A CONTRASTIVE STUDY OF EFIK - IBIBIO AND ENGLISH VOWEL SYSTEMS AND ITS TEACHING IMPLI CATIONS

BY

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The undersigned certify that they have read, and recommend to the Faculty Board of Education for acceptance, an Independent Study entitled "A Contrastive Study Of Efik-Ibibio and English Vowel Systems and Its Teaching Implications".

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Abstract

The study has been undertaken to find out the nature and degree of difficulties with English vowels which are likely to be encountered by Efik - Ibibio speakers who learn to speak English. These difficulties have been hypothetically related to the limited vowel system in the NL to which learners have been exposed in the process of their learning to read and write their own vernacular. It has also been suggested (and to some extent demonstrated) that a thorough investigation of the NL vowel system will reveal elements similar to TL vowels, and that such elements can constitute points of departure towards conquering the differences. The discovery of new elements has come about by extending the investigation to the two other age-long neglected sister dialects of Efik-Ibibio.

Insights have been gained from existing literature on theoretical and applied linguistics involving both TL and NL. The study has opted for the eeclectic approach in selecting both descriptive and contrastive models,

Existing literature has constituted, the secondary source for both TL and NL data. First hand NL data have come from Interviews with native speaker subjects; while first hand TL data have come from speech tests administered to subjects selected from among the learners the study has in mind.

The contrastive Analysis itself has revealed the types of problems likely to be encountered by learners - articulatory, distributional, - and the difficulty related to the phonemic or phonetic status of elements in the TL and NL systems. These difficulties have been ranked mainly on the basis of articulator and distributional features of elements involved.

From the CA results have been listed the voweld that shall be taught to the learners, and the sequence in which they shall be taught. Methods based on both behaviourist and cognitive psycholinguistics have been suggested, together with suitable teaching aids. Linguistic insights have been suggested as a prerequisite for the teacher who aspires to carry out the task

of helping Efik - Ibibio speakers out of their difficulties with English vowels.

Other areas of investigation have been suggested - to enrich the language and provide data for language curriculum materials.

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DEDICATION

This study has been dedicated to my son, Idongesit Michael Ekere, who, as the name implies, has come to console me after fifteen years of yearning for a second son. His arrival has made it possible for me to pay undivided attention to this study.

ACKNOWLEDGEMENT

I have to express my gratitude to all those who have in one way or the other helped to make this study a success.

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I have to say thanks to Dr. Thomas K. Adeyanju, whose challenging approach to the study and practice of Contrastive Analysis inspired me to undertake this study. All other Lecturers in the Department of Education, both of the TESL division and of other divisions, deserve my thanks for insights drawn from their lessons and advice.

My gratitude also goes to the Institute Board of Research for its financial assistance in the form of research grants towards this study.

I have to say thanks to Mr. J. O. Ezekwe, who took the pains to type this work.

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Chapter One

INTRODUCTION

1.1. Ractionale: By the time the Efik - Ibibio speaker comes to learn to speak English, he has been made literate in his own native language. (The only exception to this assertion is those children who receive their primary education outside their native language community). For those at home, in the course of their learning to read and write their native language, they have been introduced to a vowel system made up of just six monophthongal segments (Ward, 1933; Welmers, 1977), and a few combinations to produce a limited number of diphthongs. Ida Ward identifies six monophthongs without offering any defence. Welmers starts off by acknowledging "A perculiarly restricted lack of symetry ... in Efik" - But he knocks this concession over by arguing that

"If only a few morphemes in the language are ignored, sounds like [e] and [ɛ] are clearly allophones of one phoneme /e/ : [e] occurs only in word - initial position, and [ɛ] occurs only in post - consonantal position". (1977:21)

Typical forms used by Welmers to illustrate the use of those allophones include [etó] (tree), [dép] (buy), [ètɛ] (father). If on the basis of such forms, [e] and [ɛ] are analysed as allophones of a phoneme /e/, Welmers concludes:

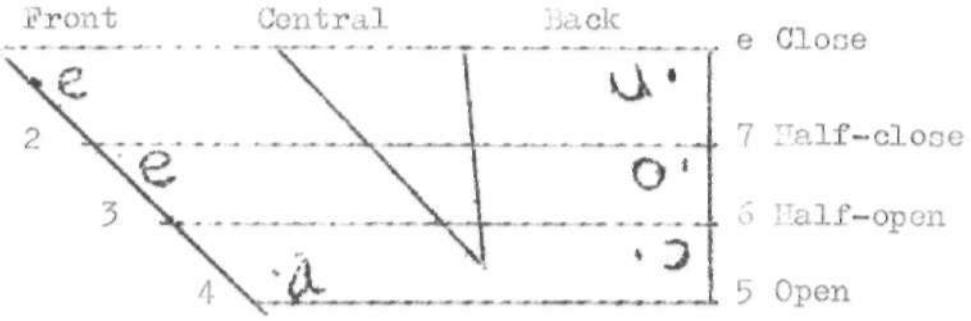
"... then Efik has a symetrical system of unrounded /i, e, a/ and rounded /u, o, ɔ/" (1977:21)

It is this symetrical vowel system of six that Ida Ward (1933) has presented as follows:

Fig 1.1 : The Pure Vowels of Efik - Ibibio
(Ida Ward, 1933 : 18)

Cardinals

1 /i/
2 /e/
3 /ɛ/
4 /a/
5 /ɑ/
6 /ɔ/
7 /o/
8 /u/



And Welmers gives the system the symetry of

i	u
e	o
a	ɔ

While Welmers does not say anything about diphthongs, Ida Ward has been able to identify thirteen. One explanation for these limitations may be that all known studies have been based on the Efik dialect which does not have as elaborate a system as do the other dialects, especially Ibibio. Efik speakers are more clear - cut in their use of vowels than Ibibio speakers are. For example, while the Efik dialect

has only [ɨ] and [ʊ] as central vowels, the Ibibio dialect has more than these, as will be shown later.

The implication for these limitations is that when the speaker of Efik - Ibibio comes to learn to speak English, especially where little oral work has preceded reading and writing, and where the teacher does not offer any acceptable model, the poor learner draws on his stock of six nonophthongal vowels to produce the vowel sounds of English.

The present study aims to identify those English vowel sounds, both monophthongs and diphthongs, which present Efik - Ibibio speakers with difficulties. It also aims to identify the nature of those difficulties, to classify and grade them through a constrastive analysis of Efik - Ibibio and English systems. It is also the aim of this study to identify more vowel sounds, even at the phonetic level, in Efik - Ibibio, and sort out those that are similar to English vowel sounds. It is hoped that the discovery of similarities between the two systems will provide starting points towards conquering

the differences (Banathy, 1969).

For the learner, a phonetic competence is envisaged, not phonemic. It is hoped that the learner that this study has in mind will come to speak the English language, pronouncing the vowel sounds, both monophthongs and diphthongs, as near as possible to how the native speaker does. This objective can be seen as related to Banathy et al's 4th and 5th qualifiers for inclusion in an inventory of target elements intended for the learner's acquisition. For this study the production control shall be stressed under the fourth qualifier while phonological accuracy and automaticity shall constitute the fifth qualifier (1966 : 44).

Finally, this study envisages, as a by - product, and indeed a remote goal, some contributions towards the review of the phonology of Efik -- Ibibio, and towards the writing of the Ibibio dialect, the desire for which has been expressed in many quarters over the years. This will help to remove one

fallacy in the teaching of the vernacular in most of our schools. As has been mentioned before, the main purpose of teaching the vernacular is to enable the learner to read and write his language; but for those who speak the Ibibio and Anang dialects, as well as for speakers of the Efik dialect, the written dialect (sometimes erroneously referred to as 'the standard dialect') is Efik. In most cases the teacher who teaches this vernacular in those areas where Ibibio or Anang dialect is spoken is himself a native speaker of either dialect. He uses his native dialect as the medium of instruction. This situation is not very different from that in which a target language, say English, is taught using the learner's native language, say Hausa, as the medium of instruction. The situation may be even worse, in the sense that for the English - Hausa example the TL and the NL are mutually unintelligible, so that the learner's pronunciation of target sounds will not be much distorted. But where the

dialect of instruction and the target are mutually intelligible, the learner can 'speak' his own dialect in an attempt to 'read' the written dialect. For example, a pupil in Primary Three has been heard reading

'eyen oro ibake owo'

as [ə yin ə do iba : k'ɔwo]

It is therefore hoped that the expansion of the vowel system of Efik - Ibibio, and the writing of the Ibibio dialect, will make native speakers literate in their own dialect and, moreover, will remove most of the problems encountered in the production of English vowel sounds. This removal will come about when the learner is made aware of the vowel sounds he produces while speaking his own native dialect, and when he is also made aware of the similarities between the vowel systems of his native language and English.

1.2. Statement of the Problem:

(a) What is the nature of difficulties encountered by Efik - Ibibio speakers who learn to pronounce some English vowel sounds?

(b) Can those difficulties be classified and graded?

(c) Will the identification of ALL the Phonetic realisations in the vowel system of Efik - Ibibio reveal similarities between the NL and the TL systems, and thus provide points of departure towards conquering the differences?

(d) In what ways can findings from a Contrastive Analysis of Efik-Ibibio and English vowel systems be used to help Efik - Ibibio speakers out of difficulties with English vowel sounds?

1.3. Hypotheses:

(a) Speakers of Efik - Ibibio who come to learn to speak English tend to use their limited stock

of vowel segments when it comes to pronouncing English vowel sounds.

(b) A thorough analysis of the vowel system of Efik - Ibibio will reveal a full range of the phonetic realizations of those segments, most of which will be found to be similar to English sounds.

(c) Efik - Ibibio speakers who learn to speak English and who are made aware of the similarities between the vowel systems of their NL and the TL will find it easy to overcome those difficulties associated with a limited vowel system in the NL.

(d) A contrastive Analysis that takes account of articulatory and distributional features, together with markedness, typology and hierorchy of difficulty, will lead to the identification of real learning tasks (in terms of English vowel sounds) for the Efik - Ibibio speaker who wants to learn to speak English.

1.4. Assumptions: Three assumptions are basic to this study:

(a) That very little descriptive study, if any, has been carried out in the field of the dialect to be contrasted with English.

(b) That the dialect under study can be subjected to linguistic analysis leading to the growth of literature in it.

(c) That the ESL learner that this study has in mind is capable of discriminating and producing English vowel sounds with phonetic competence, if he has no physical defects, and if he is given the proper training.

1.5. Definition of Terms:

(i) Allophones are the practical realization of a phoneme in a particular environment. A popular English example is the aspirated and unaspirated realizations of /p/ in [pɔt] and [spɔt] respectively. An example from Efik - Ibibio is

variants: of /i/ in [di] and [ist p], where [ɪ] is shorter than [i].

(ii) A Diphthong is a combination of two vowels with a glide from one to the other, e.g. [au] as in /haus/ (house (n)); [ai] as in [ʃsái] (a sharp rough climbing plant)

(iii) ESL = English as a second language.

(iv) First Language (L1) The first language acquired by an individual. In most cases it is the language of the parents' linguistic community. For example, the L1 for a native of Zaria who has been brought up in his native town will be Hausa. The researcher's L1 is Efik - Ibibio.

(v) Foreign Language (FL):

A language spoken outside a learner's linguistic community, but learned for purposes of reading, listening to radio broadcasts in the language, and possibly travelling. The language is not used

for administration or education in the learner's country. Example is French in Nigeria.

(vi) Interlanguage (IL) is a system resulting from a learner's attempted production of the Target Language (TL) Norm (Selinker, 1971: 36 - 37). It can be seen as a continuum connecting the Native language with the Target language, and the learner progressively moves towards the TL.

(vii) Intralingual = operating within one language. For example, in contrasting two sounds intralingually, one can use minimal pairs within the same system - /hit/ vs /hi:t/.

(viii) Lax vowel : A vowel, the production of which does not involve any rounding of the lips or strain on the lips' muscles. (see Tense Vowel below) Examples from English are [ɪ] , [ʊ] .

(ix) Minimal Pairs are pairs of words which are different in respect of only one vowel segment: e.g./hit, hi:t/; /pɔt ,pɔ:t/, ; /kɔt/kʌt/,.

)x) Monophthongs are pure vowels that do not involve any glide - e.g. /ɑ/, /e/, /æ/.

(xi) Phonemes are units of significant sounds in a language They are significant in the sense that if a phoneme is replaced by a similar unit, the word will change its meaning : /hit/ /hi:t/ /pɔt/ /pɔ:t/

hit heat pot port

/bàk/ /bà:k/

(butcher (v) Fear (v)

/i/ and /i:/, /ɔ/ and /ɔ:/,/ɑ/ and /ɑ:/ are said to be in parallel distribution.

(cf. Allophones which are in complementary distribution).

(xii) The Strong Hypothesis is an assumption held by those who believe that a Foreign Language Learner's errors are due to interference from his NL, and that

these errors can be predicted by a contrastive analysis (CA) of his NL with the TL, such CA yielding the data for FL material development.

(xiii) The Target Language (TL) is the system as spoken by native speakers, which the learner strives to speak as the native speakers do. In the present study, the TL for speakers of Efik - Ibibio is English. This NL is Efik - Ibibio.

(xiv) A tense vowel is one whose production involves rip rounding or strain on the lips' muscles or both. Examples are /i:/, /ɔ:/, /ʉ:/ and /ə:/.

(xvi) The Weak Hypothesis is the assumption held by those who believe in the analysis of learners' errors as the proper source of data for FL material development. This school of thought is sceptical about the predictive power credited to Contrastive Analysis, rather assigning to CA the role of explaining errors.

1.6 Scope of the Study: The study will deal with only the Vowel Systems, both monophthongs and diphthongs of English and Efik - Ibibio. No detailed treatment will be given to intonation, except that brief and passing references will be made where they are felt necessary to clarify meaning. Though the consonant system also poses a problem, it will not be discussed in the present study.

The study has been carried out with current speakers of the Ibibio dialect in mind. Even this dialect has its own variation from place to place. So the variant chosen has been that currently spoken by natives of Ibiono South, a few kilometres to the north of Uyo, but politically belonging to Ituh Local Government Area.

For purposes of comparison, the researcher paid a visit to Calabar and Ikot Ekpene to obtain a few samples of the other two major dialects: Efik and Anang. Samples of the Ibibio dialects spoken in other local government areas were also taken e.g. Uyo, Eket, Opobo, Etinan and Ikono.

The R. P. variant of the English Language has been used as the TL. Symbols are those found in Daniel Jones: English Pronouncing Dictionary (See Bibliography).

Chapter Two

REVIEW OF RELATED LITERATURE

An interesting guide to this review is the type of question one finds in an M.Ed. (TESL) paper on Contrastive Analysis (CA):

> "Giving specific names, articles, texts, and dates, examine critically the literature on Contrastive Analysis. What is the state of Contrastive Analysis today?"
>
> (EDTE 406 : Contrastive Linguistic Analysis, September, 1978).

The present study is essentially an exercise in Contrastive Analysis, and it is expedient, while bearing the above question in mind, to keep to Banathy's (1969) six points as closely as possible. The six points are set out as follows:-

1. The rationale or purpose for which the contrastive linguistic analysis is undertaken;
2. The scope and depth of coverage;
3. The language theory upon which the comparison is based;
4. The hypothetical framework within which the comparison is made;

5. The procedures used in making the comparison; and
6. The format and style of the formulation of the contrastive statements.

To those six points should be added the need to relate discoveries to specific teaching situations (Adeyanju, 1971; Rivers, 1968; Sanders, 1976). Points (1) and (2) have been treated briefly in relevant sections of this study. Point (5) will be unfolded in the process of the Contrastive Analysis exercise itself. Points (6) and (7) will come under the chapter entitled "Conclusions and Suggestions". This review will therefore consider points (3) and (4). Point (3) will be titled "The Descriptive Model", while point (4) will be expanded to incorporate the notions of both a hypothetical framework as spelt out by Adeyanju (1978) and a contrastive model as suggested by the same person (1977).

The Descriptive Model

Robert Lado can be looked upon as the founding father of modern Contrastive Analysis. However, in his epoch - making manual, Linguistics Across Cultures (1957), Lado quotes from Charles Fries the place of CA in the preparation of language teaching materials:

> "The most effective materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the Native Language (NL) of the learner". (Fries, 1945, p. 9).

The only model of scientific description available to Lado by 1957 seems to have been the behaviourist - based structuralist grammar. No doubt his CA was taxonomic and depended essentially on distinctive feature analysis, using the word as prime when he came to contrast speech sounds across languages. By 1968 Lado had come to appreciate the shortcomings of the structuralist school. This can be seen in his article "Contrastive Linguistics in a Mentalisic View of Language Learning" in which he has used a lot of insights from the Transformational - Generative (TG) mod-.

