	mbri	Mbit	Non-cognate
compound	esa	atɔŋ	Non-cognate
horn	Nnuk	ndok	Non-cognate
man	Inowo	ideen	Non-cognate
Male	érè̀nòwo	Owo-den	Non-cognate
Old person	Akwa-owo	baba	Non-cognate
Son	Eyen enenwo	ayénaŋwuden	Non-cognate
Red	ídíduòt	Ndatndat	Non-Cognate
Small	Ekpri	Etok	Non-cognate
Short (of stick)	Ibio	imuk	Non-cognate
Wet	mbitmbit	ndedeŋ	Non-cognate
Cold	Tuep	Adufip	Non-cognate
Son	Eyen enenwo	ayénaŋwuden	Non-cognate
Brother (younger) (for man)	éyénèkà-èrèn	Udo eka mmi	Non-cognate
Sister (elder) (for man)	Adiaha eka	Ekambaayeneka mmi awuawuŋwan	Non-cognate

Sister (younger) for man)	Eyeneka-anwan	Etok Ayenekaawunwan/ηηwa-eka	Non- cognate
thirst	Nsat-itəŋ	iwid	Non-cognate

The data presentation above depicts selected vocabularies that are distinct between languages (Efik and Ibibio). However, research has it that most of these words in Ibibio are used by most Efik speakers and vice-versa, especially speakers who possibly have a maternal relationship with each other. They sometimes mix up vocabularies when speaking. Also, historical trace of these non-cognate words reveals a degree of relatedness to the original word of the parent language. This compilation has finally given answers to series of controversies to whether the two speech forms are distinct languages or dialects of a particular language.

5.3.3.2 Degree of Relatedness

In establishing the linguistic status of Ibibio and Efik, the lexicostatistic method is employed in comparing both languages. This will enable us determine the degree of relatedness between their cognates. In calculating the degree of mutual intelligibility, Ethnologue's method of calculation is employed. The number of cognates between Efik and Ibibio languages is compared, the figure realized by the number of cognates identified is divided by the total number of lexical items employed in this analysis and the percentage rate is determined. The figures employed are assigned to cognate set as follows:

A: cognates =180

B: non cognates (vocalic and consonantal alteration) =30

C: near cognate =41

Below is the formula for calculating cognates;

$$\frac{\text{Cognates}}{\text{Total}} \times 100$$

$$\frac{180}{251} \times 100 = 71.7\%$$

A) The percentage of cognates between Ibibio and Efik:

Cognates=180, near cognates=41, non cognates= 30

Cognates + near cognate = total cognate

$$180 + 41 + 30 = 251$$

Total lexical items = 251

a. Cognates

$$\frac{180}{251} \times 100 = 71.7\%$$

$$\frac{180}{251} \times 100 = 71.7\%$$

b. Non Cognates

$$\frac{30}{251} \times 100 = 11.9\%$$

$$\frac{30}{251} \times 100 = 11.9\%$$

c. Near Cognates

$$\frac{41}{251} \times 100 = 16.3\%$$

$$\frac{41}{251} \times 100 = 16.3\%$$

5.4 Discussion of findings

In line with the study objectives, lots of findings were made. Firstly, mutual intelligibility could be symmetrical or asymmetrical. It is symmetrical when language A is intelligible to native listeners of language B as the other way around. It is asymmetric when language A is unintelligible to native listeners of language B, but language A understands language B. In this case, the linguistic distance is wider in terms of sounds, vocabulary, sentence structure and meaning. From the above data, Efik and Ibibio languages are symmetric languages in that words, sounds, meaning and sentence structure are similar. This is as a result of nearness of linguistic continuum as both languages share the same boundary and history. Differences exist on the usage of vowels where the Ibibio speaker uses /a/ in place of /e, o/ for some words that begins with /e, o/ in the Efik language, example; obubit (Efik) becomes abubit (in Ibibio), etc. and also replaces /u/ with /ʌ/ in Efik. Also, Nouns usually precedes articles before other element in the sentence or an adjective can precede noun to qualify the noun itself. It can be seen that definite article ‘the’ does not exist in Efik and Ibibio languages rather demonstrative articles are used; ‘emi’ (this), oko/oro (that), òdùsùk (some), ékèn (other), ‘edi’ (it is) in Efik. In Ibibio; ado (that), ami (this), ubaak (some), aken/afen (other) are demonstratives used as articles. The third person pronoun in English (She/he/it) is referred as ‘enye’ (in Efik) and ‘anye’ (in Ibibio) whether the subject is a boy or a girl.

