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## English Vowel Pronunciation and Its Implications for Speech Communication among Secondary School Students in Uyo Nigeria

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### **Abstract**

*Pronunciation is one aspect of language learning that is more difficult to master by a second language user, especially after adolescence. Almost all learners rate this as a priority and an area in which they need more guidance. While it is true that learners are very unlikely to attain a native-like accent, their intelligibility can be greatly improved by explicit pronunciation teaching. This study examined the pronunciation of English vowels among selected secondary school students in Uyo metropolis. A set of word list containing the 20 vowels of English (12 monophthongs, 8 diphthongs) and a short paragraph were compiled and administered to 100 students, from five secondary schools in Uyo metropolis in Nigeria. The two tests were scored, recorded and analysed using simple percentages, multiple bar charts and the chi-square. From the analyses of data, it was discovered that 12 vowel sounds were problematic to the students. The sounds were: 4 tense vowels (/ i:, ɔ:, u: and ɜ: /), 4 lax vowels (/ɪ, æ, ʌ and ə /), 2 centring diphthongs (/ ɪə / and / ʊə /) and 2 closing diphthongs (/ eɪ / and / əʊ /). The study concludes that it is expedient for teachers to teach English vowels alongside with their corresponding letters that make up the sound. Many approaches to the teachings of vowel sounds and oral English in general were suggested in the study, as recommendations.*

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**Keywords:** communication competence, feedback, phonology, language usage and learning

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### **1. Introduction**

One of the greatest challenges confronting speakers of English as second language (ESL) is inability to pronounce most English sounds the English way. Pronunciation is a vital aspect of language learning, as poor pronunciation distorts communication process. Senam and Ukut (2010, p.66) assert that: "Language is conceived primarily as spoken and heard, writing and reading come late; writing and reading are what make a literate person.... Effective communication involving speech delivery demands speaking intelligently and intelligibly." Every speaker of a language requires good pronunciation skills. Akeredolu-Ale (2005, p. 11) observes the appalling situation of spoken English in Nigeria and Ofulue (2007) says correct pronunciation skills are essential for intelligibility in a second language context, noting further the need for "a renewed emphasis on effective oral communication skills as a major requirement in the workplace, regardless of the discipline". For oral communication skills to be achieved, it must be enhanced through good pronunciation.

In other words, good speaking requires good pronunciation, especially when one is communicating with people outside one's immediate linguistic environment or speech community. Indeed, every speaker is expected to produce correct forms of sound in the language to ensure effective communication. Communication is the transmission of idea, message or information from the source to the receiver Senam, 2017)

Pronunciation is very important in today's communication and currently there has been a shift from linguistic competence to a broader level of communication compliance. Effective communication is almost based on good pronunciation. Again, pronunciation is reckoned as not just production of the right phonemes but also as the foundation for the next level of speech analysis.

Pronunciation plays an important role in the totality of what may be described as good speech. Jones (1956) as cited in Roach (2009, p. 6) describes good speech as "a way of speaking which is clearly intelligible to all ordinary people." In this case, poor pronunciation may be the first cause of unintelligible utterances, not only the grammar. This is why linguistics is more concerned with the spoken, rather than the written word (Aitchison, 2003). Since speech is primary to every language and central to human communication, good pronunciation is indispensable. Every learner of English should pronounce words properly if he means to be understood by his interlocutors.

Therefore, teaching of pronunciation is crucial in a school system because it is a filter through which others see them and often discriminate against them. Teachers should help the students in order to acquire the acceptable accent of the target language. In many situations, the non-native teacher has to be the model whether he or she likes it or not. According to Ur (1996), this teacher can be an adequate model provided he or she is a competent speaker of the English language. In any case, it is desirable for the learners to be exposed to a number of native and other acceptable accents through the use of recording. Again, unconscious pronunciation training is likely to be more helpful with classes of younger learners and beginners. Arising from the foregoing, this work sets out to examine the pronunciation of English vowels and its implications for speech communication among secondary school students in Uyo, Nigeria.

### **1.1 English and the Nigerian Situation**

The history of English language in Nigerian environment is something we are familiar with, since many scholars have given various accounts of its implantation and subsequent growth in Nigeria (Awubi 2000, Schmied, 1991, Ogu 1992, Eka 2000, among others). English language arrived Nigeria as a baton change between Christian missionaries and the colonial masters in the 17<sup>th</sup> and late 19<sup>th</sup> centuries respectively.

Commercial activities of the English and Portuguese traders along the West African coast around the 17<sup>th</sup> century brought about the implantation of English Language into Nigeria (Banjo, 1996). The Portuguese introduced pidgin as a language of business transactions. From here, the English based pidgin evolved and developed to almost a creolized pidgin in the Niger Delta region of the country. The arrival of Christian missionaries to Badagry in 1842 further raised the standard of English language in Nigeria, as they established missionary schools whose major aim was to train interpreters and messengers for churches and perhaps, the civil service.