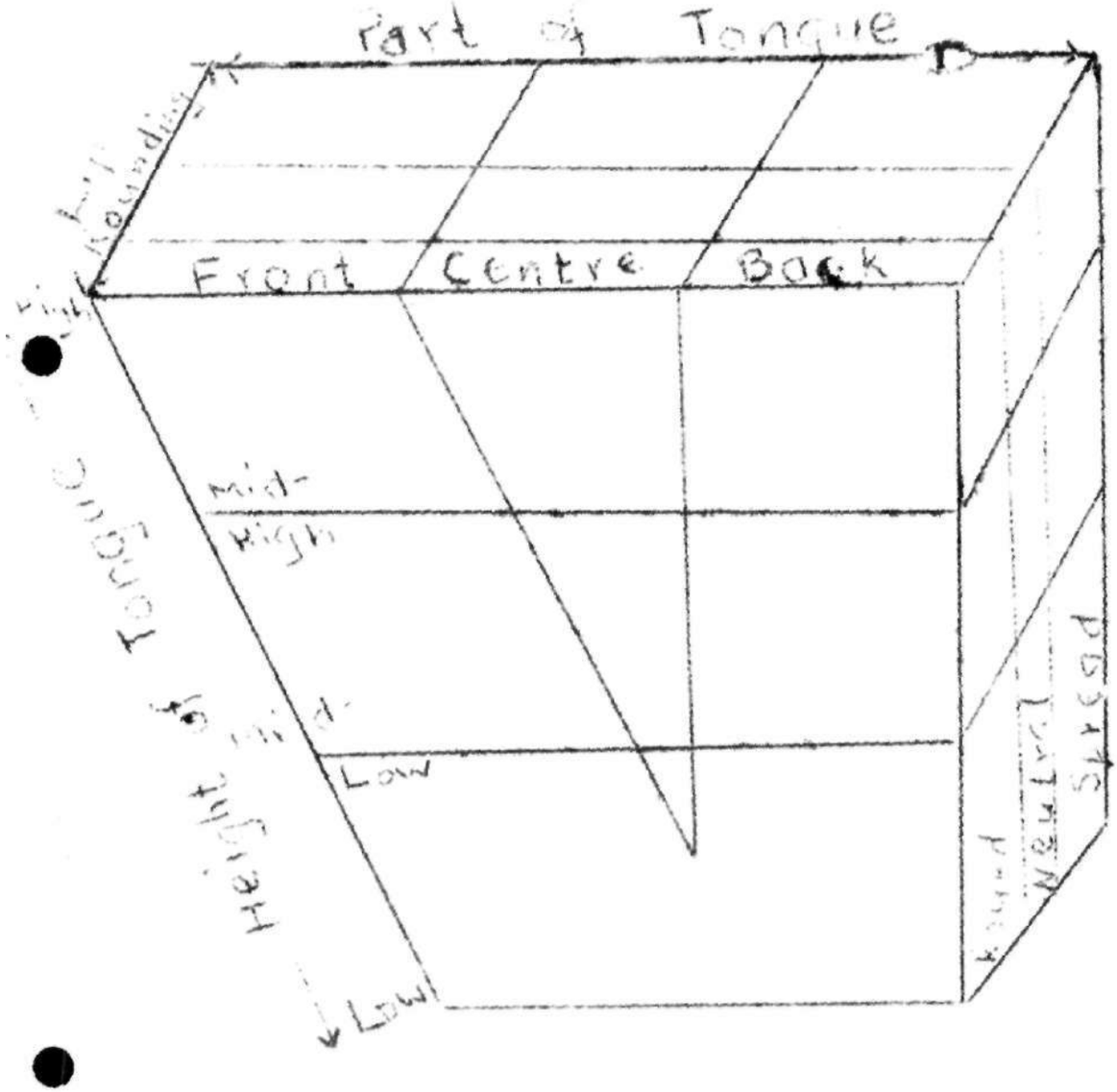
The same 'scientific' model can be seen as underlying the works of those writers who came immediately after Lado (1957) but had not yet assimilated the concepts of the TG school. In the wake of the Chomskian revolution it was easy to recognize that

> "The audio - lingual movement had succeeded admirably in bringing an emphasis on the spoken language into the classroom, and in making teachers aware of the complexity of the language learning task; yet precisely because of these achievements, new problems had arisen which needed a broader and stronger theoretical framework than audio - lingualism could provide". (Pimsleur and Quinn, 1971, p vii).

When it comes to the description of the sound system of a language, linguists seem to move consciously or intuitively in the direction of generative phonology, applying the principles of a universal grammar within the context of which they assign symbols to the sounds of particular languages to be described. The pre - Chomskian linguists do not specify the model they are using. For example, in describing the sounds of some African languages, Westermann and Ward (1933) make use of Jones's 'cardinal vowels' as points of reference. They describe these

at length in terms of tongue height in relation to the floor of the mouth and also in terms of the portion of the tongue that is raised - front, middle, or back. This same principle of universal grammar underlies most works on general phonetics like those by Jones already mentioned, Pike (1947), and Abercrombie (1976), to mention a few. Abercrombie proposes a three - dimensional model for the description of vowel sounds, but seems to shy away from producing a diagram to depict the model, giving instead a two - dimentional matrix. This study therefore proposes, for operational purposes, the following three - dimensional model:-

Fig 2.1.: A THREE- DIMENTIONAL MODEL FOR THE DESCRIPTION OF VOWEL SOUNDS



In his 'Model for Language' Moulton (1968) is essentially elaborating on the notions propounded by Bach (1964) : that the deep structures of a language are related through strings of rules to the world of experience; that those deep structures are again related through transformational rules to the surface structures; and that these last structures are in turn related through phonological rules to the level of sound. In describing the sound component, Bach stresses, there is a need to draw on the principle of a universal grammar, and select from a universal stock the relevant symbols needed to describe a particular language. This principle of universal grammar has been strongly recommended by Eckman (1977) who argues that

> ".... if the Contrastive Analysis Hypothesis is revised to incorporate certain principles of universal grammar, it is possible to predict what can be termed the directionality of difficulty". (. 315).

However, the present study has a particular learner in mind: the Efik-Ibibio speaker who learns to speak English. So the

question of directionality shall not be dwelt upon. Rather, Eckman's (1977) Markedness Differential Hypothesis (MDH) shall be used to work out the degree of difficulties predicted by the CA. Eckman has clearly demonstrated the superiority of a CA based on 'generative phonology' over one based on 'taxonomic phonemics'. Having critically reviewed the works of several contrastive analysts before him, Briere (1968) asserts as follows:-

> i ... descriptions and predictions of difficulty based solely on theoretical analysis at the phonemic level will be inadequate.
>
> ii ... Frequently it is that articulatory feature ignored as redundant for classification that may be prominent in determining the degree of difficulty when both encoder and decoder are confronted with the phonetic reality of a TL sound. (ch. II, pp. 20 - 21).

Those two points constitute a summary of Briere's 'rationale' for the choice of his descriptive model underlying the real

CA exercise carried out in Chapter VI (pp. 38 - 46) of his book, A Psycholinguistic Study of Phonological Interference.

As has been mentioned earlier on, most descriptions of Efik-Ibibio have produced only distinctive features. Cook (1969) mentions a distinction between /i:/ and /i/ in the Ibibio dialect and concedes the existence of "... one or more phonemically distinct central vowel" in the dialect. However, he regards Efik, Ibibio and Anang as three seperate languages, while at the same time indicating that the three are mutually intelligible. No contradiction could be greater. This study uses the term 'languages' for speech systems that are mutually unintelligible, for example Ibibio and Oron, Ibibio and Ibuno; Efik and Ekoi. While the five languages may share common elements, the speakers of one cannot communicate with the speakers of the others except by code - switching. The Oron and Ekoi speakers usually switch to Efik, while the Ibuno speakers switch to Ibibio. But where the speakers of Efik, Ibibio and Anang can communicate effectively, each group

keeping its own system without any code - switching, the three systems are known as dialects of one language (Crystal, 1971; Halliday et al, 1964; Ladefoged, 1968; Lyons, 1968). Perhaps it is this misconception of Efik as a distinct language that has led to the age - long concentration on this system, and the neglect of the other two sister dialects.

Efik - Ibibio belongs to that group of African languages whose vowels are pure and simple, and nasalization rare (Ward, 1937; Homburger, 1949). The limited vowel system of the Efik dialect has already been discussed in connection with the need to discover the full range of vowel sounds in the Ibibio dialect. Welmers (1973) has been able to distinguish between [e] and [ɛ] as phonetic realisations of /e/. But no acoustic analysis (though this analysis was carried out without any sophisticated instrument like the spectograph) could show this distinction in Ibibio. The notions of three phases in the use of speech sounds for communication, and of using these phases for analytical purposes, are associated with Gimson (1970) and

Crystal (1971), among others.

An interesting feature of Ward's (1933) description is her identification of thirteen diphthongs, identification which has been basic to the compilation of the diphthongs of the other two sister dialects. Her work also contains chapters on Vowel Harmony, Elision, Length and Stress. By 'harmony' she means the concord between the vowel prefixed to a verb to give personal conjugations and the vowel in the verb stem Examples are:-

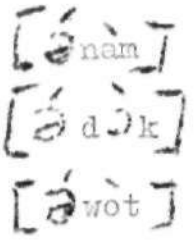
	VERB STEM	SECOND PERSON SINGULAR	THIRD PERSON SINGULAR
1.	[nám]	[àmánán]	[ánàn]
	(do)	(You've done)	(He/She has done)
2.	[dɔ́k]	[ɔ̀mɔ́dɔ́k]	[ɔ̀dɔ̀k]
	(climb)	(You've climbed)	(He/She has climbed)
3.	[wòt]	[òmówòt]	[ówòt]
	(kill)	(You've killed)	(He/She 's killed)

However, in the Ibibio dialect the second person singular would

be expressed in either of two ways:-



The third person singular would be:-



Elision: "When a word ends in a vowel and the next begins with a vowel, the first of the two is generally elided". (Ibid:26)

In this way, ké utit becomes kutit
(at the end)

ké ini becomes kini
(at the time)

mfɔn yé ima becomes mfɔn yima
(Mercy and Goodness)

The vowel that stays usually has its pitch changed to that of the elided one. For example, ké utit : kútit. Occasionally

however, the vowel of the second word gives way to that of the first as in these examples:-

[ówó émi] becomes [ówómi]; [út ɔ́ óró] becomes [út ɔ́ ró]

(this person) (such type)

Ward submits that in Efik no examples have been found in which distinctions in vowel length affect meaning (p. 27). This is a challenge that has led to the discovery of some distinctions that can bring about change in meaning in the Ibibio dialect, and such distinctions have been made to produce two phonemes:

/bak/ = Butler (v); /ba:k/ = Fear (v).

In Efik, it is true, the two are pronounced virtually the same, with a short /a/. Furthermore, in Ibibio the vowels tend to be longer in closed syllables for verbs whose objects are plural, as illustrated by the following examples:-

'bén ábáŋ' means 'carry a pot', whereas 'bé:nabaŋ' means 'carry some pots'

tát úsúŋ means 'open the door', whereas 'ta:t úsúŋ' means

Sometimes vowel length is accompanied by a change in pitch, as in:-

[kàá] (go); [nàá] (lie down); [bèé] (pass).

In Efik, Ibibio and Anang dialects, vowel pitch generally exerts a stronger influence on meaning than vowel length does. But the present study does not include pitch and intonation in its scope.

Whatever the merits or weaknesses of descriptive models, these models have provided insights useful to the present study.

THE CONTRASTIVE MODEL

Under this heading two major issues shall be considered: (a) the hypothetical framework (as distinct from the descriptive model discussed above) upon which the CA shall be based; (b) The contrastive model itself.

The hypothetical framework embodies the two main versions of Contrastive Analysis: CA apriori and CA aposteriori (Schachter, 1974). These two versions correspond to the strong hypothesis and the weak hypothesis respectively (Wardaugh, 1970). The strong Hypothesis maintains:-

(i) that the main cause of problem in L2 learning is interference from the source language. (Jacobovits, 1968).

(ii) that CA is able to predict most, if not all, of the learner's interference problems (Fries, 1945; Lado, 1957; Stockwell & Bowen, 1965; Banathy, Trager and Waddle, 1966; Banathy, 1969; Di Pietro, 1976;

Schachter, 1974).

(iii) that teaching materials can be selected more or less entirely on the basis of such CA, graded for hierarchy of difficulty, and taught along the audiolingual way, making use of minimal pairs at the phonological level - (Lado, 1957; Valdman, 1966; Rivers, 1968; Finocchiaro, 1969).

The Weak Hypothesis, which depends heavily on Error Analysis (EA) maintains:-

(i) that the selection of teaching materials should be based on actual performance errors rather than on predicted interference (Pit Corder, 1967, 1973, 1974, 1975; Schlinker, 1971, 1975).

(ii) that L2 learning is like L1 acquisition, where errors are evidence of learning - interlanguage errors - (Politzer, 1974; Krzeszowski, 1977; Slobin, 1971).

(iii) that CA apriori should be used to explain errors.

(iv) that performance errors should, therefore, be the data for CA rather than the two languages in their full abstract state.

The present study has no place for a protracted debate to determine which version is superior to the other. This is where Moulton's stand is relevant: not to worship at the altar of any linguistic religion (Moulton, 1968, P 27). In terms of research and literature, the strong hypothesis seems to have received a wider treatment than the weak version has done, but there is a need to incorporate in the strong hypothesis model insights from the weak hypothesis, so that discoveries made from Error Analysis can delimit and sharpen the focus of the CA. This is what can be seen as the eclectic and compromise stance taken by Johanson, (1975), Khafaji (1975), Sanders (1976), and Eckman (1977).

THE CONTRASTIVE MODEL

The model for phonological CA can be taxonomic or operational. Generally speaking, the constrastive model is related to the descriptive model; the taxonomic underlain by 'scientific' linguistics, while the operational model is based on the Transformational - Generative (TG) descriptive model. Generalized models can be either taxonomic or operational in their format, but autonomous models can be taxonomic only (Adeyanju, 1978).

Table 1.

MODELS OF CA

Model	Taxonomic		Operational
Autonomous	X		---
Generalized	X	OR	X

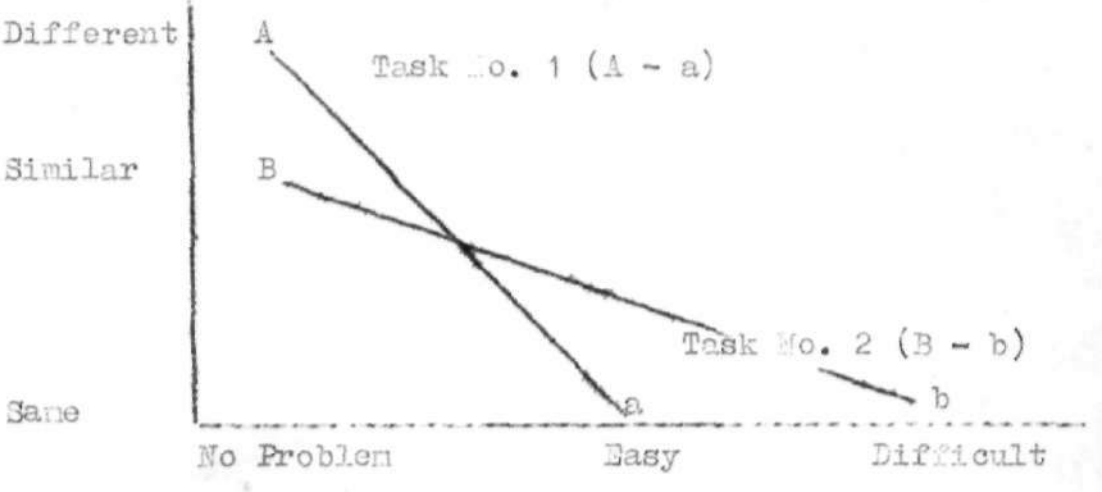
(Adeyanju, 1978).

The early years of CA witnessed the listing of items in both Source and Target languages for purposes of contrast. Lado (1957) contrasted distinctive features only, as did Banathy, Trager and Waddle in 1966, and even by Bhatia as late as 1975. Briere (1968) came to revise this model by giving it sharper tools to incorporate articulatory features, phonemic status of sounds in contrast and privilege of occurrence of such sounds within the languages in contrast. He also demonstrated that a CA that used the syllable as prime was more accurate in its predictive results than was one that used the word as prime.

The next improvement introduced the notions of quantification and hierarchy of difficulty (Stockwell & Bowen 1965). With regard to the hierarchy of difficulty, the general belief was that identical elements between the source and target languages meant absence of difficulty for the learners; similarity of elements meant easy learning tasks; while

differences between elements meant difficult tasks. While Banathy acknowledges similarities across NL and TL as points of departure towards conquering the differences, he has demonstrated that the 'same - similar - different' continuum is not parallel to the continuum of 'no problem - easy - difficult'. This is where his comparison matrix is of interest.

Fig. 2.2 Comparison Matrix



The matrix illustrates that though the native and foreign items may be very different (task No. 1) the task may be easy to overcome. On the other hand, the items may be quite similar (task No. 2) but the mastery of the task may prove to be a

very difficult hurdle for the learner (Banathy, 1969, P. 10).

Stockwell and Bowen (1965) use the criterion of choice of elements to work out the typology and hierarchy of difficulty for the learner.

Table 2 Choice of Elements

Type	NL Choice	TL Choice
1.	Op(tional)	Op(tional)
2.	Ob (ligatory)	Op
3.	Null	Op
4.	Op	Ob (ligatory)
5.	Ob	Ob
6.	Null	Ob
7.	Op	Null
8.	Ob	Null

From this table of choice is derived the next table - of hierarchy:-

Table 3 Hierarchy of Difficulty

Difficulty		Comparison		Type
Magnitude	Order	NL	TL	
I	1	null	ob	6
	2	null	op	3
	3	op	ob	4
II	4	ob	op	2
	5	ob	null	8
	6	op	null	7
III	7	op	op	1
	8	ob	ob	5

There is some relationship between this model and Eckman's Markedness Differential Hypothesis:

> "A phenomenon A in some language is more marked than B, if the presence of A in a language implies the presence of B, but the presence of B does not imply the presence of A". (Eckman, 1977, P. 320).

