

# Where Two Speech Variations Coexist: The Case of Nigerian/ Ghanaian Spoken English at Wisconsin International University College, Ghana (WIUC)

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## Abstract

This study investigated supra-segmental features (word accent, consonant digraphs and articulation of vowels) in English spoken by Nigerian students which caused difficulty of understanding to Ghanaian students and vice versa at Wisconsin International University College. Three hypotheses were tested. The results showed that the Ghanaian students' placement of word accent posed difficulty of understanding to the Nigerian students. It also showed that Nigerian students' substitution of one vowel for another in some words posed a problem of recognition and understanding of the words for their Ghanaian counterparts. It was also found that both Nigerian and Ghanaian students compromised in pronouncing some consonant digraphs distinct from the way the British pronounced those consonant digraphs. It was found that the variations in the pronunciation of vowels and word accent in the class marked the cultural identities of the two nationalities represented in the class. It was suggested that further research be undertaken to find out if the students of one country assimilated or not the word accent or vowel articulation of the other as they interact in the same classroom for four years.

**Keywords:** Word accent, consonant digraphs, vowels, transfer errors

## 1.0 Introduction

A good number of research works have been done on pronunciation of words in language (Bodomo, 1995; Meda, 1989; Littlewood, 1984; Baninyemi, 1979; Chomsky, N. & Halle, M, 1968). Some of these works focused on the application of Contrastive and Error analysis to some syntactic structures of the first and the second languages of the learner to either identify the differences that existed in the structure of the two languages or predicted transfer errors that are likely to occurred in the target language (James, 1960; Soku, 2008; Odlin 1989; Arnold & Gimson, 1965). There were other works that looked at the way supra-segmental features (i.e. accent, tone and word juncture) influenced language (Klatt, 1976; Tayne & Qadir, 2012). In this article, the researcher examined the extent to which supra-segmental features in the speech of the Nigerian students posed a problem of understanding to their Ghanaian counterparts and vice-versa.

Ghana and Nigeria were colonized by the British in the 19<sup>th</sup> century. The British brought English to the linguistic situation of the two countries and since then, both countries have continued to use English as their official language. In both countries, English, apart from being the language of instruction of other subjects studied in the schools, has also been taught as a subject from the basic to the second cycle schools. It is generally believed that a student, who completed the Senior Secondary School Certificate Examination in either country, entered the university as a learner with quite an appreciable level of understanding in English. It was noted, however, that Nigerian students who came to study in Ghana, especially at Wisconsin International University College, had a difficulty understanding English spoken by their Ghanaian counterparts in the university. The contact of the two varieties of English spoken by Nigerian and their Ghanaian counterparts resulted in the Nigerian listeners, intermittently interrupting the Ghanaian student with expressions such as, "excuse me?" , "you said what?" and "you say?" These are a few examples. A preliminary investigation into the problem revealed that part of the problem was due to the way the Ghanaians used word accent and the pronunciation of consonant digraphs "th" and "wh" in word initial position. The Ghanaian students were not sure of some of the words that the Nigerian student articulated in English. It was believed that the Nigerian students, in articulating the English segments, (vowels and consonants combination to produce syllables, words and sentences) made use of a wide range of tones and vowel substitutes, which affected the recognition of words they used in different ways. This situation, undoubtedly, suggested that there were some difficulties in the way each speaker of English perceived the words that their counterparts articulated. The major question posed was why do students of Ghana and Nigeria have difficulty understanding the spoken English of each other? In order to direct the collection of data, three hypotheses were formulated. British English then, became our standard for accessing word accent, consonant digraphs and vowels.

### 1.1 Research Hypotheses

1. There is a significant difference between Ghanaian and Nigerian students with regards to the placement of English word accent.

2. There is a significant difference between Ghanaian and Nigerian students in terms of articulation of consonant digraphs.
3. There is a significant difference between Ghanaian and Nigerian students in the pronunciation of vowels in words.