In 19<sup>th</sup> century, the British colonial masters arrived Nigeria and introduced the British English which is spoken as a second language. The language has come to stay as part of the nation's linguistic family amidst the already existing indigenous languages. Today, Nigeria is regarded as the second largest ESL country in the whole world, next to India, with about 30 million speakers of English as a second language (Jowitt, 2009). With a gradual and successful implantation of English in Nigeria, English has grown to become, not just a second language, but also the most important official language in Nigeria, being the language of the legislature, administration, judiciary, national broadcasting, commerce, the press, social media, language of education and a major requirement for admission into tertiary institutions and the language of employment. It is, therefore, evident that the main reason for the introduction of the language into the West African coast was for communicative purposes, since the traders themselves were not willing to learn indigenous languages. Fakuade (2004) describes English in Nigeria as the language of social integration among the over two hundred and fifty ethnic nationalities that make up the country and that it is acquired by its users almost as a matter of course, as they were developing with their mother tongues.

The multilingual situation of Nigeria, with over 530 languages, in not less than 250 ethnic groups has given an impetus to the spread of English language across these heterogeneous groups. The wide acceptance of the language has resulted in a situation where it is fast becoming the First language (L1) to many Nigerian children. Although this has happened to be so, there are still some problems especially at the spoken level, particularly in pronunciation.

## **2. Statement of the Problem**

Correct pronunciation is a fundamental factor of effective oral communication. Inversely, correct pronunciation of English speech sounds is sine qua none to correct pronunciation of English words. A cursory observation of speech communication situation in Nigeria reveals that wrong pronunciation of words is a major problem in human communication. The problem of articulation of English speech sounds in an environment where English is spoken as a second language (ESL) is an acknowledged phenomenon, as there will be a carryover effect of the mother tongue (MT) of the learner to the learner's second language during the second language learning process. Moreover, it is generally thought that English vowels are speech sounds that are less problematic to learners of the language as a second language. However, some vowel sounds constitute a serious problem to ESL students perhaps, as a result of the learner's linguistic and ethnic background.

The spoken English of Nigerians is appalling and this greatly affects the speech communication of many speakers of English Language in Nigeria. As a sequel to the aforesaid background this study was conducted. It is not very clear how secondary school students in Uyo metropolis pronounce English speech sound, especially vowels. Thus how do they pronounce English vowels? What are the implications of pronunciation of English vowels by secondary school students in Uyo, Nigeria on their speech communication pattern?

## **3. Objectives of the Study**

This study aimed to:

- (i)** Test the mastery of English vowels by secondary school students in Uyo, Nigeria;
- (ii)** Identify the problematic vowels among secondary school students in Uyo, Nigeria;
- (iii)** Find out what influence the general performance of secondary school students in Uyo, Nigeria, in their pronunciation of vowel sounds;

- (iv) Ascertain the implications of pronunciation of English vowels for speech communication among secondary school students in Uyo, Nigeria.

#### 4. Hypothesis

This hypothesis was tested:

- (a) **Ho:** Students who have not been taught Oral English are likely to encounter problems in their realisation of vowel sounds

#### 5. English Vowels Pronunciation and Speech Communication

Pronunciation entails the sounding of words to reflect the speech sounds contained in the word in an acceptable and intelligible manner. For one to pronounce the English sounds correctly there must be a graphic representation of sounds in the manner a word is spoken, using the phonetic symbols. *The Oxford Advanced Learners Dictionary of English (7<sup>th</sup> edition)* defines pronunciation as “the way a language or a particular word or sound is pronounced.”

If a person is said to have “correct pronunciation,” then it refers to both within a specific language or dialect. A word can be spoken in different ways by various individuals or groups, depending on a number of factors. Such factors may include: regional influence, ethnic group influence, social class or level of education, voice quality and voice dynamics of the speaker, among others. On the whole, this will in turn have great deal of implications for the speakers’ speech communication output.

Explaining *models* and *goals*, in relation to pronunciation, Roach (2009, p. 6) argues that the aim of ‘goal’ is “to develop the learner’s pronunciation sufficiently to permit effective communication with native speakers.” Model here implies pronunciation standard. The Standard British English (SBE), that is the one that is taught in public schools British and former British colonies is adopted the standard in this work. It becomes obvious that no communication can be effective with poor pronunciation. Thus poor pronunciation has negative implications for the speech communication of the speakers.

Observably, Nigerian Spoken English (NSE) is characterised by a preponderant influence in the pronunciation of English words, as evident in the pronunciation of certain words like “think” /θɪŋk/ pronounced as [tɪŋk]; “hear” /hɪə/ as [hɪæ]; “alert” [ə'la:t], for /ə'lɜ:t / and many other words by some Nigerians. Moreover, scholars like Jowitt (1991, 2000) and Udofot (2002) have shown in their various research works that Nigerian English is different from other dialects of global English in terms of pronunciation. Udofot (2002) observes some peculiarities in Nigerian English. Through a perceptual, statistical and instrumental procedure, she observes that Nigerians have fewer vowels and consonants resulting in the approximations of some English segments to close equivalents of Nigerian languages.

Banjo (1971) uses the criterion of formal education and classifies Nigerian Spoken English (NSE) into four varieties. Variety one (V1) is spoken by pupils in elementary (primary) schools which Eka (2000, p. 86) describes as “the nonstandard variety,” a variety that is often associated with the beginners. Variety two (V2) is spoken by post-primary (secondary or high) school leavers. This variety may form the “basic or general variety.” These two varieties, most times manifest some phonological features of the mother tongue into English. However, variety one is not accepted nationally. Variety two (V2) is intelligible and nationally accepted because they exhibit minimal transfer of the mother tongue influence on English. Variety three (V3) is identified with university education and Banjo (1971)

asserts that although this variety has “RP deep structure,” it is characterised by Nigerian “surface features.” The fourth variety (V4) is identified with Standard British English (SBE). It may be regarded as the sophisticated or near native variety. It is internationally intelligible but does not enjoy social acceptability within the country.