A brief illustration of this definition is given as follows:-

Table 4 Degree of Markedness of English Vowels in Efik-Ibibio

MARKEDNESS	SOUND	EFIK-IBIBIO			ENGLISH		
		Initial	Medial	Final	Initial	Medial	Final
Most Marked	/ʌ/	null	null	null	X	X	null
Moderately Marked	/ei/	null	null	X	X	X	X
	/ɔ/	X	null	null	X	X	X
Last Marked	/a/	X	X	X	null	null	null
	/e/	X	X	X	X	X	X

According to Eckman, "the area of difficulty can be predicted on the basis of a systematic comparison of the grammars of the NL, the TL and the markedness relation stated in universal grammar such that:-

(a) Those areas of the TL which differ from the NL and are more marked in the NL will be difficult.

(b) The relative degree of difficulty of the areas of the TL which are more marked than the NL will correspond to the relative degree of markedness.

(c) Those areas of the TL which are different from the NL, but are not more marked than the NL will not be difficult'. (Eckman, 1977: 321).

Eckman's is an example of a generalized and operational model. A generalized model can be difined as one in which the NL and TL are seen in the context of a universal grammar and both similarities and differences are brought out. The model becomes operational where rules are introduced in the NL to make it operate within the TL system (Sanders, 1977; Wagner & Nickel, 1968; Mouton, 1969; Eckman, 1977). It may require, for example, that the learner modify the distributional rules for /ə/ in his NL so that it can occur both medially and finally in the syllable, as well as initially. Krzeszowski (1977), who seems to lean more towards the weak hypothesis school than towards the strong, has come to give a new dimension to CA. He rejects the traditional horizontally organized model and proposes in its place a vertically organized model which can handle

"... a larger body of errors, both universal and language - specific, than it has ever been possible to demonstrate by horizontally organized Contrastive Analysis".

Chapter 3

COLLECTION OF DATA

Data connected with English vowel sounds were obtained from primary and secondary sources. Several books on General Phonetics and on the Phonology of English were consulted, and these constituted the secondary source. They included works by Pike (1947); Jones (1956, 1967); Gimson (1962); Bach (1964); Dunstan (1969); Abercrombie (1971); among others (see 'Review of Literature' and 'Bibliography'). Symbols were drawn from Daniel Jone's English Pronouncing Dictionary (1967) which are also used in The Advanced Learners' Dictionary of Current English by Hornby et al, (1962). Only one difference has been observed between these two systems : the symbol to represent the dipthong in boat. Jones uses /əʊ/ whereas Hornby et al use /ou/ in the 1962 edition. See also Appendix A, P. 173 in Dunstan (ed) : Twelve Nigerian Languages (1969) for five ways in which R.P. vowels have been transcribed. Speech tests (see later) yielded the primary data for English vowel sounds to be used in the

contrastive Analysis exercise.

Data on Efik - Ibibio vowels were also obtained from both primary and secondary sources. Existing literature on the Phonology of Efik - Ibibio constituted the secondary source. The study drew on works by Ward (1933, 1937); Westerman and Ward (1933); Homburger (1949); Ladefoged (1968); Welmers (1971), etc. for purposes of vowel representation in the course of sound analysis.

The primary source was the subjects who were involved in conversations and who were used as informants to produce sounds of interest to the Contrastive Analysis exercise.

3.1. Compiling Efik - Ibibio Vowel Sounds:

The researcher met and talked to people at the market, on the farm and in their homes. Questions were asked to make respondents use words that contained the particular sounds of interest to the study. For example, at the market, in the course of buying some kerosine, the researcher would insist on the seller

to add more :

Researcher : [mbɔ̀k stn ustn nnɔ̀]

(Please add more)

Respondent : mbɔ̀k ustn ibaha àbà; ǎdo ǎkem ndé n

(No more, please : that's enough).

Sounds of interest : [t, ɑ:, ɑ, ə, œ]

On the farm a lady was asked to teach the researcher's three-year old daughter the names of the different types of yams the lady was harvesting. And these were the types she gave:

T. O.	I. P. A.
enem	[ǎnémì]
ebre	[àbrèj]
ɔkpɔ	[ɔ̀kpɔ́]
efia')	[efiaŋ]
akpana	[àkpànǎ]

She was further asked to name the different types of stakes her husband had used when the yams were growing.

She mentioned mkpai pronounced [ḿkpáì], ukehe pronounced [ùkéhè].

The diphthong /ai/ was thus added to the stock of vowels so far recorded.

At home a chief was given a keg of palm wine and asked to call upon one of his subjects to pour it out in gourds to those present.

Researcher : [èté, èébíì sí:n úkɔ̀rɔ̀m?]

(Ete, who's going to share out this wine?)

Respondent : [ùmɔ̂ ájàá sì:n]

(Umo is going to share it out).

All verbal interactions between researcher and respondents were taped, later played back at slow speed and relevant sounds written down. Sometimes conversations among the people, particularly at the market, were caught without the knowledge of the interlocutors. Back home, the researcher could identify the following sounds:-

Monophthous			Diphthongs			
i:	i	ɨ	ai		au	
e :	e		ei	ɔi	oi	
a:	a		ie	ia	iɔ	io
ɔ:	ɔ	ʔ	ue	ua		
o	œ		uɔ	uo		
u:	u	ʊ				
ə						

The next step was to take those vowel sounds and test them out with selected informants. One illiterate native was picked as an informant from each of the twenty villages used for the study. Care was also taken to make sure that those informants had not travelled widely outside their district. Production by such people would be purer than production by those whose speech had been influenced through contact with speakers from other districts, especially the educated ones. There is a native speaker from the Abak Local Government Area where the dialect is Anang. But this person, now a Lecturer at the Institute

of Administration, Ahmadu Bello University, Zaria, speaks a mixture of all three major dialects : Efik, Anang, Ibibio - that constitute the Efik - Ibibio language. He was born in Abak where he received his primary education. He went through his teacher education in Uyo and then taught there for some time, where the Ibibio dialect is spoken. Finally, before his departure for the United States, he was teaching at Calabar and Creek Town, where the Efik dialect is spoken. No doubt my friend now speaks neither Anang nor Ibibio nor Efik, but a mixture of all three.

Five educated and fairly widely travelled natives were randomly picked from five out of the twenty villages in the district. Two were holders of the First School Leaving Certificate, the ~~other~~ one a Carpenter whose work of roof building had taken him to various parts of Cross River State; the other a trader who had also seen different parts of the State. Another informant was the researcher's elder brother who had also travelled widely within and outside the State, and had now

settled down as the Principal of one of the Secondary Schools in the State. The fourth person had the old Cambridge School Certificate plus the Teachers' Grade Two, a former legislator in the defunct Eastern Region, now a registered contractor in the State. The last was a lawyer by profession, who had got his degree from the University of Lagos and was now practising in various parts of the Cross River State.

Without going into details of production by individuals, all five had one thing in common : modification of dialect through education and contact. For example, while an illiterate native would say [ìtí : n] spelt ition (five), the educated ones would say [ítíòn] or [ítíèn]. Some of them were asked to repeat the first sound in [ánémì] (enem = a kind of yam), and [àtóɛ̀n] (oton = a tree that produces yellowish latex when cut). Only the illiterate informants got the sounds [ə, ɔɛ] accurately. The others had their production influenced by their knowledge of the spelling for the words, and so said [énémì] and [ótón].

Through this type of exercise the following vowel sounds were recorded : [i:, i, ɪ, e:, e, a:, a, ɔ:, ɔ, ʔ, o, o, u:, u, ʊ, ei, io, iɔ, ei]

A trip to Calabar and Ikot Ekpene brought the researcher to two speakers of Efik and two speakers of Anang respectively, who cooperated by producing vowel sounds to be found on the composite chart that will follow. Two informants were also selected from each of Uyo, Etinan, Eket, Opobo, and Ikono Local Government Areas, where the Ibibio dialect is spoken. Ituh Local Government Area was represented by informants from the district under study.

The researcher did not attempt the sophisticated level of using sound spectographs or oscillographs. Rather, the sounds were identified through close observation of the informant's mouth and careful listening to his production both while he was speaking and while the taped speech was replayed at slow speed.

Table 5. Recorded Speech Sounds

(Sound)	Examples from: IBIBIO	ANANG	EFIK	ENGLISH
i:	ì:ñ = Yes fi:k = (op)press		ì:ñ	i:t (eat) si:t (seat) si: (see)
i	imḍ = love (n) di = come	ima di	imḍ di	it (it) sit (sit) mi (me)
ṭ	sṭn = put	-	sṭn	-
e:	be:n = Carry Plus PI. Obj. bèé = Pass (v)	- bèé	- bèé	
e	èbé = husband men = Swallow (v) sé = look (v)	ebe mèn sé	ebe mèn sé	eg (egg) mɛn (men)
	ba:k = fear (v) kàá = go	ba:k kàá	kàá	

'For put the Anang say [sin], not [stn].

For fear (v), the Efik say bàk which also means butcher (v).

Table 5 Contd.

SOUND	IBIBIO	EXAMPLES FROM ANANG	EFIK	ENGLISH
a	àtá = sixty	àtá	àtá	
	nám = do	nam	nám	
	dá = stand (v)	dá	dá	
ɔ:	dɔ:k = climb	dɔ: k		ɔ: l (all) pɔ:t (port) dɔ: (door)
ɔ	ɔ́fiɔ́ŋ = moon bɔ́p = tie (v) bɔ̀ = receive	ɔ́fiɔ́ŋ bɔ́p bɔ̀	ɔ́fiɔ́ŋ bɔ́p bɔ̀	ɔn (on) pɔt (pot)
ʔ	es ʔk = beach			
o_3	— — do = there	Óbót = hill bót = create	Óbót bót = create do	
oe_4	itoen = refuse dump	—	—	
u_5	su:k = cut into more tiny pieces than before	—	—	u:z (ooze) pu:l (pool) zu: (zoo)

3. For <u>there</u> the Anang say dé.

4. Instead of [oe] the Anang and Efik use [o].

5. Instead of [sú:k] the Anang say [súók], as do the Efik.

Table 5 Contd.

SOUND	EXAMPLES FROM IBIBIO	ANANG	EFIK	ENGLISH
u	utin = sun du = live (v)	utin du	utin du	pul (pull) du (do)
ʊ	bʊk = bury ifʊ = laziness	bʊk ifʊ	bʊk ifʊ	—
ə	ənem = a kind of yam	—	—	ə'neim a n'tein b ti:t c
ai	utai = a reptile	utai	utai	ais (ice) bait (bite) tai (tie)
ei	dei = lick eyei = bush rat	eyei	dei	eit (eight) beit (bait) dei (day)
ɔi	ɔkɔi = novice ntɔi = drop (n)	ɔkɔi ntɔi	ɔkɔi ntɔi	il (oil) bɔil (boil) tɔi (toy)

6. For [ənem] , spelt enem the Anang say [enem] while the Efik call it 'Edidia- iwa'

7. For dei the Anang say 'ɲwem,' a term also used by the Ibibio to alternate with dei.

Table 5 contd.

SOUND	EXAMPLES FROM IBIBIO	ANANG	EFIK	ENGLISH
au	hau = question exclamation how!	hau	hau	aut (out, haus (hou hau (ho
ie	siek = be tough tie = sit	kiet = one tie	kiet tie	—
i a	siak = split (v) dia = eat	siak dia	siak dia	—
i ɔ	i di ɔ k = bad (ness) ɔ ni ɔ = yellow	idi ɔ k ɔni ɔ	idi ɔ k ɔni ɔ	—
io	sio = take out	ition = five sio	ition = five sio	—
ui	—	—	kud = shut	—
ue	duep = brush off due = offend	duep due	duep due	—
ua	suan = scatter sua = hate	suan sua	suan sua	—
u ɔ	du ɔ k = throw away du ɔ = fall (v)	du ɔ k du ɔ	du ɔ k du ɔ	—

Table 5 contd.

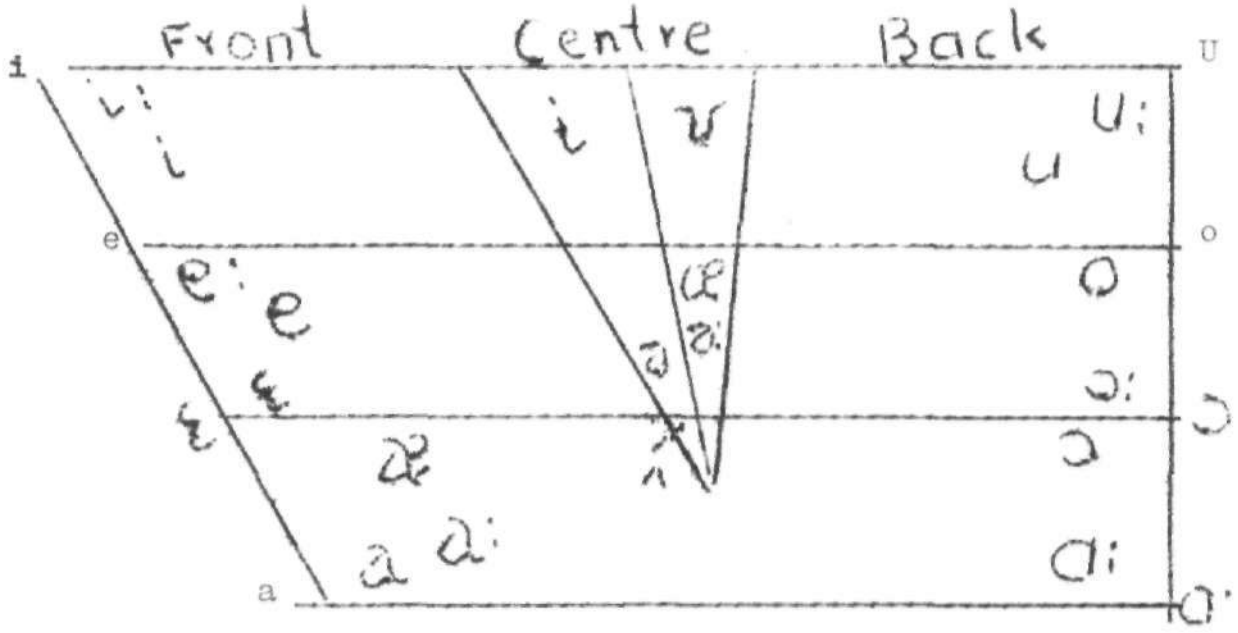
SOUND	EXAMPLES FROM IBIBIO	ANANG	EFIK	ENGLISH
uo8	iduo = container	duop = ten iduo	dupp iduo	—
	koi = fetch (v)	koi	koi	—

8. Most parts of Ibibio say [du:p] for ten. For twelve the Efik alternate between [duobeba] and [duebeba]. The Ibibio invariably say [du:biba] while the Anang say [u doriba].

Since Efik was the only lucky dialect to have had some written literature, it provided the bulk of symbols used to represent on the chart the sounds discovered in all three dialects. Phonemic charts and symbols by Ward (1933) and Welmers (1973) were used as a guide to phonetic representation. Finally, drawing on the virtue of universal grammar, the alphabet of the International Phonetic Association (I.P.A.), reproduced by Gimson (1970) provided the symbols used across both Efik - Ibibio and English languages.

Three symbols not found in any of the descriptions

Fig. 3.1 The I.P.A. Vowel Chart (Gimson (1970) modified)



so far studied have been added : [œ]

as in itœn (refuse dump) is pronounced in the same way as in French ['fœ jɛ̃] (spelt feuillet). /a:/ can be regarded as a phoneme in its own right, since the use of tho two variants [a:] and [a] of /a/ can produce a difference in meaning in the Ibibio dialect. For example:

/bak/ means butcher (v), 'be early'.

/ba:k/ means fear (v).

/jak/ (yak) means let

/ja:k/ (yak) means leave (v).

/dak/ means 'be early' (as/bak/).

/da:k/ means 'place a container under'

It will be noted that though the tone of a vowel determines meaning (Ward, 1933; Ladefoyed, 1968, Welmers, 1973) - as in (stn) = put, (stn) = refuse (v) - in the above examples the tones are identical and the difference in meaning is due to a difference in vowel length, just as can be found in English /bit/vs/bi:t/ (bit vs beat).

In other cases vowel length may not change basic meaning, but may affect grammatical meaning. For example [tat us ɔ] means 'open the door'; whereas [ta:t us ɔ] means 'open the doors. [ben aba] means 'carry a pot'; [be:n aba] means 'carry some pots'. In yet another case the concepts may remain similar as in sak = laugh; sa:k = smile.

Thirdly there is the still shorter, more backward and slightly higher form of /ɔ/ represented by [ɔ̝] It lies midway between [t̪] and [ɔ̟]. Examples are found in [es̪ɔ̝k] (beach), [ɛk̪ɔ̝k] (money). This sound is most common between Ibiono South and Itu-Itan districts of the Ituh Local Government Area.

Speech Tests

Speech tests were administered in order to record how subjects pronounced English vowel sounds. The idea was to obtain data that would support predictions made by a contrastive Analysis (CA) of English and Efik-Ibibio vowel sounds. The Tests were administered to each subject in three stages, and were labelled Test A, Test B, and Test C.

Test A : Reading of Sentences:

1. The dog bit the policeman on the beat.
   (contrast between /i/ and /i:/).
2. He met and courted the lady for a short while, but she has become a faithful mate ever since
   (contrast between /e/ and /ei/).
3. The dog is barking from the back of the kitchen.
   (contrast between /ɑ:/ and /æ/
4. Ikwɔ has bought a nice pot at the port
   (contrast between /ɔ/ and /ɔ:/).

5. Don't pull my ball into that pool please.

(contrast between /u/ and /u:/).

6. The girl's hair maintains its splendid curls.

(contrast between /ɜ/&/ɜ:/).

7. He has cut some wood to make a cot for his baby.

(/ʌ/ vs /ɔ/).

8. Don't push the cart into the tennis court, please.

(/ɑ:/ vs /ɔ:/).