## 2.0 Literature Review

Word accent typically involves a combination of the features of pitch, duration and intensity on a particular syllable of a word (Lehiste, 1970). The combination of these features caused one syllable within a word to become more prominent than others in the same word (Couper-Kuehlen, 1986). The syllable which was pronounced with a greater force was called the accented syllable or the stressed syllable (Hayes, 1995). “Accent” in this case meant “emphasized”. In English, there are some few words that the native speakers do not always agree on where to put the accent, but generally every lexical word had an accent and the accent had a fixed distribution in the language. For instance, most two syllable nouns put the accent on the first syllable; a two syllable verb would normally have the accent on the second syllable and most two syllable adjectives put the accent on the first syllable. Most words that end in “-ic, -sion and -tion,” put the accent on the penultimate syllable (i.e. second syllable from the end). Generally, words that ended in “-cy, -ty, -phy, and -al” put the accent on the ante-penultimate syllable (i.e. third syllable from end). Compound nouns in English generally put the accent on the first syllable and most compound adjectives put the accent on the second syllable while generally, compound verbs had the accent on the second syllable. A mistake in a word accent could be a cause of misunderstanding in English. This was because accenting the wrong syllable in a word could make the word very difficult to hear and understand. Again, a word which was accented differently could change the meaning or the class of word.

Word accent had been shown to play an important role in language processing by adults. Psycholinguistic experiments showed that English-speaking adults used the strongest pattern to extract words from fluent speech in difficult conditions (Cutler & Butterfield, 1992; Donselaar, Koster & Cutler, 2005; Mattys, White & Melhorn, 2005). Other works showed that nine months’ old children learning English preferred to listen to word lists containing the more prevalent strong-weak accent. This preference indicated that aspect of the word was most salient to infants at this age (Jusczyk, Culter & Redanz, 1993). Importantly, infants were shown to use this preference for strong-weak accent patterns to detect words in fluent speech and to help them develop their lexicon (Morgan, 1996; Mattys, Jusczyk & Morgan, 1999). Word accent also helps the development of speech. Researchers such as Demuth (2001); Kehoe (1998); Kehoe & Stoel-Gammon (1997) and Fikkert (1993) showed that the earliest utterances of young children used word accent to gradually build up from simple forms to more complex phonological structures. For English, where the preferred accent pattern was strong-weak, weak syllables were initially omitted (Demuth, 2001).

Other writers looked at digraphs in language. A digraph refers to a single sound, or phoneme which is represented by two letters. In digraphs, consonants join together to form a kind of consonant team, which make a special sound. For instance, *p* and *h* combine to form *ph*, which makes the /f/ sound as in *photo*. Kosur (2012: 1) defined it as “a pair of letters used to represent one phoneme in the written form of a language”. According to him, there are two kinds of digraphs namely, consonant and vowel digraphs. Consonant digraphs are those spellings where two letters are used to represent a single consonant phoneme. Consonant digraphs in English include *th* for /θ/ and /ð/, *ng* for /ŋ/, *ch* for /tʃ/, *ph* for /f/ and *sh* for /ʃ/. Vowel digraphs involve spelling patterns where two letters are used to represent a vowel sound. The /ai/ in *bail and sail* for instance, are a vowel digraph. One research which evaluated young children's use of lexical inference, compared transfer from shared rimes (e.g., “*beak*”-“*peak*”), or head rimes (e.g., “*beak*”-“*bean*”), under three conditions: Firstly, when both clue word pronunciation and orthography were present at transfer; secondly, when only the pronunciation of the clue word was given; and thirdly, when the clue was pre-taught. It was found that, equivalent transfer occurred in both the first and the second conditions where clue word pronunciations were provided at transfer, but no transfer occurred in the third condition where the clue word was (Kosur, 2012).