Secondly, our investigation reveals that Efik has twenty-three (23) consonant sounds which are classified as thirteen stops /p, b, t, d, k, kp, kʷ, m, m̃, n, ɲ, ŋ, ŋʷ/ comprising seven oral stops (plosives) /p, b, t, d, k, kp, kʷ/, six fricatives /β, f, s, ɣ, h, ʋ /, six nasal stops /m, m̃, n, ɲ, ŋ, ŋʷ/, one trill /R/, one tap /ɾ/ and two approximants /j, w/ and 9 phonetic vowels /a, e, ε, i, ī, o, ō, u, ū/ which are all significant sounds in the language. While Ibibio has sixteen occurring phonetic vowel /i, ī, ii, ə, ʌ, e, ee, a, aa, uu, u, oo, o, ɔ, ɔ̄, ʉ/ which includes short and long vowels and twenty-one phonetic consonants /p, b, t, d, k, kp, m̃, m, n, n̄, ŋ, ŋw, β, f, s, j, r, w, ʋ, / . In these consonants, six are oral stops, six nasal stops, and one syllabic nasal stop, one trill, one tap, three fricatives and one approximant. The linguistic distance in the consonant of both languages is that Efik has the glottal fricative sound [h] which occurs in free variation with the voiced velar fricative /ɣ/ while the Ibibio does not have. In terms of vowels, vowels as in / ii, ə, ʌ, ee, aa, uu, oo, ɔ/ are absent in the Efik language. The Efik mid close front vowel [ɛ] does not exist in the Ibibio vowel inventory. It occurs in word initial position, usually functioning as a concord marker representing the third person singular/plural subjects.

Moreover, the basic syllable structure of Efik and Ibibio languages are [V or N, CV, CVC]. All other structures are modifications from these basic forms. The Efik and Ibibio languages have many open syllables and few closed syllables. The only syllable structure that does not exist in Efik is CVVC structure which is prevalent in Ibibio.

Thirdly, Efik and Ibibio are tonal languages. Their tonal structure is described as ‘terraced level’. Tones are very relevant because in both languages, consonants and vowels are not significant as the tones. Our investigation reveals that Efik and Ibibio has two basic tones: the register tones which are the high [´] and the low [˘] tones. Other tones are modification of the two basic tones which could be called contour tones like the rising tone [ˆ] which comprises the low and the high tones (L+H), the falling tone [ˆ] which is made of the high and low tones; and the downstep [!]. These tones perform lexical and grammatical

functions. Tones in Efik and Ibibio are important like the segments because they create distinctiveness in word meanings.

Finally, results show that Efik and Ibibio have a higher degree of cognates at 71.7%, non-cognate at 11.9%, and near cognates at 16.3%. The higher degree of cognates is presumed to be due to the proximity of closeness to each other. This establishes the fact that both speech forms are dialects of a language that are mutually intelligible to a large extent. The non-cognates show that the differences in both speech form is not much, by and large, it is still mutually understood among speakers, whereas near cognates highlights the similarity that exist in the vocabulary of these languages in spite of the sound change by vowel alternation and stylistic variation by speakers these speech form.

6. Conclusion

Differences within the same language do not make the varieties separate languages because of the mutual intelligibility that exist among them. It is said that the people speak different dialects of the same language. On the other hand, when members of the same region do not understand each other, they speak different languages. Therefore, dialects that are different from each other are considered different languages. The Efik and Ibibio languages are considered dialect because speakers of both understand themselves, as such they are mutually intelligible, close to each other, and share some historical experiences. This study may prove to be incomplete for reasons of time, space, and finances; the researcher believes it is a pathway for further insight on the historical evidences surrounding the relatedness of both languages.

7. Recommendations

The study recommends that;

- A historical linguistics study on the Efik and Ibibio languages should be carried out as it would be of immense interest. This is because, the formation of some words shows that there has been some traces of deletion process and vowel alternation in words probably due to language contact and other sociolinguistic factors. Deliberate attempts and advancements by native speakers and linguists alike are recommended to further authenticate the research to know the parent language of both dialects.

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