9. He jumped out of bed and shot at the bird without missing (/e/ vs /ɜ:/)

10. He had agreed to the bet, but would not honour his pledge in the end

(contrast between /e/ and /ʌ/).

11. I shall go back to class after this test.

(Use of /əʊ/).

Test B : Reading of Single Words:

The underlined items from Test A were written out for the subjects to read. More items representing marginal positions in the syllable were added:.

1.	it,	bit	me		eat,	beat,	bee
	is	pit			ease,	seed,	sea
	in	sit			eel,	peel,	pea
2.	egg	beg			ate,	mate,	may
		bet			eight,	bait,	bay
		west			aim,	name,	ray.
3.	ark,	bark,	tar,		ant,	pant	
	art,	park	par,		act	pact.	
		stark	star				
4.	on	pot			all,	port	door
		cot			court		floor
					œught		
5.		pull	do		ooze	pool	zoo
		full				fool	

6.	around	maintain	teacher	earth	third	transfer
	above	perform	prosper	earn	learn	
					girl	
7.	up	cup		on	cot	
	under	cut		odd	pot	
					hot	
8.	art	cart		ought	court	
	ark	park		all	fought	
9.	egg	get	earth	girl	transfer	
		jet	earn	learn		
		bed	earl	bird		
10.	but		bet			
	nut		net			
	stump		stem			
11.	oat					
	oath					
	go					
	know					

Test C : Production of Vowel Sounds

C1. Monophthongs

In	eat, seat, see	i:
	it, sit, me	ɪ
	egg, set	e
	ant, cat	æ
	art, mark, tar	ɑ:
	on, pot	ɔ
	Call, port, door	ɔ:
	pull do	ʊ
	Ooze, pool, zoo	u:
	about, maintain, teacher	ə
	earth, third, transfer	ɜ:
	up, cup	ʌ

We can hear the Vowel

C2 : Diphthongs

In	eight, bade, day	We can hear the Vowel	ei
	ice, bite, sky		ai
	out, house, how		au
	oil, soil, toy		ɔi
	oat, goat, go		əu
	ears, hears, beer		iə
	heirs, bears, bear		ɛə
	poor		uə

Subjects who took part in the tests:

One hundred and fifty pupils from Primaries Four, Five and Six took part. Five schools were randomly selected to represent the ten schools in the district under study. Pupils in Primaries one to Three were left out because it was felt though the Cross River State Government had made English both a subject and medium of instruction in all classes of the Primary School, those pupils' control of English was not adequate for them to cope with the

'long' sentences found in the test. In each of the classes involved, pupils' names were written out, numbers assigned and samples drawn using Tables of Random Numbers. This sampling exercise was done immediately before each batch from a class was taken out for the test. The same method of sampling was repeated in the Post Primary institutions. Each batch had to be finished with in a school day, so as to avoid cases of selected pupils being absent when they had to be seen the next day.

Forms One to Five pupils in the two Secondary schools and one Teachers' College in the District were also involved. But here subjects were selected at random from class to class, ten students from each class. The classes varied in size from College to College, and even within each College itself; so the representative percentage was not uniform throughout the Colleges used in the study.

Some teachers of various grades and belonging to various disciplines were also requested to take part in

the test. They included:

(a) Fifteen Grade Two teachers in the Primary Schools selected.

(b) Five Grade One Teachers in both Primary and Post Primary Schools.

(c) Sixteen N.C.E. Teachers of Geography, Mathematics, Physics, Chemistry, Physical and Health Education, Biology, History, Bible Knowledge, English Language and Literature in English in the Post Primary Schools selected for use.

(d) Fourteen graduates in the disciplines listed under (c) above.

Administration of the Tests

The tests were conducted in a room previously arranged in every institution to be used. The subjects were called in one at a time. Each subject was then asked to read the sentences through once. When it came to the words, each set was read first downwards, then across. For example,

in the first set the reading was done as follows:

First Reading	Second Reading
it, sit, me	eat, seat, see
ill, pit	eal, peat, pea
bit	beat, bee

Third Reading →

it	eat
sit	seat
me	see
pit	peat
bit	beat
be	bee
ill	eal.

Finally, the vowel sounds were to be identified in the context of reading frames as in the following examples:

In	it, sit and me eat, seat and see eight, bait and day	We can hear the vowel	i: ei

And the subjects were to read:

(a) In it, and me we can hear the vowel /i/.

(b) In eat, seat and see we can hear the vowel /i:/.

(c) In eight, bait and day we can hear the vowel /ei/.

The pupils in the Primary and Junior Post Primary classes were sometimes assisted by the researcher, who read the first line or first set of items to the subjects as an example for them to follow. Each subject's reading was tape-recorded for subsequent analysis.

Analysis of Test Results:

The Tests had been designed to find out how the subjects could pronounce English vowel sounds - monophthongs and diphthongs - appearing initially, medially and finally in the syllable. The tables that follow indicate the percentage of subjects in each category who got the sounds in different positions write, and those who got them wrong.

Table 6 :

Speech Tests (Monophthongs) : Analysis of Results

Categories of Subjects & Their Performance

Tested		Primary 150		Sec.Sch. 100		T. C. 50		Gds I, II 20		N.C.E. + Deg. Not Eng. 15		N.C.E. + Deg.Eng 15	
Sound		% R	% W	% R	% W	% R	% W	% R	% W	% R	% W	% R	% W
i:	In	0	100	20	80	25	75	40	60	45	55	60	40
	M	0	100	30	70	40	60	65	35	60	40	90	10
	F	2	98	60	40	80	20	90	10	70	30	98	2
i	In	76	24	80	20	86	14	90	10	90	10	98	2
	M	78	22	85	15	83	17	85	15	92	8	100	0
	F	82	18	83	17	90	10	92	8	98	2	100	0
e	In	83	17	90	10	89	11	91	9	94	6	96	4
	M	86	14	96	4	100	0	98	2	100	0	100	0
ɜ:	In	0	100	4	96	16	84	35	65	37	63	70	30
	M	5	95	7	93	10	90	30	70	35	65	85	15
ɑ:	In	2	98	16	84	14	86	20	80	25	75	68	32
	M	6	94	12	88	30	70	40	60	48	52	78	22
	F	4	96	18	82	36	64	25	75	35	65	60	40
ɔ:	In	8	92	20	80	18	82	25	75	40	60	72	28
	M	6	94	24	76	40	60	32	68	45	55	67	33
	F	17	83	30	70	45	55	50	50	60	40	85	15
ɔ	In	65	35	78	22	82	18	87	13	91	9	95	5
	M	57	43	72	28	76	24	88	12	93	7	92	8
ʌ	In	0	100	2	98	11	89	13	87	15	85	45	55
	M	0	100	6	94	6	94	20	80	21	79	65	35

In = Initial Position.
R = Correct Production.
W = Wrong Production.

Speech Tests (Monophthongs) : Analysis of Results

Categories of Subjects & Their Performance

Tested		Primary 150		Sec. Sch. 100		T. C. 50		Gds I, II 20		N.C.E. 1 Deg. Not Eng. 15		N.C.E. Deg. 15	
Sound		% R	% W	% R	% W	% R	% W	% R	% W	% R	% W	% R	% W
u :	In	11	89	21	79	18	82	26	74	30	70	73	27
	M	5	95	45	55	60	40	50	50	70	30	80	20
	F	10	90	40	60	69	31	55	45	75	25	82	18
u	M	54	46	77	23	76	24	74	26	83	17	91	9
	F	60	40	87	13	90	10	92	8	93	7	98	2
ə :	In	4	96	16	84	30	70	35	65	30	70	71	29
	M	0	100	10	90	6	94	15	85	26	74	52	48
	F	10	90	40	60	55	45	65	35	50	54	80	20
ɔ	In	12	88	41	59	43	57	65	35	50	50	74	26
	M	8	92	40	60	60	40	72	28	81	19	70	30
	F	6	94	46	54	38	62	75	25	70	30	91	9

In = Initial Position

M = Modial Position.

F = Final Position.

Figures next to Category names indicate the number of subjects in those categories.

Table 7 :

TEST ANALYSIS : DIPHTHONGS

Categories of Subjects & Their Performance

Tested		Primary 150		Sec. Sch. 100		T.C. 50		Gds I, II 20		NCE + Deg. Non Eng 15		NCE + Deg. Eng. 15	
Sound		R %	W %	R %	W %	R %	W %	R %	W %	R %	W %	R %	W %
ei	In	6	94	28	72	40	60	45	55	53	47	73	27
	M	8	92	25	75	42	58	51	49	56	44	75	25
	F	9	91	32	68	52	48	50	50	52	48	87	13
ai	In	60	40	85	15	91	9	89	11	92	8	100	0
	M	78	22	90	10	94	6	96	4	87	13	95	5
	F	88	12	92	8	92	8	91	9	96	4	97	3
ɔi	In	52	48	71	29	68	32	76	24	83	17	92	8
	M	59	41	71	29	76	24	78	22	85	15	95	5
	F	62	38	87	13	90	10	88	12	87	13	91	9
au	In	70	30	80	20	78	22	84	16	86	14	91	9
	M	73	27	79	21	86	14	90	10	88	12	93	7
	F	77	23	89	11	92	8	96	4	87	13	100	0
əw	In	0	100	12	88	28	72	35	65	43	57	51	49
	M	0	100	7	93	30	70	37	63	53	47	67	33
	F	2	98	19	81	42	58	58	42	68	32	83	17
iə	In	3	97	11	89	7	93	14	86	42	58	70	30
	M	3	97	17	83	20	80	16	84	48	52	61	39
	F	7	93	21	79	40	60	37	63	49	51	72	28
ɛə	In	0	100	6	94	3	97	10	90	30	70	41	59
	M	2	98	16	84	4	96	12	88	26	74	51	49
	F	9	91	10	90	15	55	32	68	35	65	46	54
uə	M	0	100	10	90	16	84	13	87	31	69	50	50
	F	2	98	17	83	12	88	24	76	30	70	65	35

R = Correct Production.
W = Wrong Production.
In = Initial Position.
M = Medial Position.
F = Final Position.

At the Primary level there was generally some progression in performance from Primary Four to Primary Six, though there were variations from school to school. However, since the concern of the study was not to improve the level of English in particular schools in the district, results from all the primary schools used were brought together and the analysis of performance on each vowel carried out as follows:

Sound Tested		Percentage of subjects who got it correct	Percentages of Subjects who got it wrong
i:	Initial	0	100
	Medial	0	100
	Final	2	98

A full analysis of those results can be seen in Tables 7 and 8 above, where there is some progression from the Primary School performance to performance by graduates in English.

In Tests A and B, apart from the difficulties observed in the production of some sounds in different syllabic positions,

there was also confusion between some sounds. At the Primary level, and even beyond, no distinction was made between the following pairs of sounds:

/i: , i /; / e, ei /; /ɔ:, ɔ /; /ɔ , ʌ/ ; /e , ʌ /. The sounds /ɑ:/ and /æ / were replaced by /à /. /ə / was replaced by / a / or / e /, depending on the environment. So maintain was generally pronounced /menten/; teacher as /ti:tʃa /. /ʌ / would be either /e/ or /ɔ/. Some subjects in the primary schools pronounced but as /bet/, while others said /bɔt/. Cut and hut were pronounced /kɔt/ and /hɔt/ respectively. In their initial and final positions, the sounds /i, e, ɔ, u/ caused relatively little trouble possibly because they also occured syllable-finally in the subjects' NL as in [dí] = come; [sé] = look (v); [dɔ] = marry; [dù] = live (v); and word - initially as in [ità] = three; [èbé] = husband; [ɔkɔ́] = fence (n); and [útín] = sun. The most difficult vowels at this level were /ʌ, ə:, ɑ:, æ /, which are completely

absent from subjects' NL, and for which they made substitutions as stated above.

The diphthongs/ɪə, ɛə, ʊə, əʊ/ presented a lot of problems. For example, in their initial positions /əʊ, ɛɪ/ could not be got right, in spite of assistance by the researcher. The way those diphthongs were pronounced can be summarised as follows:-

Table 9 : Performance Errors

Given			Pronounced		
WORD		SOUND	WORD		SOUND
T. O.	I.P.A.	/Phoneme/	T. O.	I.P.A.	/Phoneme/
eight	eit	ei { In	eight	et	{ In
bade	beid	{ M	bade	bed	e { M
day	dei	F	day	de	F
oat	əut	əʊ { In	oat	ot	{ In
goat	gəut	{ M	goat	got	o { M
go	gəʊ	F	go	go	F
heirs	hɛəz	ɛə { In	heirs	(h)es	e M/In
bears	bɛəz	{ M	bears	bies	ie { M
bear	bɛə	F	bear	bie	F
ears	iəz	In	ears	ies	{ In
hears	hiəz	ie { M	hears	hies	ie { M
beer	biə	F	beer	bie	F
gourd	guəd	uə { M	gourd	guɔd	u ɔ { M
poor	puə	F	poor	puɔ	F

There was relatively little difficulty with /ai/, au, /ɔi/, especially where they occured syllable - or word - finally. This could be due to the presence of those sounds word - finally in the subjects' NL, as in [útái] = reptile; [ktɔ́i] = a dot or drop; [háù] = a surprise exclamation, with a questioning tune. Even the percentage success in producing those sounds was pretty high, ranging between 58% and 78% at the Primary school level.

Other cases of erroneous substitution, by as few as 15 pupils, were those of /a/ for /au/ as in /rand/ for /raund/ (round); and /ɔ:/ for /ɔi/ as in /ɔ:l/ for /ɔil/ (oil).

In Test C where some extraconscious effort was required, the following deviations could be observed:-

(a) Confusion between /i/ and /i:/

/ɔ/ and /ɔ:/

/e/ and /ei/ __ particularly where they occurred syllable - initially and - medially.

(b) Substitution of /ɔ/ or /e/ for /ʌ/; /a/ for /æ/ and /a:/; /a/ or /e/ for /ə/; /O/ for /əʊ/; /i e/ for /iə/; /e/ for /ɛə/ and /uɔ/ for /uə/ - in all their syllable positions.

At the Post Primary level The Teachers' College Students performed generally better than their Secondary School Counterparts (see Tables 7, 8). T. C. Students were able to distinguish between those vowels that were long and tense on the one hand and others that were short and lax on the other hand, especially /i:/ and /i/; /ɔ:/ and /ɔ/. But both at the T.C. and at the Secondary Schools there was difficulty with both the long and the short versions of the Schwa - /ə:/ and /ə/, especially where they occurred syllable - medially.

The following problems observed at the Primary Level were repeated at the Post Primary:

(a) Confusion between /e/ and /ei/.

(b) Virtually all deviant substitutions found in (b) for Primary School pupils.

Post - Primary Students (and some teachers) were asked to repeat some sets of expressions that contained sounds common to Efik _ Ibibio and English:-

Table 9. : Sounds Common to NL & T.L. Systems

Efik - Ibibio		English	
Phonetic Representation	Orthographic Representation	Phonetic Representation	Orthographic Representation
1. [sí:n édim]	sin edim (cause rain to fall)	s i : n	seen
[si:n Ukɔt]	sin ukɔk (share out wine)		scene
2. [sín úbɔk]	sin ubɔk (lend a hand)	Sin Most subjects tended to replace the lax (ɪ) by the still shorter [ɨ] found in their dialect.	Sin
3. [dei]	dei (lick)	dei	day

Table 9 contd.

Efik - Ibibio		English	
Phonetic Representation	Orthographic Representation	Phonetic Representation	Orthographic Representation
4. [dɔ́ːk]	dɔk (climb, mount		
[dɔ́ː]	dɔ! Marry! (said sarcastically)	dɔː	door
		pɔːt	port
5. [dɔ̀k]	dɔk (dig)	dɔk	dock
[Kpɔ̀k dɔ́ːk]	Kpɔ̀k dɔk (hop and mount)		
6. [Sú : k áfaŋ]	Suk afaŋ (cut afaŋ into smaller pieces than before)	pu : l	pool
7. [dù]	du (live (v)	du	do
8. [ənémì]	enem (a kind of yam)	ə'neim	a name
		ən 'eim	an aim

The idea was to make the subjects aware of the similarities between the sounds in their NL and those in the TL systems. Some sounds that they had found difficult to produce could, in the course of such repetition, be produced easily. For example, four Form 5 pupils were able to read Scene, a name, an aim, door and day phonetically well.

At this point it is interesting to mention a drama that occurred at the Standard Bank, Uyo, on Thursday, December 21, 1978. A customer had come to withdraw ₦80.00 from his Savings Account. While completing the withdrawal form on the customer's behalf, the Cashier 'heard' [tē : tī] instead of [ēitī], and filled in ₦30.00 for the poor man. After all due processing, the Cashier presented the ₦30.00 to the customer, who felt shocked and disappointed. There was a row, and the Manager's attention was attracted to the counter. A compromise was reached by the Manager, who instructed the

Cashier to process a withdrawal form for another ₦50.00. This illustrates the confusion among most of these people between /e/ and /ei/, between /æ:/ and /e/, and between /t/ and /θ/.

The performance of four Grade One and eleven Grade Two Teachers was generally of the same quality as that of T. C. students. The sounds that presented most difficulty were /ʌ, ə, ə:, ɜ:, ɑ: / in their medial as well as marginal positions. /i/ was difficult to pronounce medially.

Holders of the N. C. E. with English as one of the major subjects, together with holders of degrees in English or in Education with English as a teaching subject, these tended to have some advantage over their counterparts in the other disciplines. There was also generally better quality production among graduates in the Arts than among those in the Sciences. Even among graduates in English, it was observed that those who performed best were those

who taught Language in their respective schools. For example, two of them could, unassisted, speak with a clear distinction between /ʌ/ and /ə/; between /ə:/ and /e/; and between the tense and the lax variants of the front /i/, the central /ɘ/ and the back /u/ - a distinction that could not be made by most graduates who taught Literature, not to mention those graduates in the other disciplines.