In addition to the criterion of formal education, Jibril (1982) uses ethnicity, with an observation that Spoken Nigerian English is a continuum within which there are several interacting phonological systems. Later, Banjo (1996, p. 78) identifies “home background and the quality of education at the primary and secondary levels,” to be crucial factors that can influence the spoken English of Variety 3 speakers. In spite of these classifications and explications, Ogunsiji (2007) observes that when a Nigerian speaks English, no matter his level of education, native speakers of English have no difficulty in identifying the speaker as a Nigerian because of the reflection of some structural characteristics of Nigerian languages. The structure may be phonological, morphological, syntactic, semantic or semiotic.

Furthermore, among most non-native speakers of English, there exist a number of mispronunciations due to what may be referred to as spelling-pronunciation. Learners of English tend to pronounce most phonemes and words without much reference to the standard British English (SBE) pronunciation; they naturally attach pronunciation to a letter or sequence of letters. They assume a one to one correspondence between sound and letters in spelling which is inappropriate. Yule (1996, p. 58) in his demonstration of phonetic teaching echoes: ‘throw’ begins with only two consonants /θr/, once again showing that spelling is not a good guide in phonology.

Similarly, Jowitt (1991, p. 68) observes that students unconsciously rely on their mother tongue models, as many of their teachers did ... as a guide to pronunciation. To provide a solution to the problem, Roach (1983, p. 1) suggests:

Because of the notoriously confusing nature of English spelling, it is particularly important to learn to think of English pronunciation in terms of phonemes rather than letters of the alphabet, one must be aware, for example, that the word ‘enough’ begins with the same vowel phoneme as that at the beginning of ‘inept’ and ends with the same consonant as ‘stuff.’

Relating pronunciation to many Nigerian learners of English, most words are pronounced exactly as they are spelt. This is what makes the pronunciation of many Nigerians differ from that of native speakers.

## **6. English Vowels**

Vowel sounds are speech sounds that are produced without any audible obstruction of the airstream from the lungs and other speech articulators, unlike consonant sounds which are produced with total or partial obstruction of the air. In other words, English vowel sounds are speech sounds produced by an articulation having little or no constriction of the mouth passage. In the production of a vowel sound, there is free flow of air from the lungs through the oral cavity. Although the vocal cord could be raised, it is not raised to form contact with any other organ, as to obstruct free flow of the airstream. Since all vowels are voiced phonemes, they are produced with a voiced pulmonic regressive speech mechanism. There is vibration at the vocal folds in their productions. There are 20 vowel sounds in English.



## 6.1 Classification of English Vowels

Vowels are described considering the shape of the oral cavity, which depends on the position of the highest point of the tongue during the production Yul-ifode (2008). The 20 vowels of English are divided into 12 pure vowels called *monophthongs* (5 *tense*, 7 *lax* vowels) and 8 *diphthongs* (with 3 *centring diphthongs* and 5 *closing diphthongs*). The 12 pure vowels are conventionally assigned numbers 1 to 12. Each vowel sound has its number; the numbering is of essence. This means they are known by their numbers. English monophthongs may be categorised as follows:

### 6.2.1 Direction of Articulation

The 12 pure vowels are classified into 5 long or *tense* vowels and 7 short or *lax* vowels. The tense vowels usually have colon-like, diacritics or dots (:) placed after them, e.g. /i:/, /a:/, /ɔ:/, /u:/ and /ɜ:/. Examples of the *lax* vowels are: /ɪ/, /e/, /æ/, /ɒ/, /ʊ/, /ʌ/ and /ə/.

### 6.2.2 Level of Jaw Opening

**i. Close Vowels:** vowels produced when the tongue is very close to the palate and both jaws are also close to each other. The four vowels in this group are:

/i:/, /ɪ/, /ʊ/ and /u:/.

**ii. Half Close:** The four in the group are:

/e/, /ɜ:/, /ə/ and /ɔ: /.

**iii. Half-Open Vowels:** The vowels under this are:

/æ/, /ʌ/ and /ɒ /

**iv. Open vowel:** e.g. / a: /

### 6.2.3 Tongue Height/Movement

Vowels are thus described on how high the tongue is raised during articulation. Examples:

**i. Front Vowels:** These are produced when the front of the tongue is raised highest during articulation, as in /i:/, /ɪ/, /e/ and /æ/.

**ii. Central vowels:** In the production of the central vowel, the tongue is raised highest towards the palate e.g. /ɜ:/, /ə/ and /ʌ/.

**iii. Back vowels:** During the production of these, the tongue pulls back in the mouth with its back raised highest e.g. /u: /, /ʊ/, /ɔ:/ and /ɒ/.