There was yet another category of writers who worked on vowels in language. Vowels are language sounds that are produced with an approximation without any obstruction in the air passage (Jones, 1956). Among all the organs used in the production of sounds (i.e. articulators), only the tongue is prominent in the production of vowels. Vowels sounds are produced through the mouth (i.e. oral sounds). Some works like Duthie, (1996), discussed the place and manner of articulation of vowels and the position of the lips during the articulation of vowels. This work researched into the substitution of vowels in English words by Nigerian student and the influence it had on their Ghanaian counterparts.

## 3.0 Research Design

Case study design was used in this study and the method was the survey method. A text was administered to the students of the two countries to read and the reading was recorded for analysis. The study was conducted among

a population of 182 learners in the Business Study Programme of Wisconsin International University College, Ghana. Systematic sampling in the random beginning method was used to select 40 of them, that is, 20 from each country that participated in the research. Out of the 20 from each nation, one-half comprised females and the other half were males. The researchers considered one variable, background (i.e. nationality) as an independent variable and three dependent variables, the consonant digraphs “th” and “wh”, word accent and vowel articulation in this work.

### 3.1 Instrument

A text made up of carefully selected words was composed and given to the students sampled to read. The text contained some vowels and bi-syllabic words which put the accent mark on either the first or the second syllable and some consonant digraphs. The text was pre-tested on five students from each country. It was found that the passage brought out the pronunciation difficulties and some word accent issues that the researcher wanted to test. In each case two possibilities were found. In the case of word accent, either the accent was placed at the beginning of the word or at the middle of the word. With consonant digraphs, the learner either pronounced the cluster correctly or substituted it with a single consonant and in the case of vowels, either the vowel was articulated rightly or it was substituted by another vowel. All these were taken into consideration in designing the table for the scores.

The passage was then presented to the 40 students who were selected for the study to read on the 25<sup>th</sup> and 30<sup>th</sup> of September, 2013. The essence of the text was to find out how students from both nations pronounced the selected consonant digraphs and vowels, and how they marked accent on some selected words in the text. Their pronunciation of these words was compared to the transcribed forms in the British English. In the case of accent, the words were autographically written. Where the student had placed the accent was indicated by a hyphen (-). Pearson Chi-Square test and the Cramer’s V were used to test the variables. These scales enabled the researcher to ascertain the extent to which each speaker conformed to or deviated from the British Standard English. The researcher was then able to find the speakers of an English variety which posed the greater difficulty of understanding to the other.

### 3.2 Procedure

Each student was given the text which he or she used five minutes to prepare. The student then read out the text to the researcher who recorded it for analysis. The following word accent was tested in the reading passage: “estate”, “telephonist”, “universities”, “highlights”, “cocoyam”, “umbrella” and “mistake”. Each of the words had the accent on the first syllable of the word. A learner who placed the accent on the first syllable scored two marks and the one who placed the accent on the second syllable or on the third syllable in the case of “universities”, scored one mark. Regarding consonant digraphs the following words were examined: “there” /-ðeɪ(r)/; “father” /fɑ:ðə(r)/; “the” /ðə/; “that” /ðæt/; “which” /wɪtʃ/; “where” /weə(r)/; “with” /wɪð/; and “this” /ðɪs/. A learner who articulated a consonant digraph correctly scored two (2) points for each. The one who articulated it wrongly scored one (1) mark for each. On the issue of vowels, the bolded vowels in the following words were tested: mother / mɒðə(r)/; brother / brʌðə(r)/; turned / tɜ:nd/; but / bʌt/; news / nu:z/; knew / nu:/; touching / tʌtʃɪŋ/.

### 4.0 Analysis of Data

Data obtained from the text read was analysed by simple frequencies and percentages. Pearson Chi-Square test was used to find the significant differences that existed between Ghanaian and Nigerian students with regards to placement of accents, in articulation of some selected consonant digraphs and pronunciation of some vowels. Cramer’s V was also used to test the strength of the differences that existed between the variables.

Demographic information of the respondents (see table 1.1) showed 40 students participated in the research. This was made up of ten males and ten females from each country.