Moreover, with very few exceptions, /ou/ was still used in the place of /əu/; for example, [gou] was heard more frequently than [gəu].

Chapter Four

ANALYSIS OF DATA:

CONTRASTIVE ANALYSIS

Since this contrastive study is meant to predict errors likely to be made by Efik - Ibibio speakers learning to use English vowels, it will be necessary to use the English vowel system as the starting point, and to find out the degree of differences that exist between the NL and the TL systems. The analysis will be carried out in three major phases: the taxonomic phase, the typological phase, and the hierarchical phase.

4.1. The Taxonomic CA. In this phase the aim is to list out the twelve English monophthongal vowels and the eight diphthongs, together with their possible allophones, and then compare them with corresponding elements in Efik - Ibibio. Composite charts comprising the monophthongal and diphthongal systems of both TL and NL will be very helpful

here, together with Venn diagrams that illustrate areas of intersection between the two systems.

Taking the pure vowels (monophthongs) first, let us compare them across the .

Fig. 4.1. NL & TL MONOPHTHONGAL VOWELS

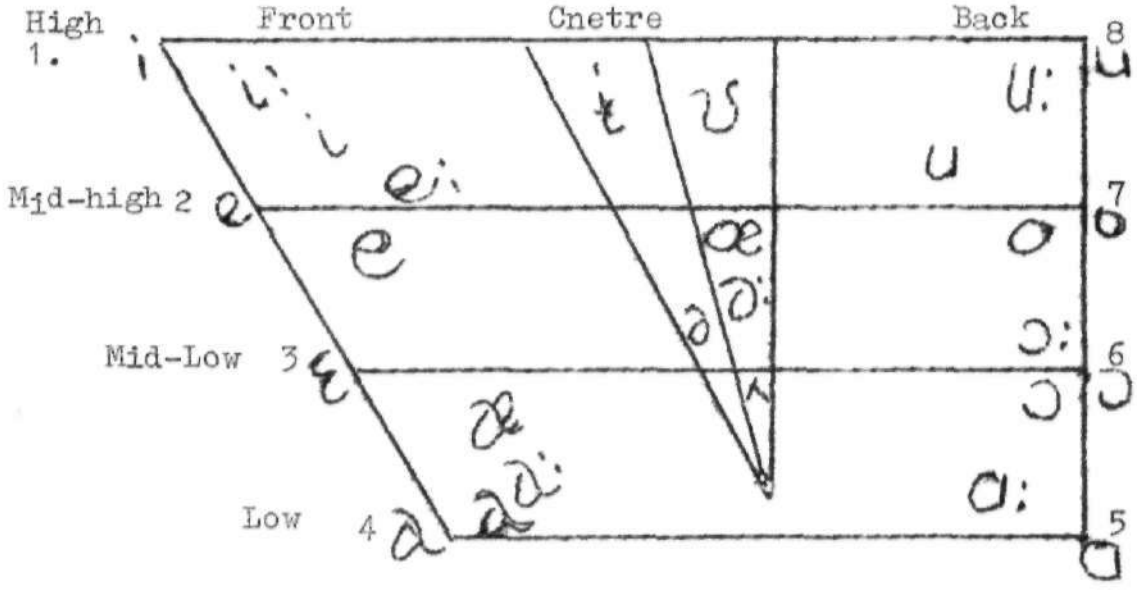
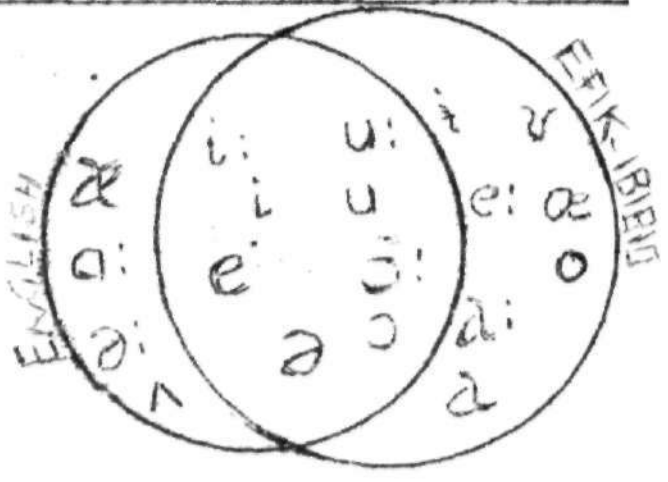


Fig 4.2. INTERSECTION OF NL & TL MONOPHTHONGAL VOWEL SYSTEMS



two systems in terms of articulatory features, phonemic versus phonetic status, and privilege of occurence (Briere, 1969).

/ i: /.

In both English and Efik - Ibibio, / i: / is the highest front vowel, It is unrounded but tense, though more tense in English than in Efik - Ibibio. For example, the / i: / in [pʰi:k] (peak) is more tense than the one in [f í : k] fik =((Op) press).

In English it is a phoneme distinct from / i /, for example, which occurs in [pʰik] (pick). Most writers on the phonology of Efik - Ibibio tend to ignore the existence of / i: / in the language's vowel system. Possibly led by spelling conventions, they have, as will be seen later, come to regard [i] and [ɨ] as allophones of [i]. But if we forget about spelling conventions for the mean time, it can be shown that / i: / and / i / are different phonemes in Efik - Ibibio, as well as in English. The same combination

of letters (fik) will produce two distinct expressions depending on the vowel used. So /f : k/ means `(op) press,' whereas /fik/ means `foment'. This same phenomenon of same spelling but different pronunciations and meanings is also found in such English words as bow, pronounced / bəʊ / (a weapon) and /baʊ / (to bend the body); minute pronounced /'minit/ $\frac{1}{60}$ hour or $\frac{1}{60}$ degree , and /mainju:t/ (very tiny).

/i:/ occurs initially, medially and finally in English, as in/i:t, i:z/ (eat, ease); /si:t, si:d/ (seat, seed); and /si:/ (see, sea). In final positions or when followed by voiced consonants, /i: / tends to be longer than when it is followed by voiceless consonants (Abercrombie, 1964; Gimson, 1964). The sound occurs initially (in very restricted use) and medially in Efik - Ibibio, but not finally. Examples are , [ị̃ñ] (yes); [nsi:p] (nsip = pith from palm frond).

/ɪ/

This is also front-high, though not as high as /ɪ:/. It is lax and short. In English it is a phoneme, with variants that reflect its position in the syllable. In Efik - Ibibio it is also a phoneme, and has allophones [ɪ] and [ɪ̀] .

In English /ɪ/ occurs syllable - initially, medially and finally as in /it, iz/ (it, is); /fit, fil/ (fit, fill); /mi/ (me). In Efik - Ibibio /ɪ/ occurs word-initially and syllable finally as in [ɪ́mɛ̀] love (n) and [mí] = here . In closed syllables the sound shortens to [ɪ̀] as in

[sɪ̀n̄] = put ; [fɪ̀k] = foment .

/e/.

For /e/ the front of the tongue is raised between the mid-high and mid-low positions, with the lips loosely spread and slightly wider than for /i/. The tongue may have more tension than in the case of /ɪ/, especially in

English, the rims making a light contact with the upper molars. It has the status of a phoneme in both TL and NL systems. Welmers (1973) has identified a variant [ɛ̝] in the Efik dialect.

In English /e/ occurs syllable - initially and medially, as in /eg/ (egg); /set, sed/ (set, said). In the final position /e/ is always replaced by the Schwa /ə/. In Efik-Ibibio /e/ occurs medially and finally in the syllable, as in [mèn] (= swallow(v)) and [sé] (= look (v)). It also occurs word-initially as in [èbé] (= husband).

The Ibibio dialect has a lengthened variation /e:/ which is grammatically significant. Transitive verbs with medial /e/ take singular objects, whereas they take plural objects when this medial vowel lengthens to /e:/ - eg. [bén ábáŋ] means 'carry a pot'; [bé:n ábáŋ] means 'carry some pots'. In some expressions, the lengthening, which occurs in open syllables, is accompanied by a change of pitch, as in [bèé] (= pass v), [fèé] (= fly v).

/æ/

For this sound the mouth is slightly more open than for /e/; the front of the tongue is raised just below the mid-high position, with the side rims making a very slight contact with the back upper molars. The lips are neutrally open. There is considerable constriction in the pharynx, the tongue rather more tense than for /e/, thus producing a quality nearer to the third cardinal vowel /ɛ/ than to the fourth - /a/.

It is a phoneme, with slight variations in length according to position in the syllable.

/æ/ occurs syllable - initially and medially (but not finally), as in /ækt, æntl/ (act, ant); and in /bæk, bæg/ (back, bag). In each pair, the first [æ] is shorter than the second, the former followed by a fortis, the latter by a lenis consonant.

The closest Efik-Ibibio vowel to the English /æ/ is /a/. For the production of /a/, the front of the tongue assumes its lowest position in the mouth, with the tension for /æ/ relaxed. The constriction in the pharynx is also removed, so

there is a fully wide and open quality, just like the fourth cardinal vowel /a/. There are two versions : /ɑ:, ɑ /, which have been shown to represent two different phonemes. /ɑ/ occurs syllable - medially and finally as in [nám] (do) and [dá] (stand (v)). It also occurs word-initially as in [ājà](aya = sleeping mat). /ɑ: / occurs medially with both semantic and syntactic significance. For example, [bàk] means butcher (v), whereas [bà:k] means fear (v); [tát úsúŋ] means 'open the door', and [tá:t úsúŋ] means 'open the doors'. There is also a change of pitch which accompanies the long variant in final positions as in [kàá](= go) and [nàá] (= lie down).

The Efik - Ibibio speaker is likely to substitute /a/ for /æ/, especially in initial positions, as has been borne out by the speech tests whose results have been analysed in the previous chapter. For example, even very highly educated subjects said [aktʃ] and [antʃ] for act and ant respectively. The sound in medial positions is not likely to

prove any easier either. /ɑ:/ 89

This normally long vowel is articulated with a considerable seperation of the jaws and the lips neutrally open. A part of the tongue between the centre and the back is in the fully low position, no contact being made between the rims of the tongue and the upper molars. The quality is somewhat nearer to the cardinal /ɑ:/ than to /a/ . The shortening effect of closing fortis consonants is less marked in /ɑ:/ than in other vowels.

It is a phoneme distinct from /æ/ , for example, as in

[pʰæt] vs [pʰɑ:t]

(pat (part) and

[hæd] vs [hɑ:d]

(had) (hard).

/ɑ:/ occupies all three positions in the syllable, e.g. /ɑ:k, mɑ:k, tɑ:/ (ark, mark, tar).

This sound is also absent in Efik-Ibibio, and the tendency is to substitute for it the nearest vowel in the NL, which is

also /a/, as was actually done during the speech tests, in which hard and had were both pronounced /hadd/.

/ɔ:/

A relatively long vowel, /ɔ:/ is articulated with medium lip-rounding and some degree of tenseness. The back of the tongue is raised between the mid-high and mid-low positions, no contact being felt between the tongue and the upper molars. Its quality therefore lies between cardinals /ɔ/ and /o/.

It is a phoneme distinct from /ɔ/, for example. In English it contrasts with /ɔ/ as in port and pot. In Efik-Ibibio the contrast is both semantic and syntactic, so that we have [jɔ́k] (yɔk) which means swell, usually with reference to a particular spot; whereas [jɔ:k] (yɔk) means two things: (a) swell, in more than one place; (b) 'cut into tiny pieces'.

In English /ɔ:/ occurs in all syllable positions as in [ɔ:l] (all); [pɔ:t, pɔ:l] (port, Paul); [dɔ:] (door) - with the usual slight shortening before fortis consonants.

In English /ɔ:/ is not followed by /ŋ/ as it is in Efik-Ibibio - [bɔ̀:ŋ] (bɔŋ = shout (v)).

In Efik - Ibibio the most usual position for /ɔ:/ is in closed syllables. The final position seems to be restricted to situations in which the speaker is sarcastically telling the other person to carry out what the latter has perversely decided to do.

[dɔ̂:] means 'marry!' (as you have so decided);

[tɔ̂:] means 'plant!' (as you have so decided). In both cases the tone carries a note of warning to the listener regarding possible unpleasant consequences.

/ɔ/

This usually short vowel is articulated with wide open jaws and slight, open lip-rounding without tenseness. The back of the tongue is in the fully low (open) position, no contact made between the tongue and the upper molars. Its quality is that of the cardinal /ɔ/.

It is a phoneme distinct from /ɔ:/, for example, in both English and Efik - Ibibio.

In English it occurs syllable - initially and medially - e.g. [ɔn, kɔt] (on, cot); but not finally. In Efik - Ibibio it occurs syllable - medially and finally, and word-initially as in [ɔ́kpɔ́, bɔ́p, bɔ̀] meaning bone, tie (v), and receive respectively. The Ibibio dialect has a still shorter variant [ˀ] in some closed syllables like [àkˀk] (okuk = money) and this [ˀ] lies midway between [t] and [ʊ].

/ʊ:/

This usually long sound is a back high vowel, but the tongue raising is relaxed from the highest position and is somewhat advanced from the true back. Its relationship with /ʊ/ (see later) is similar to that between /i:/ and /i/, the articulation of /u:/ being more tense than that of /ʊ/ though no firm contact is felt between the tongue and the upper molars. The lips are closely rounded.

It is a phoneme distinct from /u/ as can be seen in /pu:l/ and /pul/ (Pool and pull). Writers on the phonology

of Efik - Ibibio regard [u:] as an allophone of /u/, the other allophones being [u, ʊ] . But it has a grammatical significance in the sense that [nu:k] means push, with a plural object, whereas /nuk/ takes a singular object.

In English /u:/ occupies all syllable positions as in / u:z, , pu:l, zu: / (ooze, pool, zoo). In Efik-Ibibio it occurs only word-medially as in [sú:k] (Suk = cut into smaller pieces than before).

/ ʉ /

This is a usually short vowel pronounced with a part of the tongue nearer to centre than to back raised just above the mid-high position. It has therefore, a symetrical back relationship with the front vowel /i/. The tongue is lax compared with the tense position for /u: / , and there is no firm contact between the tongue and the upper molars. The lips are closely but loosely rounded.

It has the status of a phoneme in English, and in Efik-Ibibio there are two variants : [u, ʊ]

In English /u/ occurs medially and finally in the syllable, but neither initially nor before /ŋ/. The shortening effect of fortis consonants following vowels is particularly felt here; so we have [pʰut, pʰuːl] for put and pull, the former shorter than the latter.

In Efik - Ibibio it occurs word-initially, in closed syllables and syllable - finally, as in [útín, búndù] for sun, put (with plural objects as well as [búːn]) and live (v) respectively. The still shortened variant [ʊ] is most frequently heard medially and occasionally finally as in [bʊ̀k] (buk = burry) [ìfʊ̀] (ifu = laziness).

/ə/

This is a central vowel with neutral lip-position, having in non-final positions a tongue raising between mid-low and mid-high, as in [ə'lɑun, fə'tig] (alone, fatigue). In the

vicinity of the velar consonants /k, g, ŋ/, the tongue may be slightly more raised and retracted - e.g. [lɔŋ əgɔu] (long ago). In final positions - ['mʌ̀ə, 'ma:stə, dɔktə] (mother, master, docter) - the vowel is articulated either in the mid-low central position or in the lowest region of the central area.

This vowel is a phoneme distinct from /e, ɔ, ʌ/ for example, a distinction which most speakers of Efik-Ibibio cannot appreciate either in their receptive or in their productive use of English.

In English /ə/ occurs inall three positions in the syllable, as in /ən, əv/ (an, of); /mən'tein, 'maun tən/ (maintain, mountain); and /'ma:stə/ (master).

In Efik-Ibibio, especially in the Ibibio dialect, the schwa tends to replace most vowels word-initially, the only position in which it was recorded - e.g. [ə́nə́m̀] (enem = a kind of yam); [ə̀kà úkè] (aka uke? = where are you going?).

It was careful listening that led to the discovery of this sound in the Ibibio dialect, even if its use was more restricted than that of the other vowels. As was reported in the previous chapter, subjects were made to say [ə'neim] in imitation of [á némì], the only difference lying in the tones and in the vowels of the second syllables of the two expressions. It can be said that the apparent absence of this sound from the NL has led to the age - long problem with the Schwa, leading to awkward substitutions in an attempt to use the sound. For example, maintain is pronounced [menten]; teacher is pronounced [titʃa]; and condition becomes [kondiʃion]. The sound substituted for /ə/ will depend on the environment.

/ə:/

Like /ə/, this sound is articulated with the centre of the tongue raised between mid-high and mid-low, no firm contact being made between the tongue and the upper molars; the lips

are neutrally spread. The quality is removed from all peripheral cardinal vowel values. It has the same quality as /ə/, except that even in its reduced form it is still longer than /ə/, so that the second vowel in ['fɔ:wə:d] (foreword) is longer than the corresponding second vowel in ['fɔ:wəd] (forward). It can be reduced to /ə/ where it is not associated with any stress accent, e.g. in <u>were</u> we can have /wə:/ accented, and /wə/ unaccented.

/ə:/ occurs in all three syllable positions in English, as in [ə:θ, θə:d, trænsfə:] for <u>earth</u>, <u>third</u>, <u>transfer</u> (v) respectively. It does not occur before /ŋ/.