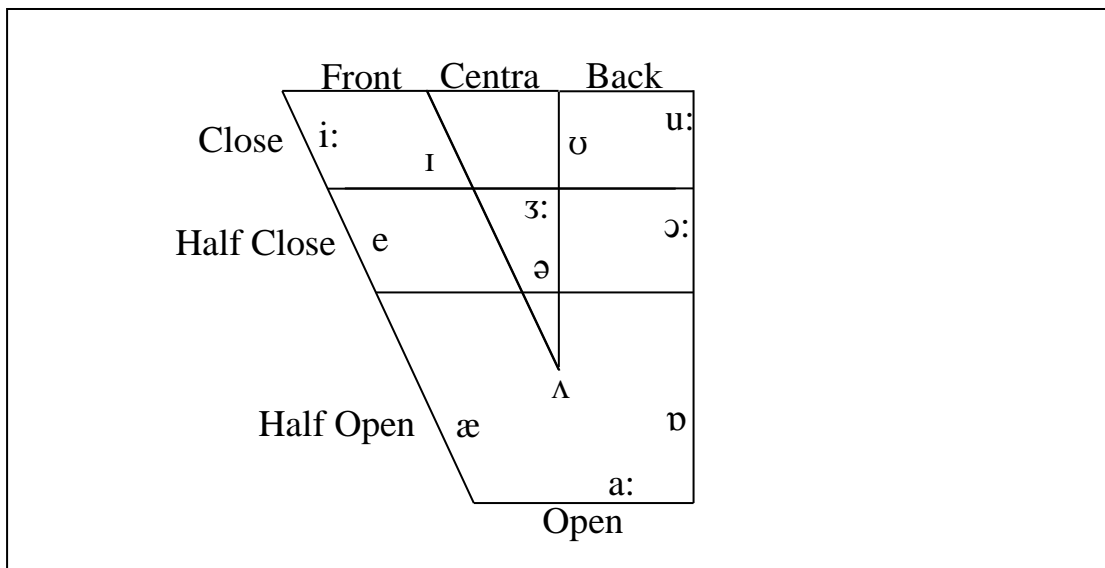
### 6.2.4 Shape and Position of the Lips

**i. Rounded:** The lips in the production of the following sounds are rounded /ʊ/, /u: / and /ɔ:/.

**ii. Spread:** When the lips are spread the vowels articulated are: /i:/, /ɪ/, /æ/, /e/, and /a:/.

**iii. Neutral:** The lips are in this position when they are slightly parted. These are: /ə/, /ɜ:/ and /ʌ/. The above classification of the monophthongs may better be illustrated below through the figure called the *vowel trapezium chart*.

**Fig.1: SBE Position of the pure vowels in the trapezium chart**



Having taken the discourse this far, it is expedient to outline with some examples the twenty vowels of English where some words were selected for the pronunciation test:

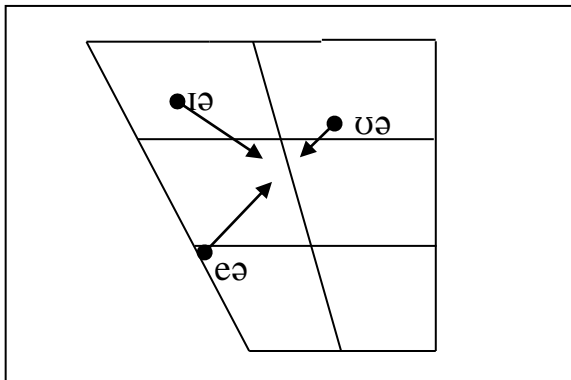
### 6.2.5 The Monophthongs (pure vowels)

1. /i:/ e.g. vehicle, quay, amoeba.
2. /ɪ/ e.g. estate, bucket, village.
3. /e/ e.g. discretion, pleasant, etiquette.
4. /æ/ e.g. access, pancake, can.
5. /a:/ e.g. start, aunt clerk.
6. /ɒ/ e.g. sob, swamp, yacht.
7. /ɔ:/ e.g. dwarf, sword, fork.
8. /ʊ/ e.g. wolf, bosom, could.
9. /u:/ e.g. tomb, louvre, chew.
10. /ʌ/ e.g. bulb, oven, study.
11. /ɜ:/ e.g. word, curse, alert.
12. /ə/ e.g. collect, fatigue, ago.

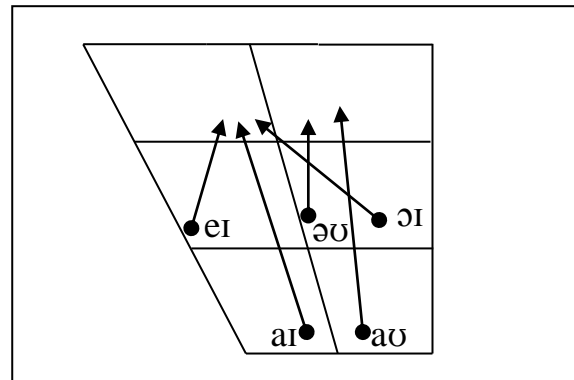
### 6.2.6 The Diphthongs

13. /eɪ/ e.g. steak, aim, day.
14. /aɪ/ e.g. vie, pint, indict.
15. /ɔɪ/ e.g. hoist, oyster, boy.
16. /aʊ/ e.g. ounce, arouse, loud.
17. /ɪə/ e.g. atmosphere, weird, hero.
18. /eə/ e.g. where, repair, spare.
19. /əʊ/ e.g. phone, toast, no.
20. /ʊə/ e.g. sure, dual, poor.