### 4.1 Test of Hypotheses

Hypothesis 1: There is a significant difference between Ghanaian and Nigerian students with regards to the placement of English word accent.

The data (Table 1.2) showed that 85.0%, (i.e more than 8 out of 10) Ghanaian students and 15% (i.e. more that 1 out of 10) Nigerian students pronounced most of the words with accent wrongly placed on them. On the contrarily, 20 respondents constituting 3% (i.e 3 out of 10) Ghanaians and 85.0% (i.e. more than 8 out of 10) Nigerians pronounced most of the words with accents correctly palced on the words. This implied that most of the Nigerians articulated word accents better than their Ghanaian counterparts. Clearly, there was a percentage difference of 70 between the total number of Ghanaian and Nigerian students who had most of the pronunciations correct in terms of word accents.

To test the significance of this difference and the strength of the relationship between the two countries in terms of word accent, Chi-square test and Cramer’s V were computed (as shown in tables 1.3). The chi-square test indicated that the difference between Ghanaian and Nigerian students with regards to placement of word accent

was statistically significant (Pearson Chi-Square Value = 19.600,  $p < 0.01$ ). Thus, the hypothesis H1 that there is a significant *difference between Ghanaians and Nigerian students in terms of placement of accent on English words* was confirmed.

In order to test if this difference was not by chance, Cramer's V was used to test the strength of the relationship between Ghanaian and Nigerian students with regard to placement of word accent. It was found that there was a vast difference between the manner Ghanaian students placed word accent from that of their Nigerian counterparts. It became evident that word accent was one of the elements that posed a problem of understanding between students from both countries.

The symmetric measure showed that the relationship between the two variables was quite strong (Cramer's V = 0.700,  $p < 0.01$ ). This implies that knowing a person's nationality might give us some amount of confidence to guess his/her placement of word accent on bi-syllabic words.

*Hypothesis 2: There is a significant difference between Ghanaian and Nigerian students in terms of articulation of consonant digraphs.*

The data (Table 1.4) showed that 85% (i.e. more than eight out of ten Ghanaian students articulated consonant digraphs wrongly and 100% Nigerian students (i.e. ten student out of ten) articulated consonant digraphs wrongly too. The table also showed that only 15% Ghanaian students (that is, more than one student out of ten) articulated consonant digraph correctly and 7.5% Nigerians (i.e. not a single person out of ten) articulated consonant digraphs correctly. This implied that, on the average, Ghanaian students' articulation of consonant digraph was quite better than that of Nigerian students.

The chi-square test indicated that based on the sample, the difference between Ghanaian and Nigerian students with regards to articulation of consonant digraphs was statistically significant (Pearson Chi-Square Value = 0.07,  $p > 0$ ). This confirmed the hypothesis (H2) that there is a significant difference between Ghanaian and Nigerian students in terms of articulation of consonant digraphs.

The symmetric measure, however, for this test (H2) as shown in table 1.5, indicated that the relationship between the two variables was very weak (Cramer's V = 0.285,  $p > 0.72$ ). This implied that consonant digraphs did not pose much problem of understanding to both nationalities in the class. It also implied that knowing a person's nationality was not a criterion to guess his/her articulation of consonant digraphs.

*Hypothesis 3: There is a significant difference between Ghanaians and Nigerian students in the pronunciation of vowels in words.*

The data in Table 1.6 showed that 0% Nigerian student (i.e. no Nigerian student) pronounced the vowels tested in the selected words correctly. On the contrary, 100% (i.e. ten out of ten Ghanaian students pronounced the selected vowels correctly.

The chi-square test showed that the difference between Ghanaian and Nigerian students with regards to pronunciation of vowel was statistically significant (Pearson Chi-Square Value = 36.190,  $P < 0.01$ ). This confirmed the hypothesis (H3) that there is a significant difference between Ghanaians and Nigerian students in the pronunciation of vowels in words.