This sound is completely absent from the Efik-Ibibio vowel system, and Efik - Ibibio speakers tend to substitute for it the vowels /e, a, ɔ:/, so that <u>third</u>, and <u>earth</u> will be pronounced [θed] and [e θ], <u>transfer</u> and <u>further</u> will be pronounced as [transfa] and [fɔ:ðə] respectively. Reference is made here to the bank episode reported in the previous chapter, an awkward drama that resulted from faulty

perception with regard to /ɔ:/ and /e i/.

/ ʌ /

This sound is articulated with the jaws apart; lips neutrally open; centre of the tongue raised just above the lowest position; no contact made between the tongue and the upper molars. Its acoustic quality is that of a centralized and slightly raised cardinal /a/.

It has the status of a phoneme distinct from /ɔ/, for example.

It occurs syllable-initially and medially, as in [ʌp, kʌp] (up, cup); but not finally.

This is another vowel that is absent from the Efik-Ibibio system. The nearest sound that will likely take its place is /ɔ/, as Efik-Ibibio speakers tend to say [ɔp, kɔp] for up and cup. There is in most cases confusion between the words hot and hut; cot and cut; dog and dug - to mention a few examples. The pronunciation has been observed as follows:

[hɔt, kɔt, dɔg]- one rendering for the corresponding pair of items.

The diagram at the beginning of this chapter (Fig. 4.1) has been drawn to bring together the monopthongal vowels in the NL and TL systems in terms of articulation. The following chart (Table 10) is meant to summarize those sounds in terms of privilege of occurence in the syllable or word.

Table 10 Positional Occurence of Vowel Sounds

Vowel	EFIK - IBIBIO			ENGLISH		
	Initial	Medial	Final	Initial	Medial	Final
i:	i; ñ (yes)	nsi:p (pith)		i:t (eat)	si:t (seat)	si: sea, sea)
i	ima (Love v)		di (come)	it (it)	sit (sit)	mi (me)
ɨ		stn (put)				
e	ebé (husband)	mèn (swallow) v	sé (look) v	eg (egg)	set (set)	

Table 10 contd.

Vowel	EFIK - IBIBIO			ENGLISH		
	Initial	Medial	Final	Initial	Medial	Final
e:		bé : n (carry + pl. object)	b è é (pass) v			
æ				ænt (ant)	kæt (cat)	
a	aja (aya = mat)	nam (do)	da (stand) v			
a:		bà: k (fear v)	kàá (go)			
ɑ:				a:t (art)	ma:k (mark)	ta: (tar)
ɔ:		dɔ́:k (climb)	dɔ̂: (marry!)	ɔ:l (all)	pɔ:t (port)	dɔ: (door)
ɔ	àkɔ́ (fence)	bɔ́p (tie v)	bɔ̀ (receive)	ɔn (on)	kɔt cot	

Table 10 contd.

VOWEL	EFIK - IBIBIO			ENGLISH		
	Initial	Medial	Final	Initial	Medial	Final
o	Òkón (Okon)	Sóp (disappear)	dó (there)			
œ	ítœ̀ǹ (refuse) (dump)	ńtœ́ pit-latrine				
U:		Sú : k cut Smaller		u:z (Ooze)	pu:l (Pool)	zu: (Zoo)
U	Útín (Sun)	bún (put + (Pl. Ob.)	dù (live) (v)		Pul (pull)	du (do)
ʊ		bʊ̀k (bury)	ə̀bʊ̃ (Cray-fish)			
ə	ənémǹ (kind of yam)			ən (an(d))	mən't-ein (maint-ain)	ma:stə (master
ə:				ə: θ (earth)	θə:d (third)	trɛ̃n-s'fə (transfer) v
ʌ				ʌp (up)	kʌp cup	

As could be seen from the Venn diagram for monophthongs, the area of intersection represented the majority of elements - 66.7% English, 53.3% Efik - Ibibio - from the two systems. But the diphthongs show a greater diversity : 50% of English diphthongs and 30.8% of Efik - Ibibio diphthongs found in the overlapping zone. For the construction of the Venn diagramms, the radii for the two circles are calculated as follows:-

Efik - Ibibio :

No. of Elements = 13

Required Area = 13 cm^2

$r_1 = \sqrt{\frac{13}{\pi}} \approx$ 2 cm.

English:

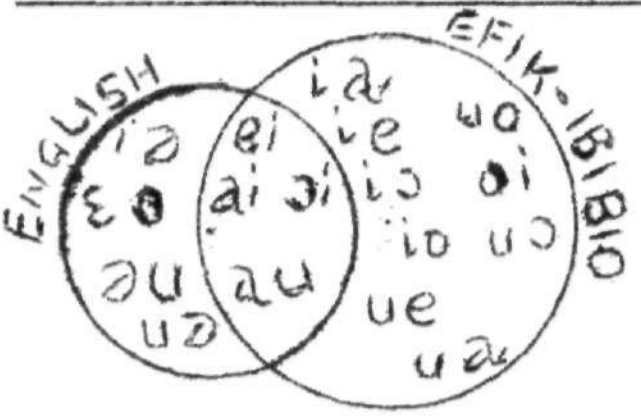
No. of Elements = 8

Required Area = 8 cm^2

$r_2 = \sqrt{\frac{8}{\pi}} \approx$ 1.8 cm.

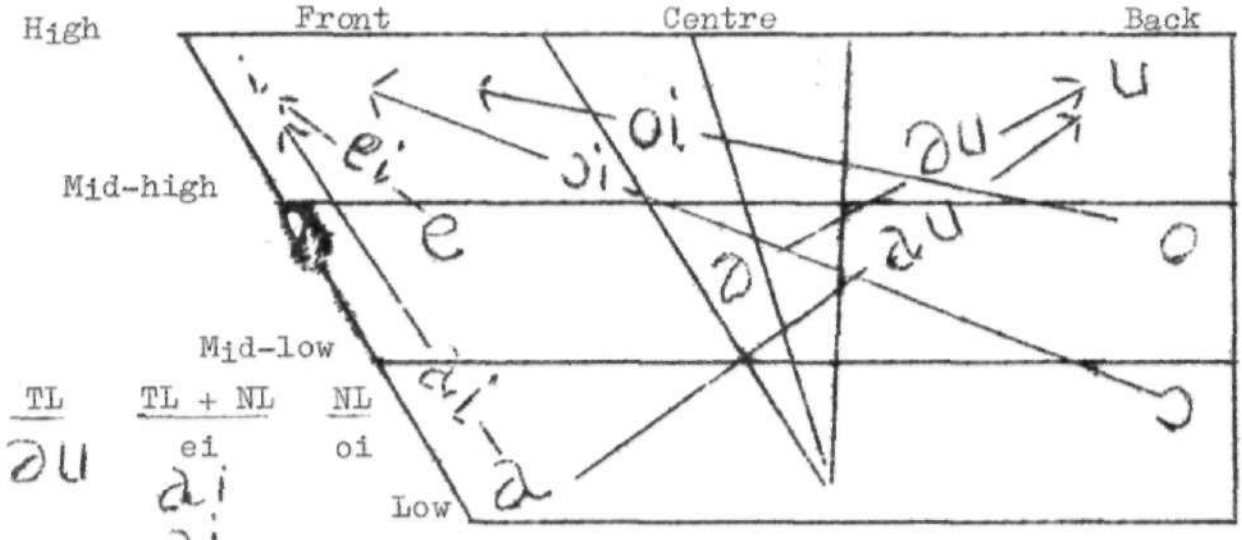
$|r_1 \ r_2|$ = 1.8 cm also.

Fig. 4.3 NL & TL DIPHTHONGS IN VENN DIAGRAMS



For the most part, the two systems have two different dichotomic patterns: the TL system divides into closing and centring types; whereas the NL system ~~dividesintoclosing~~ divides into closing and opening types. A single chart, as was used for the monophthongs, will be too crowded to depict the two systems; so a chart will be drawn to represent each of the closing, centring and opening types.

Fig 4.4 CLOSING DIPHTHONGS (ENGLISH & EFIK - IBIBIO)



TL	TL + NL	NL
əu	ei	oi
	ai	
	ɔi	
	əu	

The description of each diphthong will take account of the starting point and the end of the glide. The points themselves will not be described at length, since most of them have already been described as monophthongs. Each diphthong will be given the status of a phoneme, and variants indicated where applicable. Then their positions in the syllable or word will be given.

/ e i /

This is a glide from /e/ to /ɪ/. It has reduced variants in syllables closed by fortis consonants. So we have the following distributional features and variants in English:

[eit, eid; beit, beid; dei] for (eight, aid; bait, bade; day). The variants in [eit, beit] are shorter than those in [eid, beid].

In Efik - Ibibio it occurs only syllable - finally as in [déi, ńséì] for dei (= lick) and nsei (= a yellowish substance for sacrifice.) Efik - Ibibio speakers do not seem to be aware of the similarity between their word dei for lick and the English word day. This lack of awareness makes most of them substitute for the /ei/ sound the monophthong /ɛe:/ pronouncing day as [dê:] instead of [dei] .

/ai/

For this diphthong the glide is from the /a/ position closing towards /i/. It also receives the shortening effect of closing voiceless consonants.

It occupies all three positions in English - [ais, aiz; bait, baid; skai] for ice and eyes; bite and bide; and sky respectively.

In Efik-Ibibio the diphthong occurs only syllable finally also, as in [ùjàì] for uyai which means beauty.

Efik - Ibibio speakers are not likely to encounter much difficulty with this diphthong, except, perhaps, in its initial and medial positions. A few isolated cases were recorded of confusion between /ai/ and /æ/. For example, a child in Primary Five failed to distinguish between ice and ass [ais, æs], possibly because the words represented concepts he had never perceived in his life.

/ɔi/

For this diphthong the tongue glide begins at a point between back mid-low and low positions and moves in the direction of front high /i/. The variants are the short and long forms

as dictated by position in the syllable: whether open or closed; if closed, whether by a fortis or by a **lenis** consonant.

In English it occurs syllable - initially, medially and finally, as in [ɔil, sɔil, bɔi] for oil, soil and boy . The [ɔi] in [tʃɔis] (choice) is slightly shorter than those in [ɔil] and [sɔil].

In Efik - Ibibio / ɔi / occurs only syllable - finally as in [tɔ́i] (tɔi = drop (v)); [ńtɔ́i] (ntɔi = drop (n)); [ńsɔ́i] (nsɔi = carved or sharpened object).

Efik - Ibibio speakers are likely to have problems with English / ɔi/ in initial and medial positions.

/au/

This is another diphthong that involves crossing the centre. The tongue glide begins in the front low position for / a / and moves in the direction of the back high for /u/.

It occupies all three positions in English : [aut, aul; haus, hauz; hau] for out and owl, house (n) and house (v), and how , the first member of each pair being shorter

than the second due to the contrast between the voiceless and the voiced consonants that close the syllables.

This diphthong has a very restricted use in Efik-Ibibio, occurring only in exclamations like [háù], showing questioning and surprise; [ńsáù], showing speaker's disgust at the other person's perversity. It also occurs as a liaison between two words as in [àkàúkɛ́] (where are you going?)

This sound is also likely to present difficulties in its initial and medial positions in English.

/əu/

The glide for this diphthong begins at a central position, between mid-high and mid-low, and moves in the direction of / u /, with a slight closing movement of the lower jaw.

Two variants are still operating: /əu/ and /ou/, though the latter seems to be phasing out. Length is also affected by environment, like other diphthongs.

In English the diphthong occurs initially, medially and finally - e.g. [əut, əuld; gəut, gəuld; gəu] for (oat, old; goat, gold; go). This diphthong is completely absent from Efik-Ibibio. It is therefore likely to cause Efik-Ibibio speakers a lot of problem, and the tendency will be for those speakers to substitute for /əʊ/ the monophthong /o/. Most subjects who took part in the speech tests performed poorly with regard to this diphthong (see Table 8). Over 80% of the subjects pronounced <u>oat</u>, <u>goat</u> and <u>go</u> as [ot, got, go].

The length and stress of closing diphthongs tend to fall on the first elements, giving the diphthongs a falling quality (Abercrombie, 1964).

Fig 4.5 CENTRING DIPHTHONGS (ENGLISH)

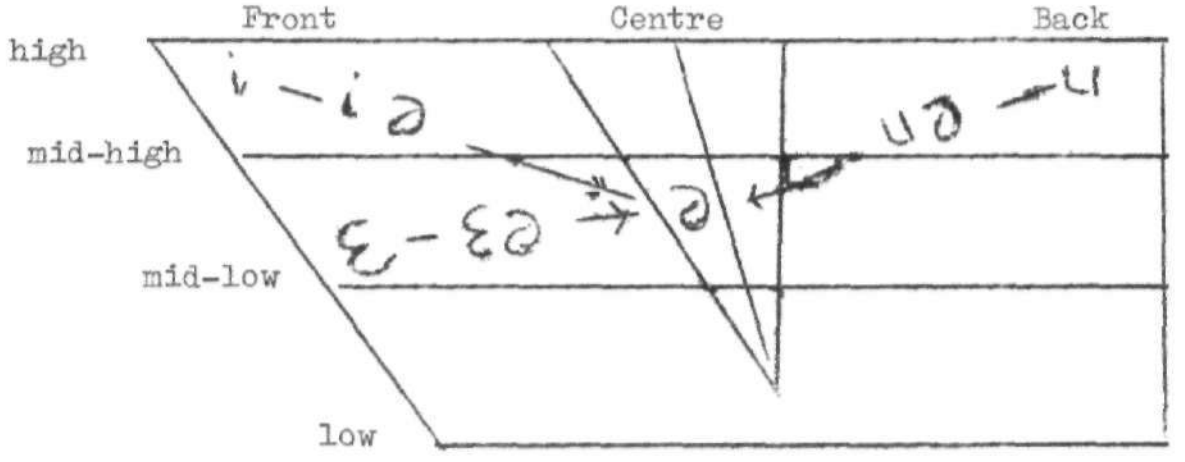
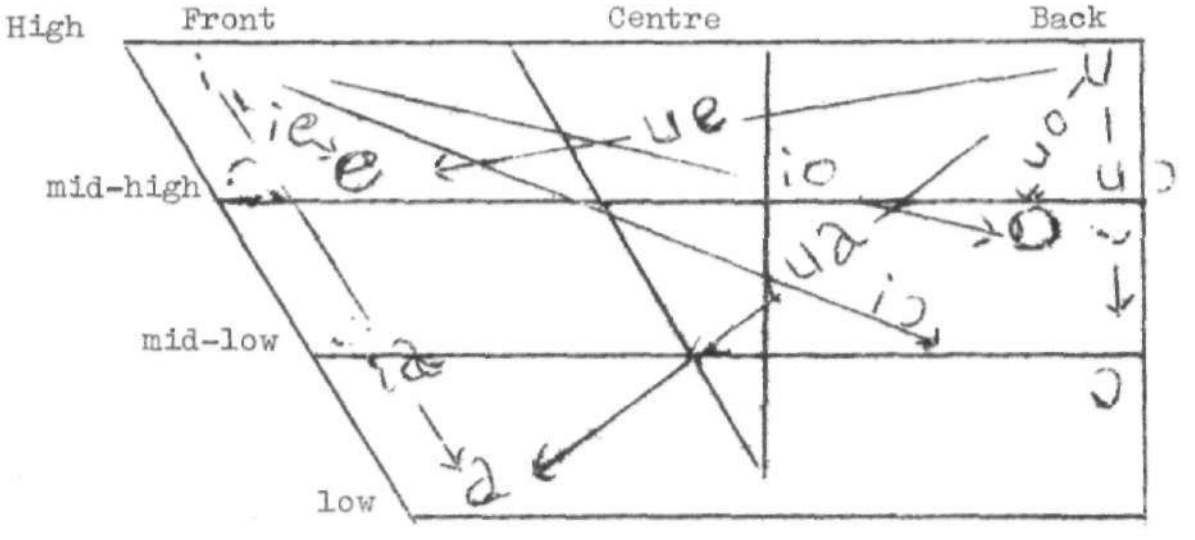


Fig. 4.6 OPENING DIPHTHONGS (EFIK-IBIBIO)



/iə/

The glide here is from the front high position for /i/ towards the more open variety of /ə/ when /iə/ is word-final; in non-final positions the glide may not be so extensive, the quality of the [ə] element being of a mid-type. Daniel Jones (1954) has pointed out the 'rising' quality of the sequence [i] + [ə] (as well as the 'falling' quality) as in [pʰiərjəd] (period) and [siərjəs] (serious).

[iə] appears in all syllable positions, as in [iəz, biəd, biə] for ears, beard and beer.

Since it is absent from Efik-Ibibio, the speakers are likely to substitute for it the glide from /i/ to /e/ i.e. /ie/ - (see chapter 3, page 73), where ears, hears and beer are reported to have been pronounced [ies, hies, bie] respectively.

/ɛə/

The glide begins in the front mid-low position and in the direction of the more open variety of /ə/, especially where this diphthong is final; but where it occurs in a closed syllable,

the second element tends to be a mid /ə/ type.

In English /ɛə/ occupies all three positions in the syllable: as in [ɛəs, skɛəs, hɛə, for heirs, scares and hare.

The tendency for the Efik - Ibibio speaker, whose NL does not have this diphthong, is to substitute for it the lengthened /e:/, and to say [e : s, ske:s, he:] for the words given above. Sometimes /a:] is used as when their is pronounced [ðɑ:] instead of [ðɛə]. But when it comes to there, Efik-Ibibio speakers go back to /e:/ and say [ðe:].

/ʊə/

The glide for /ʊə/ begins from the back high /u/ position and moves towards the central mid-low position for /ə/.

In English it occurs medially as in [gʊəd] gourd, and finally as in [pʊə, pjʊə, dʊə] for poor, pure and dour. It also occurs word-medially as in ['kjʊərɪəs, 'spjʊərɪəs] for curious and spurious respectively.