**Fig.2: SBE centring diphthongs**



**Fig.3: SBE closing diphthongs**



## 7. Theoretical Framework

This study was anchored on the framework of Jim Flege’s Speech Learning Model (SLM). The central theme of Flege’s (1995) SLM is that second language learning is more difficult as the phonetic space becomes committed to the first language (Walley, 2007). Accordingly, this postulation focuses on how the perception of sounds in a second language (L2) is influenced by the first or native language (L1). The establishment of perceptual categories of phonemes for the L1 starts already during the first five years of life. The more established those categories are when the L2 learning starts the more difficult it becomes to acquire new perceptual categories (Piske, 2001, Mackay, 2001, and Flege, 2001). By application, as L1 categories developed, they become more likely to block the formation of new L2 vowels. Flege names this mechanism “equivalence classification” (Flege, 1987). In order to operationalise the distinction between new and similar L2 sounds, the SLM employs three criteria for classification.

First, the International Phonetic Alphabet (IPA) symbols used to represent sounds of the L1 and L2 are considered. Then, acoustic measurements and finally, listener’s perceptual judgment of sounds in L1 and L2 are employed. An identical sound is one which has the same IPA symbol in the L1 as well as L2. The acoustic measurement of these identical sounds in the L1 and L2 are not significantly different. The identical sound is usually produced authentically because of the process which called positive transfer (Flege, 1996). A similar sound can have the same IPA symbol but some acoustic differences between the sounds in L1 and L2 must exist. A new L2 sound differs acoustically and perceptually from the L1 sounds. Other than the similar sound, a new L2 sound has no equivalent IPA symbol in the L1 language (Flege, 1996).

Applying this approach to secondary school students in Uyo metropolis, the researcher discovered an overriding influence of the respondents L1 (their mother tongue which were mostly Ibibio, Anang and Oron) on the production of English vowels as their L2. This resulted in a phonetic transfer of their first language to English, as most of them could not pronounce the word, “study” – with emphasis on vowel 10: /ʌ /, as in study, blood, country because, they were influenced by the /ɒ / sound of their native languages . For instance, Ibibio has 16 vowel system /i, ɪ, ii, ʌ, e, ee, a, aa, uu, u, oo, o, ɔ, ɔɔ and ʊ / (Urua, 2000). Observably, of the 16 vowels, there is no close equivalence of the English vowel / ɜ: / . Consequently, most respondents of Ibibio origin could not distinguish the phonemes contained in the two words – “curse” and “study” – which are / ɜ: / and /ʌ /, respectively. More so, Annang language shares seven vowels of Ibibio / a, e, i, o, u, ɔ and ʊ / . For Oro, the vowels include / i, ɛ, e, a, o, σ, u / . On the whole, Flege’s SLM is practically valid.



## 8. Research Methodology/Data Presentation

The study made use of tests for the purpose of collecting data. Test one (single pronunciation test) contained twenty single words designed to test the respondents' ability to pronounce the words properly to reflect the vowel sounds contained in it. Test two (oral test on connected speech) was a short paragraph developed by the researcher for their reading, using the initial twenty words selected for their single word pronunciation test. The two tests were:

### Test 1(Pronunciation test)

- |            |              |           |           |           |
|------------|--------------|-----------|-----------|-----------|
| 1. Amoeba  | 5. Etiquette | 9. Clerk  | 13. Fork  | 17. Loud  |
| 2. Indict  | 6. No        | 10. Hero  | 14. Poor  | 18. Study |
| 3. Village | 7. Can       | 11. Yacht | 15. Spare | 19. Curse |
| 4. Day     | 8. Boy       | 12. Could | 16. Tomb  | 20. Water |

### Test 2 (Pronunciation test on connected speech)

Amoeba is a microscopic organism that can be found in the village stagnant impure water. Sometimes, clerks can drop in fuel into the water when passing by. Doing this is a bad etiquette in the community. This attracts a curse which may lead one to lying in the tomb. The poor boy who used fork to sail the yacht on the hero's day could not spare him. He spoke loudly when he saw the indicted person had no hiding day. The action became a case study.

In the two tests, respondents (students) were tested and scored over one hundred (100%). One hundred (100) senior secondary (high) school students were selected from five secondary (high) schools in Uyo, the Capital City of Akwa Ibom State of Nigeria. Twenty (20) students were drawn from each of the five schools through available sampling technique. The choice of the senior students stemmed from the assumption that they have been taught oral English by their English Language teachers over years. The schools selected for the study were:

- (i) Uyo High school, Oron Road (School 'A')
- (ii) Nigerian Christian Institute, Udo Otung Ubo Street (School 'B')
- (iii) Community Secondary School, Aka Offot (School 'C')
- (iv) Bright Stars Model Secondary school, Aka Itiam (School 'D')
- (v) Four towns Secondary School, Abak Road (School 'E')

The 100 respondents (students) were scored according to their performance and tabulated as shown below:

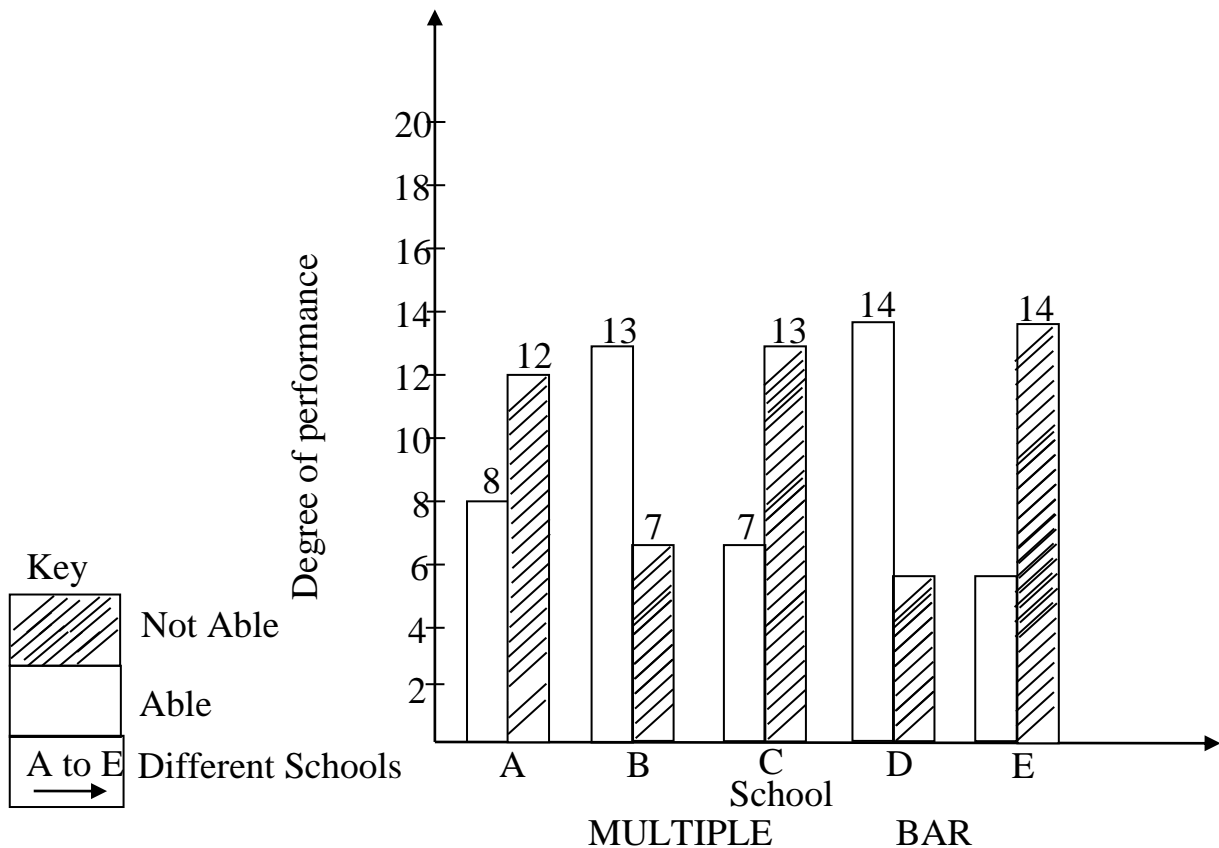
**Table1: Observation of Values**

| Schools      | Degree of Performance by respondents |          | Total      |
|--------------|--------------------------------------|----------|------------|
|              | Able                                 | Not Able |            |
| A            | 8 (40%)                              | 12 (60%) | 20 (100%)  |
| B            | 13 (65%)                             | 7 (35%)  | 20 (100%)  |
| C            | 7 (35%)                              | 13 (65%) | 20 (100%)  |
| D            | 14 (70%)                             | 6 (30%)  | 20 (100%)  |
| E            | 6 (30%)                              | 14 (70%) | 20 (100%)  |
| <b>Total</b> | 48 (48%)                             | 52 (52%) | 100 (100%) |

**Table2: Production test result in percentage (%)**

| S/N | Words              | SBE Pronunciation | Vowel Sounds | Number Right | % Right | Number Wrong | % Wrong |
|-----|--------------------|-------------------|--------------|--------------|---------|--------------|---------|
| 1.  | Amo <u>e</u> ba    | /ə'mi:bə /        | / i: /       | 5            | 25      | 15           | 75      |
| 2.  | Ind <u>i</u> ct    | /ɪndɪkt /         | / aɪ /       | 13           | 65      | 8            | 35      |
| 3.  | Vill <u>a</u> ge   | / vɪlɪdʒ /        | / ɪ /        | 8            | 40      | 12           | 60      |
| 4.  | Day                | /deɪ /            | / eɪ /       | 6            | 30      | 14           | 70      |
| 5.  | et <u>i</u> quette | /etɪket /         | / e /        | 16           | 16      | 4            | 20      |
| 6.  | No                 | /nəʊ /            | / əʊ /       | 5            | 25      | 15           | 75      |
| 7.  | Can                | / kæn /           | / æ /        | 8            | 40      | 12           | 60      |
| 8.  | Bo <u>y</u>        | /bɔɪ /            | / ɔɪ /       | 20           | 100     | -            | -       |
| 9.  | Cl <u>e</u> rk     | /kla:k /          | / a: /       | 15           | 75      | 5            | 25      |
| 10. | He <u>r</u> o      | / 'hɪərəʊ /       | / ɪə /       | 4            | 20      | 16           | 80      |
| 11. | Y <u>a</u> cht     | / jɒt /           | / ɒ /        | 9            | 45      | 11           | 55      |
| 12. | Co <u>u</u> ld     | /kʊd /            | / ʊ /        | 14           | 70      | 6            | 30      |
| 13. | For <u>k</u>       | /fɔ:k /           | / ɔ: /       | 8            | 40      | 12           | 60      |
| 14. | P <u>o</u> or      | /pʊə /            | / ʊə /       | 7            | 35      | 13           | 65      |
| 15. | Sp <u>a</u> re     | /speə /           | / eə /       | 15           | 75      | 5            | 25      |
| 16. | Tom <u>b</u>       | / tu:m /          | / u: /       | 6            | 30      | 14           | 70      |
| 17. | L <u>o</u> ud      | / laʊd /          | / aʊ /       | 18           | 90      | 2            | 10      |
| 18. | St <u>u</u> dy     | / stʌdɪ /         | / ʌ /        | 8            | 40      | 12           | 60      |
| 19. | Cur <u>s</u> e     | / kɜ:s /          | / ɜ: /       | 6            | 30      | 14           | 70      |
| 20. | Wat <u>e</u> r     | / 'wɔ:tə /        | / ə /        | 6            | 30      | 14           | 70      |