The symmetric measure for H3 indicated that the relationship between the two variables is very strong (Cramer's V = 0.951,  $p < 0.01$ ). This implied that the substitution of vowels in words articulated by Nigerian students posed a problem of recognition of words and for that matter, understanding to their Ghanaian counterparts. It also implied that knowing a person's nationality might be enough to be able to conclude on his/her pronunciation of some vowels.

## **5.0 Discussions and conclusion**

In this work, the researcher investigated the influence of supra-segmental features (word accent, consonant digraphs and articulation of vowels) of the English spoken by Ghanaian students on their Nigerian counterparts and vice versa. It was found that Ghanaian students' placement of word accent posed difficulty of understanding to Nigerian students. Nigerian students' substitution of vowels in some words also posed a problem of recognition of those words to their Ghanaian counterparts and for that matter, difficulty in understanding those words. The difference in articulation of consonant digraphs and vowels also marked the cultural identity of the two countries represented in the class.

It was also found that both Nigerian and Ghanaian students' of English compromised in pronouncing some consonant digraphs distinctly from the British Standard of Received Pronunciation. It was noted that Ghanaian and Nigerian students pronounced consonant digraphs in similar ways. In so doing, consonant digraphs did not pose a major problem of understanding to any of them. The compromise in articulation of consonant digraphs by students from the two countries makes their spoken English distinctive from the British Standard of Received Pronunciation. The work concluded that, a further research needs to be done to find out if the students of one nationality assimilate the word accent and vowel articulation of the other country as they stay together for the four year course duration.

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**Table 1.1: Demographic Profile of Respondents**

Nationality	Sex	Frequency	Percent
Ghanaian	Male	10	25.0%
	Female	10	25.0%
Nigerian	Male	10	25.0%
	Female	10	25.0%

Table 1.2: Difference between Ghanaians & Nigerians in terms of placement of word accent

			Accent		Total
			Wrong Answer	Correct Answer	
Nationality	Ghanaian	Count	17	3	20
		% within Ghanaians	85.0%	15.0%	100.0%
	Nigerian	Count	3	17	20
		% within Nigerians	15.0%	85.0%	100.0%
Total		Count	20	20	40
		% within nationality	50.0%	50.0%	100.0%

$$X^2 = 19.600, df = 1, p = 0.00$$

Table 1.3: Symmetric Measures for H1

		Value	Approx. Sig.
Nominal by Nominal	Phi	.700	.000
	Cramer's V	.700	.000
N of Valid Cases		40	

Table 1.4: Difference between Ghanaian & Nigerian students in terms of articulation of consonant digraph

			Consonant Digraph		Total
			Wrong Answer	Correct Answer	
Nationality	Ghanaian	Count	17	3	20
		% within Ghanaians	85.0%	15.0%	100.0%
	Nigerian	Count	20	0	20
		% within Nigerians	100.0%	.0%	100.0%
Total		Count	37	3	40
		% within nationality	92.5%	7.5%	100.0%

$$X^2 = 3.243, df = 1, p = .072$$

Table 1.5: Symmetric Measures for H2

		Value	Approx. Sig.
Nominal by Nominal	Phi	-.285	.072
	Cramer's V	.285	.072
N of Valid Cases		40	

Table 1.6: Difference between Ghanaians & Nigerians in pronunciation of vowels

			Vowels		Total
			Wrong Answer	Correct Answer	
Nationality	Ghanaian	Count	0	20	20
		% within Ghanaians	.0%	100.0%	100.0%
	Nigerian	Count	19	1	20
		% within Nigerians	95.0%	5.0%	100.0%
Total		Count	19	21	40
		% within nationality	47.5%	52.5%	100.0%

$$X^2 = 36.190, df = 1, p = .000$$

**Table 1.7: Symmetric Measures**

		Value	Approx. Sig.
Nominal by Nominal	Phi	<i>-.951</i>	<i>.000</i>
	Cramer's V	<i>.951</i>	<i>.000</i>
N of Valid Cases		<i>40</i>	

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