This is another diphthong that is lacking in Efik - Ibibio. There is likely to be an interference problem for the Efik-Ibibio speaker, who will tend to substitute for /uɔ/ either /uɔ/ or /iɔ/ from his NL system. There are no centring diphthongs, rather there are opening ones. So instead of [puɔ], the Efik - Ibibio speaker is likely to say [puɔ]. For [pjuɔ] he is likely to say [piɔ].

He would be hard put to it to pronounce spurious and curious with phonetic accuracy. Even the researcher often requires some degree of conscious effort to get those and similarly difficult words right.

The Typological Phase

The aim of this part of the CA is to bring together the results from the taxonomic exercise and group them into types or categories. Briere (1969) identifies six groups, while Stockwell and Bowen (1965) have as many as eight types. Stockwell and Bowen's basis - choice of elements in the two systems in

contrast - is more applicable to grammar than to phonology, so that basis shall not be used here. In Briere's analysis, all the elements have been brought together and the contrast incorporates both typology and hierarchy at one stroke.

The present study rather chooses a simpler typological pattern, recognizes three broad types based on articulatory features, distributional features, and features associated with the question of phonemic versus phonetic status of elements. A model that uses these three criteria for typology is very similar to one that incorporates Eckman's (1977) notion of markedness, a notion that will be found very useful when it comes to determining the hierarchy of difficulties.

1. Articulatory Problems:

Efik-Ibibio speakers are likely to have problems with those English vowels - monophthongs and diphthongs - which are not found in the NL, but which are somehow similar to some sou

in the NL. This is where the notion of negative transfer (Carroll, 1968) or interference (Lado, 1957); Wagner and Nichel, 1963) comes in. This problem can be manifested both at the receptive and at the productive levels of communication. The story has already been told of the Cashier who 'heard' [teti] instead of [eiti].

The articulatory features of each sound have been given in the taxonomic phase of this CA, so there is no need for repeating them here. What is essential here is to group those English vowels that are likely to cause trouble, and the nearest sounds in the NL that are likely to be substituted for them.

The following monophthongal vowels in the NL and TL systems are paired for these substitution predictions : /a : æ /; /a : ɑ:/; /ɜ: ʌ /; and /e : ɔ :/. It has been shown that /æ , ɔ:, ʌ, ɜ :/ are completely absent from Efik - Ibibio. Some sounds, which used to be thought of as strange to Efik - Ibibio, have been

discovered, especially in the Ibibio dialect : /i:, ə , ɔ :, u:/. The problem here is that the learner is not aware that these sounds do exist in his NL; all he knows are /a, e, i, o, ɔ , u/ from which he makes his selection when he learns to use English vowels.

Another type of articulatory problem is that of substituting the very short variant [ɨ] of /i/ for [i] in medial positions, especially where the syllable is closed by a nasal consonant so one hears [stn] for [sin]; [stŋ] for [siŋ]. There is also the problem of confusing /ɔ: / with / ɔ/ and /u:/ with /u/.

The NL and TL diphthongal systems have been shown to possess two different dichotomic patterns : Efik - Ibibio has closing and opening diphthongs, whereas English has closing and centring diphthongs. So the learner is likely to 'hear' and 'produce' utterances in which opening diphthongs are substituted for English centring ones; and as has been illustrated, the following

substitution pairings can be predicted: /ie/ for /i ə/; /u ɔ / for /u ə/. Since neither the starting nor the gliding direction for / ɛ ə / is available in the NL system (except for the isolated case of [ɛ] as a variant of /e/ mentioned by Welmers, 1973), the learner is likely to perceive and produce for this / ɛ ə/ monophthongs or diphthongs that will vary according to environment. Air is likely to be pronounced e: ; tear (n) and tear (v) have been most frequently heard as (tie); hair, hare, heir /hɛə, ɛə/ are all heard and produced as /he:/.

2. Distributional Problems

Some sounds are common to both the NL and the TL systems, but the problem that is likely to confront the learner is one connected with the privilege of occurrence of those sounds in the syllable or word. It is well to map out the TL sounds found in the NL system and show how they are used in the syllable or word within the two systems.

Table 11 : Distribution of Monophthongs

Sound		In.	M.	F.
/i:/	TL	✓	✓	✓
	NL	✓	✓	ø
/i/	TL	✓	✓	✓
	NL	✓	ø	✓
/e/	TL	✓	✓	ø
	NL	✓	✓	✓
/ɔ:/	TL	✓	✓	✓
	NL	ø	✓	✓
/ɔ/	TL	✓	✓	ø
	NL	✓	✓	✓
/u:/	TL	✓	✓	✓
	NL	ø	✓	ø
/u/	TL	ø	✓	✓
	NL	✓	ø	✓
/ɒ/	TL	✓	✓	✓
	NL	✓	ø	ø

From this chart the following predictions can be made: the learner is likely to have problems with English words in which /i/ occurs finally. The medial position has just been discovered, and experience has shown that Efik - Ibibio speakers do not differentiate between the /i:/ and /i/ in heat and hit; beat and bit; seat and sit; where the sounds appear medially in English syllables.

Another problem will be with /i/ in its medial position in English, for which the learner is likely to substitute [ɛ].

/U:/ occurs neither initially nor finally in the NL. The learner is likely to have problems with such expressions as ooze, zoo, true, for example, in which /u:/ occurs marginally in the syllable. Even where /u:/ occurs medially, the learner has been known to find it difficult to differentiate between /u:/ and /u/ in pool and pull; fool and full, for example.

The same shortening found for /i/ is likely to apply to /u/ in closed syllables. The learner is likely to substitute for /u/ the still shorter form [ʊ], as some have been heard

saying [k ʊ k] for <u>cook</u> and [b ʊ k] for <u>book</u>.

Finally, /ɔ/ will be difficult to perceive and to produce medially and finally by Efik-Ibibio speakers who learn to say <u>maintain</u>, <u>teacher</u>, <u>succeed</u>, <u>doctor</u>, for example. They are likely to hear and repeat (mente:n), ('titʃə), (sɔk'si:d) and ('dɔktə) respectively. Even where /ɔ/ occurs initially in the TL, as in <u>around</u>, <u>obtain</u>, <u>admit</u>, for example, the learner is likely to hear and say (a'raund), (ɔbte:n), (ad'mit), respectively.

The distribution of diphthongs common to both the TL and the NL systems is shown in the next chart.

Table 12: Distribution of Diphthongs

Sound	(Diphthong)	In.	M	F
/ei/	TL	✓	✓	✓
	NL	ø	ø	✓
/ai/	TL	✓	✓	✓
	NL	ø	ø	✓
/ɔi/	TL	✓	✓	✓
	NL	ø	ø	✓
/au/	TL	✓	✓	✓
	NL	ø	ø	✓

From this chart it can be seen that all those sounds common to both TL and NL systems occur in all three syllable positions in the TL, but only finally in the NL system. It would therefore appear that the learner was going to find it difficult to perceive and repeat words or syllables containing those sounds initially or medially. But this is not exactly

the case. It has been shown from the speech test results that those four diphthongs had generally high scores among the various levels of participating subjects. The only diphthong that gave considerable trouble, even in final positions, was /ei/, for which most subjects substituted /ɛ:/ marginally and medially. So they would say [e:t] for eight; [de:t] for date and [de:] for day. The error with day is due to the fact that the learners are not aware of their use of /ei/ in dei, nsei and eyei (meaning lick; yellow substance for sacrifice; unfolded palm frond, respectively. /ai, ɔi, au/ were produced correctly by most subjects in all syllable positions during the speech test.

The last type of problem has to do with the question of the phonemic or phonetic status of elements in the NL and TL systems. In English /i:/ and /i/ are different phonemes, with slight variations in the length of each according to its position in the syllable or the type of consonant that follows if it occurs initially or medially. In Efik - Ibibio, before the

discovery in this study of the semantic and grammatical significance of differences in vowel length, previous writers recognized /i/ as the phoneme, with [i:] and [i] as allophones, This is why to the learner there is no distinction between /i:/ and /i/ in beat and bit. In the NL, [s ɔ:k] and [s ɔk] are used by some speech communities to mean rub, with both singular and plural objects. No doubt they fail to discriminate between port and pot, between caught and cot, for example. Also in English /e/ and /ei/ are two significant vowels, but Efik-Ibibio speakers fail to appreciate this significance, though in their NL, /de / means a different thing from /dei/. It should be noted that the tones of both expressions are identically high. but the difference lies in the use of a monophthong in de (= sleep v), and a diphthong in dei (= lick).

The Hierarchical Phase

From the taxonomic and typological analysis carried out so far, and taking account of Eckman's (1977) Markedness Differential

Hypothesis (MDH), it is easy to work out a hierarchy of difficulties likely to be encountered by Efik-Ibibio speakers who learn to use English vowel sounds. In this regard, the lay-out of items will show the most difficult elements at the top, the others following in a descending order down to the least difficult. There will be four points along the markedness-and-difficulty continuum: most marked and most difficult; moderately marked and moderately difficult; and not marked and not difficult. Banathy (1969) has illustrated that the same-similar-different continuum is not necessarily parallel to the no problem-easy-difficult continuum. The error made by those who regard the two continuums as parallel can be related to the error of contrasting the NL with the TL systems in terms of only one of articulatory features, phonemic or phonetic status of elements, distributional features of those elements in the syllable or word.

Table 13 : Markedness & Hierarchy of Difficulty (Monophthongs)

Markedness Difficulty	Sound	TL			NL		
		In	M	F	In	M	F
(1)	ɔ:	✓	✓	✓	ø	ø	ø
MOST	ɑ:	✓	✓	✓	ø	ø	ø
	ɜ:	✓	✓	ø	ø	ø	ø
	ʌ	✓	✓	ø	ø	ø	ø
(2)	ɒ	✓	✓	✓	✓	ø	ø
Moderate	u:	✓	✓	✓	ø	✓	ø
(3)	i:	✓	✓	✓	✓	✓	ø
Least	i	✓	✓	✓	✓	ø	✓
	ɔ:	✓	✓	✓	ø	✓	✓
	u	ø	✓	✓	✓	ø	✓
(4)							
Not Marked:	ɔ	✓	✓	ø	✓	✓	✓
Not difficult	e	✓	✓	ø	✓	✓	✓

With regard to pure vowels (monophthongs), this lay-out has shown that /ɔ:, ɑ:, ɒ, ʌ/ are most marked in the learners' NL and therefore most difficult. They are completely absent from the NL system and are likely to lead to errors of confusion and substitution on the learners' part.

/ə, u:/ are moderately marked as they are present in the NL system with virtually the same articulatory features. But /ə/ occurs only initially and /u:/ occurs only medially in the NL system, whereas they occur in all positions in the TL. There are likely to be difficulties when the learner comes to listen to or pronounce words in which /ə/ occures medially or finally or in which /u:/ occurs initially or finally.

The least marked and therefore least difficult are /i:, i, ɔ:, u/, the first three of which occur in all positions, while /u/ occures medially and finally in the TL system. In the NL system each phoneme occurs in at least two syllable - positions:

/i:/ initially and medially; /i/ word-initially and syllable - finally; /ɔ:/ syllable-medially and finally; and /u/ word initially and syllable finally.

It has been mentioned that the learners are not yet aware of /i:, i/; /u:, u/; and /ɔ:, ɔ/ as distinct phonemes even in their own NL. This lack of awareness makes them treat the sounds in each pair as allophones of a phoneme, and so feel that they can replace each element by the other without affecting meaning.

The unmarked (and not difficult) sounds are /ɔ, e/, which occur in all positions in the NL system. In terms of distributional features, /e/ can be seen as more marked in the TL than in the NL, because it does not occur syllable-or word - finally in English. This shows the directionality of difficulty: that the English speaker who learns to speak Efik-Ibibio will have difficulty with words like ete (= father, Sir, and Ukpe (= deep pit), for example, in which /e/ occurs finally.

However, as was mentioned at the beginning of this study, this CA has in mind not the English speaker who wants to learn Efik-Ibibio, but the Efik-Ibibio speaker who wants to learn English. That is why those sounds in Efik-Ibibio discovered in the course of investigation have not been brought in during the Constrastive Analysis, except those ones which are likely to be substituded for those English sounds which are absent from the NL system.

Table 14 : MARKEDNESS & HIERARCHY OF DIFFICULTIES (DIPHTHONGS)

MARKEDNESS & DIFFICULTY	SOUND	TL			NL		
		In.	M.	F.	In.	M.	F.
1. MOST	ɔ u	✓	✓	✓	ø	ø	ø
	ɛɔ	✓	✓	✓	ø	ø	ø
2. Moderate	uɔ	ø	✓	✓	ø	ø	ø
	iɔ	✓	✓	✓	ø	ø	ø
3a	ei	✓	✓	✓	ø	ø	✓
3. Least							
3b	ai	✓	✓	✓	ø	ø	✓
	ɔi	✓	✓	✓	ø	ø	✓
	au	✓	✓	✓	ø	ø	✓

/əu/ and /ɛə/ are most marked because they are not only absent from the NL system but also likely to lead the learners to perceive and produce sounds that are far from the ones given. Observation has shown that /əu/ is replaced by /o/ as in [go] instead of [gəu]; and /e:/ is substituded for /ɛə/ as in [he:] for [hɛə]. The production of [go] for [gəu] is not necessarily related to spelling, because boat, goat and those are pronounced [bot], [got] and [ðoz] respectively. As the diphthongs are completely absent from the NL system, there are bound to be distortions whether the sounds in question occur in closed or in open syllables.

/uə, iə/ are said to be moderately marked in the sense that the learner has some sounds in his NL that are slightly near those TL ones. For example, he has /uɔ/ and can say [puɔ] for poor; he has /ue/ and can say [kruel] for cruel. For hear and beer he is likely to say [hie] and [bie]. The argument here is that the learner has got starting points

identical with those for the TL diphthongs, and getting him to glide towards the centre instead of in an opening direction will pose a problem not as great as that to be encountered where the starting points, and possibly the glide ends, in the TL system are quite strange to the learner's NL system.

The least marked items are further divided into two sub-categories : (a) and (b). The (a) portion has only one item /ei/, which is present in both the TL and the NL systems. But the difficulty lies in distribution. In the TL it occurs in all three syllable positions, but in the NL it occurs only syllable - finally. We have already seen the learners' problem with eight, bade and weight, in which for /ei/ they are likely to substitute a monophthong /e:/ and pronounce the words as [e:t, be:d, we:t]. Even in its final position in the TL, the sound has been known to constitute some set-backs to most learners, who pronounce day as [de:].

Under category (b) we have /ai/, ɔi, au/ which occur both marginally and medially in the TL system, but only finally in the NL system. These sounds are not likely to cause as much trouble as /ei/ does. In fact, as has already been mentioned, most subjects who participated in the speech tests got these sounds right in all their syllable positions.

One interesting point about these least marked sounds /ei, ai, ɔi, au/ is that they occur only syllable - finally in the NL system, just like /oi/ which belongs to this NL system only. A rule can be formulated to the effect that all closing diphthongs in Efik-Ibibio occur only syllable - finally in the language. Others, which glide from close to open positions, occur only syllable-medially and - finally, but not initially, as follows:

Table 16 : DISTRIBUTION OF NL OPENING DIPHTHONGS

Diph-thong	Medial	Final
ie	Siek (be tough)	tie (sit down)
ia	Siak (Split (v))	dia (eat)
i ɔ	idiɔk (bad ness)	ɔniɔ (yellow)
io	i tion (five)	sio (take away)
ue	duep (brush away)	due (offend)
ua	tuak (hit (v))	sua (hate)
u ɔ	duɔk (lose)	duɔ (fall (v)).
uo	duop (ten)	iduo (container).

The use of such data as these in helping the learner out of predicted problems will be discussed in the next chapter.

Chapter 5

SUMMARY, CONCLUSIONS, TEACHING IMPLICATIONS, SUGGESTIONS

5.1. SUMMARY

The study has involved a contrastive analysis of English vowels with those of a Nigerian language that has not yet received adequate treatment in the literature. The purpose has been to find out the nature, types and degree of difficulties likely to be encountered by Efik - Ibibio speakers who learn to speak English, particularly those who come to do this after they have learned to read and write their won vernacular; and then to suggest teaching strategies to help these learners out of their problems with English vowels. It is hoped that the learners this study has in mind will come to speak English with phonetic, not phonemic, competence (Rivers, 1975, 17). The study is essentially that of contrastive phonology, but the scope has been limited to a CA of only the vowel systems of the NL and the TL, leaving out such aspects as the consonantal system,

stress and rhythm and intonation. The TL has been the R.P. variant of the English language, while the NL has been Efik-Ibibio as currently spoken by natives of Ibiono South in the Ituh Local Government Area of Cross River State.

In the review of related literature attention has been focused on the descriptive model upon which is to be based the CA exercise; on the hypothetical framework within which the CA exercise is to be carried out; and on the contrastive model to be used in the CA exercise itself. This review has pointed out the inadequacies in the linguistic description of the NL in existing literature, and has suggested a more comprehensive study that will take account of all three major dialects – Ibibio, Anang and Efik – of the NL. Two major descriptive models have been identified : the 'scientific' model and the TG model. The TG model has been opted for on account of its built-in universal grammar which provides a compound basis for the description of both the NL and the TL, and which allows the learner to adjust

his NL rules and make them function at the TL level. The strong hypothesis and the weak hypothesis have been identified and examined at length; and this study has opted for the strong and predictive version, with modifications that incorporate some elements from the weak version so that discoveries made from Error Analysis can delimit and sharpen the focus of the CA. All variants of the autonomous and the generalized models have also been discussed, and for the present study an ecclectic model has been worked out, which makes use of insights from both taxonomic and operational approaches. The operational aspect of the model has been stressed, so that after the nature, types and hierarchy of difficulties have been identified, the learners' NL rules can be modified to operate within the TL system.