**Table3: Multiple Bar Chart Showing the Performances of Students per School**



## 5. Test f Hypotheses

- (b) (i) **Null Hypothesis (H<sub>0</sub>):** Students who have not been taught Oral English are likely to encounter problems in their realisation of vowel sounds  
 (c) (ii) **Alternative Hypothesis (H<sub>1</sub>):** Students who have been taught Oral English are likely to encounter problems in their realization of vowel sounds  
 (d) **Level of Significance (α):** 2.5% = 0.025.

**Note:** The lesser the level of significance, the higher the value in respect to degree of freedom (V or df) from the (X<sup>2</sup>) table.

- (e) Finding the expected value (E) for each value in the cell:

$$E = \frac{TR \times TC}{GT}$$

E = the expected values  
 TR = total row values  
 TC = total column values  
 GT = Grand total values

- (f) Test statistic (chi-square i.e. goodness of fit test)

$$X^2 = \sum_{i=1}^n \frac{(O_i - E_i)^2}{E}$$

∑ = total  
 O<sub>i</sub> = each observation value  
 E<sub>i</sub> = each expected value  
 n = last value

i.e.

$$\sum_{i=1}^n \frac{(O_i - E_i)^2}{E} = \frac{(O_1 - E_1)^2}{E_1} + \frac{(O_2 - E_2)^2}{E_2} + \dots + \frac{(O_n - E_n)^2}{E_n}$$

- (g) Degree of freedom (df or v): = (C - 1) (r - 1)  
 C = number of columns  
 r = number of rows  
 (h) Critical values from the chi-square table. Note: The right hand side is used since X<sup>2</sup> is in the square form.  
 H<sub>0</sub>: X<sup>2</sup> > (V, α) rejected H<sub>0</sub>  
 H<sub>1</sub>: X<sup>2</sup> < (V, α) not rejected  
 (V, α) = table value for the X<sup>2</sup>  
 X<sup>2</sup> = calculated value for the chi-square  
 (i) Expected value for each observed value. (E) i.e.  $\frac{TR \times TC}{GT}$

Example:  $E(8) = \frac{48 \times 20}{100} = 9.6$

GT

**Table 4: Table for X<sup>2</sup> calculation**

| Observed Value (O) | Expected Value (E) | O – E | (O – E) <sup>2</sup> | $\frac{(O - E)^2}{E}$ |
|--------------------|--------------------|-------|----------------------|-----------------------|
| 8                  | 9.6                | -1.6  | 2.56                 | 0.267                 |
| 13                 | 9.6                | 3.4   | 11.56                | 1.204                 |
| 7                  | 9.6                | -1.2  | 6.76                 | 0.704                 |
| 14                 | 9.6                | 4.4   | 19.46                | 2.017                 |
| 6                  | 9.6                | -3.6  | 12.96                | 1.360                 |
| 12                 | 10.4               | 1.6   | 2.56                 | 0.246                 |
| 7                  | 10.4               | -3.4  | 11.56                | 1.111                 |
| 13                 | 10.4               | 2.6   | 6.76                 | 0.650                 |
| 6                  | 10.4               | -4.4  | 19.36                | 1.816                 |
| 14                 | 10.4               | 3.6   | 12.96                | 1.246                 |
| <b>Total</b>       |                    |       |                      | <b>10.621</b>         |

$$X^2 = 10.621$$

$$(V, \alpha), V = (C - 1) (r - 1)$$

From table (1) above, C = 2

$$V = (2 - 1) (5 - 1) = 1 \times 4 = 4$$

(V, α) = (4, 0.025) from the X<sup>2</sup>

From the table we have = 11.143

$$X^2 = 10.621$$

(4, 0.025) = 11.143 i.e. H<sub>0</sub>: 10.621 < 11.143.

(j) Since H<sub>0</sub> = 10.621, i.e. < 11.143, the H<sub>0</sub> is upheld while H<sub>1</sub> is rejected. Therefore students who have not been taught Oral English are likely to encounter problems in their realisation of vowel sounds. Inversely, students who have been taught oral English are more likely to perform better in their realisation of vowel sounds while those who not been taught are likely to encounter problem in their realisation of vowel sounds. This implies that there is a significant relationship between teaching students Oral English and their realisation of vowel sounds.

## 6. Discussion of Findings

From the degree of performance in Table 1 above, school D scored the highest in the pronunciation test. This was seconded by school B. All other schools were unable to pronounce the vowel sounds properly. The school, with the least score was E, followed by schools C and A.

From Table 2, the following findings were obvious: going by a general assessment in the performance test, out of 20 vowels of English, the students found the following vowels and diphthongs, more challenging and problematic: / i:, ɪ, eɪ, əʊ, æ, ɪə, ɔ:, ʊə, u:, ʌ, ɜ: & ə /.