Both NL data and TL data for the CA have been obtained from primary and secondary sources, For the NL data selected speakers of the NL who were used as informants and from whom sounds of interest were elicited constituted the primary source. The following vowels were discovered : /i:, e:, ɑ:, ɔ:, ɔ, ə, æ, ei/, which had not been found in the literature

reviewed in the study, and some of which were also found to be common to both the NL and the TL systems. Secondary data were obtained from existing works by Westermann and Ward (1933); Ward (1933, 1934); Cook (1969); Welmers (1973) and others, who have done some work on the description of Efik - Ibibio, though with an emphasis on the Efik dialect, to the neglect of the other two. Works by Pike (1946, 1947), Jones (1956, 1967, Gimson (1962), Abercrombie (1976), and a host of others, were consulted, and these constituted the secondary source of TL data for the CA, particularly with regard to symbols used to represent vowel sounds. Speech tests were used to discover the learners' errors, which were then analysed to obtain data for the CA exercise. This was a deviation from Briere's recipe : that predictions from CA should be tested out with learners that the study had in mind, and performance data subjected to Error Analysis to strengthen the claims of CA (1968 : 39). However, the test was in keeping with the opinions of Corder (1967, 1973, 1975), Politzer (1974), and

Krzeszowski (1976) : that performance errors should constitute the data for CA. Tables were constructed to depict the percentage of subjects in different categories who got individual TL vowels right, and the percentage who got them wrong. The following vowels were found to be most difficult : /æ , ɑ: , ɔ: , ʌ , iə , eə , uə , əʊ/. It was also discovered that the vowels /i: , ɜ: , ə , ei/ appeared to be difficult because the subjects had not been aware of the existence of those vowels in their NL. All vowel sounds were tested in their initial, medial and final positions in the TL syllables, and it was discovered that a familiar sound could be difficult if it occurred in one position in the TL syllable, but was absent from that position in the NL.

The CA itself has been carried out in three phases : the taxonomic phase, the typological phase, and the hierarchical phase. In the taxonomic phase the TL vowels, both monophthongs and diphthongs, have been listed out and contrasted one by one with corresponding elements in the NL in terms of articulatory features

phonemic or phonetic status, and privilege of occurence in the syllable or word. Charts have been drawn that contain the TL and NL vowels, with Venn diagrams that represent areas of intersection between the TL and the NL systems. Some vowels in the TL system have been found to be more tense than similar NL elements, e.g. /ɑ: vs ɑ/. It has also been found that there are no centring diphthongs in the NL system; that instead of centring diphthongs, the system has opening diphthongs, most of which are likely to be substituted by learners for TL diphthongs both receptively and productively. Some elements common to the TL and the NL systems have been found to be more restricted in occurence in the NL than in the TL, e.g. /u:/, which occurs initially, medially and finally in the TL but only medially in the NL. It has therefore been predicted that learners will have problems with TL syllables which contain /u:/ initially or finally. However, this kind of prediction has been seen not to hold true for all vowels. Test results have shown that the sounds /ɑi, ɔi, ɑʊ/, though occurring in all three positions in the TL

system and only finally in the NL, pose very negligible problems to learners.

In the typological phase all the contrastive results listed in the preceding phase have been brought together and grouped into types or categories, using Briere's (1968) method but simplified. Three main types of problems have been identified : articulatory problems, especially those related to TL segments that are absent from the NL system; distributional problems; and problems related to situations in which a segment is a phoneme in the TL but an allophone in the NL, and vice versa.

Eckman's MDH has been found very useful for working out the hierarchy of difficulties likely to be encountered by learners. Markedness has been largely related to the privilege of occurrence of elements across the TL and NL systems. Four points have been identified on the 'markedness- and-difficulty' continuum: most marked, moderately marked, least marked, and not marked - which imply also most difficult, moderately difficult, least difficult

and not difficult,points. For the monophthongs the hierarchy has been arrived at as follows:

Most marked /ɑ:, ɒ, ɔ:, ʌ/; moderately marked /ɑ:, u:/; least marked /i:, ɪ, ɜ:, u/ and not marked /ɔ, e/. For diphthongs we have them in this order : /əʊ, eə/; /ʊə, iə/; / ei/; and /ai, ɔi, aʊ/. The last two sets of diphthongs have been grouped as least marked (a) and (b) respectively. No diphthong has been found to be not marked.

5.2 CONCLUSIONS

One type of difficulty predicted by this contrastive study is that related to articulation, especially the articulation of TL elements which are absent from the NL systen. It has been predicted (and this prediction has been supported by test results) that learners are likely to substitute for TL vowels absent from their NL system those NL vowels which they have been taught in the course of their learning to read and write their own vernacular. So /ɛ/ will be used in place of /æ, ɑ:/; /ɔ/ will be used for /ʌ/; and /e:/ will replace /ə:/. NL opening diphthongs will be substituded for TL centring diphthongs, e.g. /ie/ for /iə/; /uɔ/ for /uə/.

Another type of difficulty predicted is that of privilege of occurence of TL vowels. Some TL vowels, though identical with NL ones, will still present some difficulties because they are more restrictedly distributed in the NL than in the TL. For example, it has been shown that the learners will tend to substitute for TL /i, u/ in their medial positions the still shorter

variants /ɪ̈ , ʊ̈ /, which are found medially in the NL.

In most course books in Efik, like Akpa Edikot Owed, the vowels /ə, e, i, o, ɔ, u/ appear at the beginning of every lesson and learners have to memorise and chant them from time to time. It can be seen that sounds like /i:, ɔ:, u:, ə/ are missing from the list, so that learners are likely to confuse /i:/ with /i/, /ɔ:/ with /ɔ/, /u:/ with /u/; while /ə/ is likely to be replaced by /ə/, /ɔ/ or /e/. Even the diphthong /ei/ is likely to be replaced by /e/ or /e:/, not only in initial and medial positions which this sound occupies in the TL and not in the NL) but also finally (where the sound is found in both the TL and the NL systems).

All these observations lead to conclusions that can support the first hypothesis : that Efik - Ibibio speakers who learn to speak English tend to use their limited stock of vowel sounds when it comes to pronouncing English words that contain vowel sounds similar to the ones in their NL.

Efik - Ibibio sounds representing the three major dialects have been recorded and analysed. Sounds which were assigned the status of allophones and those that were not identified in the literature have been discovered; and it has been demonstrated that these sounds are phonemes as they have both semantic and grammatical significance when they contrast paradigmatically with sounds that were regarded as co-variants of same phonemes. For example /ɔ:/ contrasts with /ɔ/ in /jɔ: k / and /jɔk/ (both spelt 'yɔk'), which carry different semantic and grammatical interpretations. Furthermore, /ə/ has been found in initial positions in the NL syllable. In sum, the following TL vowels have been descovered in the NL system, though not in identical syllable positions:-

/i :; ɔ:, u:, ə, ei/ - which have hitherto been regarded as alien to Efik - Ibibio. It can be seen that apart from /ə, ei/, the other sounds have some symmetrical length relations with /i, ɔ, u/ respectively. Other vowels, which are not

found in the TL system, have also been discovered ! /ɑ:, ɛ:, œ:/ - which are nowhere mentioned in existing literature. These discoveries have come to support the second hypothesis : that a thorough analysis of the NL vowel system will reveal a full range of the phonetic realizations of the traditional six segments, most of which will be found to be similar to, if not identical with, some TL vowel sounds.

It has been reported that in the course of the speech test which formed part of the data collection exercise, some subjects were made to repeat certain sets of expressions that contained vowels common to both the TL and the NL systems. The subjects were able to pronounce with phonetic accuracy both NL and TL words which contained /i:, ɔ:, u:, ə, ei/. Care was taken, however, to select NL and TL words in which those vowels occupied identical syllable positions. What happened here was that new NL vowels were discovered; subjects' attention was drawn to the similarity between those sounds and what they were given from

the TL system in terms of articulatory features, distributional features, and phonemic versus phonetic status. At first subjects had difficulty perceiving or producing those sounds in the TL context. But when they were made aware of the presence of those sounds in their NL system as well as in the TL system, they were able to overcome their difficulty.

In the course of the CA itself it has been predicted that those TL sounds which are least marked or not marked at all in the NL will be least difficult or not at all difficult for learners.

The least marked and not marked sounds are those already found in the literature on the NL together with those discovered during this study. This reduction or removal of difficulty has come to support the third hypothesis : that Efik - Ibibio speakers who learn to speak English and who are made aware of the similarities between the vowel systems of their NL and the TL will find it easy to overcome those difficulties associated with a limited vowel system in the NL.

The fourth and last hypothesis states that a CA which takes account of articulatory and distributional features, together with markedness, typology and hierarchy of difficulties, will lead to the identification of real learning tasks (in terms of English vowel sounds) for the Efik-Ibibio speaker who wants to learn English. The CA exercise has been carried out in three phases. Firstly the TL and the NL vowels have been listed and compared, taking account of articulatory features, privilege of occurrence, and the question of phonemic or phonetic status of each vowel in these TL and NL systems. Next the problems discovered in the preceding taxonomic exercise have been grouped into three types : articulatory problems, distributional problems, and problems associated with the phonemic or phonetic status of elements across the TL and NL systems. Finally on the basis of the degree of markedness, these problems have been ranked as most difficult, moderately difficult, least difficult, and not difficult. These facts are in partial support of the fourth hypothesis. The section that follows will be devoted to the question of

teaching implications of the CA results. Such implications will go to show to what extent the CA results have supported the remaining part of that hypothesis.

5.3 : TEACHING IMPLICATIONS

In discussing teaching implications, efforts will be made to deduce from the CA results the real learning tasks, in terms of English vowels, for the Efik - Ibibio speaker who wants to learn English. On the basis of the hierarchy of difficulties, and possibly on the basis of function loads[1] of elements in the learning tasks, a sequence will be worked out in which materials so far identified will be taught to the learners.

According to Banathy, Trager and Wardle

> "Learning a foreign language ... means changing one's native language behaviour to that of speakers of the target language. Acquiring this different communication behaviour means first, changing one's listening habits to the point at which the incoming auditory data of the TL will be automatically decoded in terms of its linguistic

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(1) Quoted by Rivers (1978 : 18) from Stockwell, Bowen and Martins (1965 : 292).

> structure and referential system. Second, it means learning the production of the sound sequences of the TL so that its native speakers can comprehend them immediately and identify them as acceptable". (1966 : 37).

This change that has to take place in the learner's communication behaviour will be equated with the differences, established by a CA, between the TL and the learner's NL, and will constitute the actual learning task for the learner - i.e. learning Task = Σ (TL - NL).

Banathy (1969) carries this learning task argument a step further by incorporating the notions of quantification for the differences and of degree for predicted problems. From the notion of quantification some TL elements can be identified as same with NL elements, others as similar to NL elements, and the rest as different from NL elements. Problems will be ranked as nil, easy, and difficult. He has, however, come to demonstrate that the 'same - similar - different' continuum is not necessarily parallel to the one represented by the 'nil-easy-difficult'

continuum.

It has been stated under 'Rationale' that this study envisages for the learner phonetic competence at both the receptive and the productive levels of communication in the TL. For the curriculum writer, Rivers warns against the 'etic' approach, and rather recommends the 'emic' approach in the teaching of TL phonology, She argues that

> "Teachers often concentrate on sounds with distinctive features that contrast most obviously with those of otherwise comparable sounds in the NL (i.e. the so-called 'difficult' sounds), while allowing students to produce with native-like articulation sounds with fewer contrasting features. The result is a disruption of the phonological system of the FL: sounds produced with incorrect articulatory positions deform neighbouring sounds and a 'foreign accent' develops". (1968 : 154 - 155, 1975 : 17).

The other danger in the etic approach, she goes on, is to concentrate on the TL sounds that learners find difficult to articulate, and to train them

> "... to produce these in such a distinctive and restricted way that the speaker sounds ridiculosuly pedantic or pretentious to the native speaker, who has learned to produce those sounds with variations ...dependent on phonological environment and level of discourse". (ob. cit.

In recommending the 'emic' approach she argues that

> ". . . . the student will acquire the phonological system as a functioning whole, learning to discriminate and produce sounds which signal distinctions of meaning within the new language, without being constantly reminded of ways in which it is similar to or different from the phonological system of the native language".
>
> (obr. cit.)

Implicit in this chain of argument are the following teaching points:

(1) The need for the teacher to bear in mind (and to explain to mature students) the phonological phenomena of segmental assimilation and environmental variation.

(2) The need to use native - speaker models, either through physical presence or through the use of taped speeches, to demonstrate (1) above.

(3) The need for frequent contrastive drills - both interlingually and, most especially, intralingually - to fix in the students' minds those phonetic distinctions that are tied up with meaning in the

TL system.

The notion of difference between the actual learning task and the learners' input has to be so tailored as to take into account Banathy's recipe: to use common elements between TL and NL systems as potential points of departure towards conquering the differences, (1968: 5). A good approach, therefore, is to teach all twelve TL monophthongs and all eight TL diphthongs, together with variations that reflect environment and meaning. The assumption shall be made that all twenty elements carry an equal function load; so the sequencing shall be based mainly on the hierarchy of difficulties discovered in the CA, beginning from the easiest and working up to the most difficult as follows:

(1) monophthongs:

(a) /e, ɔ/

(b) /u, ɔ:, i, i:/

(c) /u;, ə /

(d) /ʌ, æ, ɑ:, ə :/.

(2) Diphthongs:

(a) /ai, au, ɔi/

(b) /ei/

(c) /iə, uə/

(d) /ɛə, ə u/.

"Hearing, identification, discrimination and repetition, are the key words to be remembered in teaching correct pronunciation and intonation". (Finocchiaro, 1969:101).

The problem of motivation is another factor that has to be borne in mind. Learners have to defy being laughed at as speaking the 'European' way; they must be made aware that

> ". . . the closer a person approximates to RP and recognized stress and intonation, the more clearly will he be intelligible to those outside his tribal and linguistic group".
>
> (Tiffen and Williams, 1969 : 26).

In actual teaching, there is a need to present the sounds in the context of real communication, using sentences. The question of regular drilling has been justly stressed by Bride and McGregor, who believe that

> "Five minute drills on consecutive days are more effective than fifteen minutes at a stretch".
>
> (1970 : 182).

Minimal pair drilling can be done, to train in both reception and production, as suggested by Tiffen and Williams (1969:27-29), and by Bride and McGregor (1970 : 181 - 184), following laid down steps. A modified model based on these suggested steps was used during the speech test reported in Chapter Three of this study.

Drama, which involves dialogue, is also a very important medium for teaching speech, and the place of dialogue has been ably defended by Rivers (1968 : 183 - 188). Games can also be used to help the learners in proper discrimination and accurate production of TL sounds.

All the steps so far discussed can be seen as underlain by the behaviourist view of language and language acquisition. A most effective approach is an ecclectic one that incorporates insights from both behaviourist and cognitive code-learning schools. Students' drilling will be most effective when they

are made aware of existing rules, which they can use to generate more and more patterns of their own. It means, besides the explanation of articulatory positions and distributional features, students will be taught some elements of transcription, most likely at an advanced stage of their language work, so that they can build up their own words and use good dictionaries effectively to look up words, not only for meaning but also for pronunciation.

All the methods suggested shall be accompanied by such devices as tape recorders, while drilling in sounds can be carried out in language laboratories, where available. Alternatively, the model for stulents' imitation can be obtained from native speakers' recorded speeches.

There is a need for the teacher of pronunciation to be himself a good speaker of the TL. The researcher has always believed that the language teacher cannot run away from linguistics, call it theoretical or applied.

> "Every teacher of English should have knowledge of the way the vowel and consonant sounds of English are formed".
>
> Tiffen and Williams (1969 : 30).

And of course no excellent methods or sophisticated aids can produce any good results unless the teacher has got some insights from at least descriptive and contrastive linguistics, so that he can, for example, explain how an English vowel is different from the students' NL vowel, especially in terms of articulation. Such insights will make the teacher understand his students' problems:

> "Teachers with an understanding of their students' problems can be expected to guide their students more effectively. They will recognize the cause of an error and be better able to prepare corrective drills. And they will be able to grade the learning burden according to the degree of difficulty instead of arranging series of lessons in a purely logical sequence".
>
> Adeyanju (1971 : 287 - 288).

That quotation applies to teachers of phonology as well as to teachers of grammar to which it was originally addressed.

It is well at this point to relate the above discussions on teaching materials and procedures to the last part of the

fourth hyphthesis : the use of CA results to work out teaching strategies.

Finally, it can be seen that the scope of this study has been very limited. Other areas remain to be studied. It is gratifying to hear that Efik - Ibibio is now to be studied as a major subject at the College of Education, Uyo, and to be pursued to the degree level subsequently. A programme of this nature requires a thorough review of the language in question, a review that will take into account the features - phonological, lexical, and syntactic, for example - of all three major dialects: Efik, Ibibio and Anang. It will not only make the language richer, but will also facilitate an easier and more effective pedagogical contrastive study of the language and English or any other foreign language. A most effective approach to this review will be to take on a little aspect at a time. An elaborate study can be carried out on the consonantal system; another one can be on comparative stress systems; and yet another on intonation; not to mention the lexical and syntactic dimensions.

together with morphology. Each of the last three areas can be sub-divided for purpose of thorough and comprehensive investigations. Language study, be it descriptive or contrastive, should be viewed and organized in a multi-dimensional framework, incorporating not only linguistic but also cultural features. And when these features are investigated individually, the piecing together of results and findings will provide excellent data for the production of texts and other materials for teaching the language and for foreign language teaching.

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