The less challenging and problematic vowel sounds were: / ə, a:, ɒ, ʊ, aɪ, ɔɪ, aʊ & eə /.

Seventy five percent (75%) of the respondents could not pronounce “amooeba” with the long vowel sound / i: / but realised it as /e/ which is incorrect. It was observed that a greater number of students did not know most of the phoneme that is contained in first pure vowel of English, /i:/. Letters which constitute this phoneme include: ‘ee, ea, ey, eo, oe, ei and ay,’ in words like: seed, each, key, people, amooeba, seize and quay. Similar problem was observed to occur in the pronunciation of “village” where the respondents realised that word with [e] sound instead of / ɪ /. Sixty percent (60%) wrong response was recorded.

Also, the closing diphthongs: / eɪ / and / əʊ /, in the words “day” and “no” were sources of difficulty to 70% and 75% of the respondents, respectively, even when there is such diphthong as / eɪ / in Ibibio language (Essien, 1990). The closing diphthongs /aɪ, ɔɪ and aʊ / were also tested and noted to be less problematic. Among the five closing diphthongs those noted to be problematic were two - / eɪ / and / əʊ /. For the centring diphthongs 75% of the respondents pronounced the diphthong / eə / in “spare” while 80% of the respondents could not pronounce the word “hero” to realise the centring diphthong / ɪə /. 65% had a wrong response in pronouncing the centring diphthong / ʊə / in poor.

For the *tense* vowels, the following were problematic, as revealed in the test / i:, ɔ:, u: and ɜ: /. It was astonishing to discover that most students pronounced the word “fork,” as [f ɜ: k] instead of /fɔ:k/. This may be caused by wrong pronunciation inherited from their nursery school when they were taught phonics by their teachers. The *lax* vowels which constituted a problem to them included: /ɪ, æ, ɒ, ʌ and ə /. Considering individual words which the phonemes are found, most students could not have a correct response to the pronunciation of the words: “yacht, can, study and water.”

On the whole, the student performances were represented statistically in the multiple bar chart, as shown above. While school D scored the highest, school E scored the least. The poor performance of school E may be caused by failure to introduce Oral English earlier to the students. Drawing a general inference, the performances of schools B and D were very encouraging. Among the schools with discouraging performances were schools A, C and E.

## 7. Conclusion

Pronunciation is an essential aspect of language learning. As a matter of fact, every language is first spoken before it is written. Besides, confidence with pronunciation allows learners the interaction with native speakers. Be that as it may, it behooves speakers of any language, either in first or second language situation to pay necessary attention to pronunciation of sounds to ensure that communication is not impaired in any way. It is against this backdrop that this study examined the pronunciation of vowels among select secondary school students in Uyo, Capital City of Akwa Ibom State of Nigeria.

Although English vowels are less problematic, the findings of this study have that twelve vowel sounds that are ticklish to the students. They are 4 tense vowels (/i, æ, ʌ and ə /), 4 lax vowels (/ i:, ɔ:, u: and ɜ: /), 2 centring diphthongs (/ɪə and ʊə/) and 2 closing diphthongs (/eɪ and əʊ/).

## 8. Recommendations

From findings of this study, the following recommendations are proffered:

- (i) Students should be taught correct pronunciation in a second language learning situation at an appropriate time before late adolescence. This is because it is difficult to learn pronunciation effectively at a later stage in life.
- (ii) The language teachers should be considerate enough to explain critically the length differences in Standard British English (SBE) vowels, as well as the vowels with double articulation.
- (iii) The distinction between vowels / ɪ / and / i: /, / a: / and / æ / must be well taught as in (sheep/ship, bead/grid, pat/part, fat/fart), etc. ESL students should be encouraged to spread their lips more widely in the production of the English phonemes with the diacritics dots to show length.

(iv) Attention should be paid to those vowels which are not articulated in most Nigerian mother tongues like / æ , ʊ , ɜ : / and / ə /. For instance, the schwa vowels / ə / which are rarely used in Nigerian Spoken English should be critically taught. The difference in length should be emphasised.

(v) The students should also be made to note that the vowels / ɜ : / and / ə / are the most used vowels of English and that the short vowel / ə / would never occur in stressed syllables, so that it will not contrast with the long central vowels / ɜ : / which occurs in stressed syllables.

(vi) Teachers should not only rely on the “shadowing approach” (i.e. repeating the sounds after the teacher) in the teaching of vowel sounds and oral English in general. They should teach the sounds in line with the letters which constitute the phoneme of that sound.

(vii) The spoken English teacher should also use the framework of an electronic text which could be in form of dialogue or prose passages that contain the segmental phonemes. The aim of the language teacher is to exploit the linguistic context presented in this way to the best advantage of his students. Digital audio CDs (like that of Peter Roach) and modeled tele-tutors should be used with the students. In this regard, a student in the pronunciation class listens to a word or phrase articulated or produced by a native speaker. The student can record the words into an MP3 recorder and play it back. He will then be open to rational criticism between his own output and that of the native speaker.

(viii) The teaching of pronunciation should take a learner centred approach. This type of teaching naturally encourages the use of naturalistic exercises. The learners should be able to practise speech that will be directly useful to them in their real lives. By extension, teachers can be learner-centred by developing skills in communicating with learners about speech and pronunciation rather than just giving the learners phonetically accurate descriptions.

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