# PHONOLOGICAL FEATURES OF ENGLISH AS SPOKEN BY SOME FINAL YEAR SENIOR HIGH SCHOOL STUDENTS IN GHANA

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## DECLARATION

I do hereby declare that with the exception of the cited references, this work is the result of my own original research.

It has not been submitted in whole or in part to any other university.

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# DEDICATION

To my parents and siblings-

Mary, Becky, Gabby, Michael and Ralph

And

To Joe: *without wax*

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*What shall I render to my God for all His mercy store?*
*I'd take the gifts He has bestowed, and humbly ask for more!*

THANK YOU!

## ABSTRACT

*This study was to determine if any trends could be detected in the English spoken by twenty Ga and twenty Asante-Twi final year Senior High School students. The researcher was interested in two things: the first was to use the Accent Phonology theory by Trubetzkoy (1931) to see where similarities, approximations and differences occur between the English spoken by the students and RP: the second was to see if it was possible to identify any respondent as Ga or Asante-Twi by hearing him or her speak English.*

*The data consisted of words and sentences which the respondents had to read out. Their readings were recorded, transcribed and their approximations to the RP consonants, vowels, stress and intonational patterns were analyzed.*

*Results showed that out of the 20 RP vowels looked at, the respondents made use of 12: seven pure vowels and five diphthongs. The respondents' use of the voiced dental fricative (ð), the velar nasal (ŋ) the glottal fricative (/h/), the alveolar and post-alveolar approximants (/l/ and /r/, respectively), registered more variation from the RP than the other consonants. The respondents had some knowledge of stress patterns in English, but failed to make distinctions between weak and strong forms of grammatical words. They also carried the syllable-time rhythm of their L1s into English.*

*Results also revealed that listening to the way a respondent realized the RP vowels was not an adequate method to tell which L1 he or she speaks. What is more, with the consonants, the only ones that might be used to identify one group from the other are the glottal fricative / h/, the post-alveolar /r/ and the alveolar approximants /l/, and even with the last two, the differences between the two groups are not significant.*

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# CHAPTER ONE

## INTRODUCTION

### 1.1 BACKGROUND

In recent years, as the English language spreads across the world and is accepted by many as their second language, one of the issues surrounding the English language has had to do with the controversy of how to deal with non-native varieties of English, which are the varieties of second-language speakers of English. While some have embraced these varieties, others condemn them. According to Bamgbose (1996:9),

> " The labels 'Non-native Englishes' and its variant 'New Englishes' have become so familiar to those researching in English as spoken or written in non-native contexts that it will come as a surprise that anyone will dare to question the validity of the concept which they represent".

Clifford H. Prator, on the other hand, believes that a "second language variety of English is a tongue caught up in a process that tends to transform it swiftly and quite predictably into an utterly dissimilar tongue" (Prator, 1968:464), and so such varieties of English must not be accepted.

But these arguments and counter arguments have not stopped the emergence of such varieties as Indian English, Pakistani English, Malaysian English, Singaporean English, Filipino English, South African English, Liberian English, Nigerian English, and Ghanaian English.

One aspect of these new varieties is that they contain certain unique characteristics that set them apart from the standard spoken English. These characteristics have been treated differently by different people.

Owusu-Ansah (1997:23-33) discusses the issues of nativisation, norm-breaking and standardization of the English language in Ghana. He states that Ghanaian English, as any other variety of English, does show certain different features from Standard English. Some of such features have been described by some writers as evidence of fallen standards and have been condemned, while others are accepted as nativised forms. He states that there is a need "to guide the process of nativisation along the path towards a national standard that is both internationally and locally acceptable" (p.24).

The need for a national spoken standard has arisen because the Received Pronunciation, which hitherto was seen as the standard pronunciation of English, has lost its recognition.

### 1.1.1 THE RECEIVED PRONUNCIATION

The British native speaker's ideal when it came to pronunciation, in the 20th century was the Received Pronunciation. Daniel Jones, in the first edition of *The English Pronunciation Dictionary* described the type of pronunciation recorded as "that most usually heard in everyday speech in the families of Southern English persons whose menfolk have been educated at the great public boarding schools" (Jones, 1997, 15th ed). He labelled his model 'Public School Pronunciation (PSP)', a term he changed in 1926 to 'Received Pronunciation' or RP. He states in the introduction of the 11th edition of his dictionary that:

> "I wish also to state that I have no intention of becoming either a reformer of pronunciation or a judge who decides what pronunciations are 'good' and what are 'bad'. My aim is to observe and record accurately, and I do not believe in the feasibility of imposing one particular form of pronunciation on the English-speaking world. I take the view that people should be allowed to speak as they like. And if the public wants a standardized pronunciation, I have no doubt some appropriate standard will evolve itself. If there are any who think otherwise, it must be left to them to undertake the invidious task of deciding what is to be approved and what is to be condemned…" (Jones, 1956: xvi)

Though Jones said that he truly had no intentions of 'imposing one particular form of pronunciation on the English-speaking world', RP soon became the accent that everybody wanted to use. According to Gimson (2001:79), this accent,

> " ... a result of a social judgement rather than of an official decision as to what is 'correct' or 'wrong', became more widely known and accepted (even) through the advent of radio and television. The BBC used to recommend this form of pronunciation for its announcers mainly because it was the type which was most widely understood, and which excited the least prejudice of a regional kind".

In recent years, RP no longer enjoys the prestige it used to. Today, many educated native English speakers are combining their regional accents with RP- an accent labelled by

Crystal (1995), as 'modified RP' ( cited by Jenkins, 2000:14). Even the BBC embraces all kinds of accents now. What is heard on the air waves is not the accent of the home counties but rather the differing accents from all regions.

Thus, if even the native speakers of English are turning down RP and embracing their own accents or dialects of English, it becomes quite ludicrous to insist that the teaching of second language learners should be based on RP.

Those who are of the view that RP can no longer serve the function it used to, give the following reasons:

- Native speakers are taking up their indigenous accents in place of the RP
- Materials for second language teaching include "elements that are unnecessary, unrealistic and at worst, harmful for preparing teachers to equip their learners with pronunciation skills appropriate to an international use of English". (Jenkins, 2000:1)
- Forcing second language learners to forsake those marks of mother tongue identification "may even be seen as forcing them to reject their own identity" (Dalton and Seidlhofer, 1994a:7).
- There are very few people who can teach or examine students using RP as the norm.

The last point is true in Ghana where RP cannot be effectively taught or examined because there are only a handful of people, if any at all, in the whole country, who can be said to use this accent. The teachers in the schools most definitely do not. So, while

students' spoken English is assessed using the RP model, they do not use this accent, neither are they taught it. This creates a big problem since there is no way students can pass an examination in a subject they have not been taught. Finding a national standard therefore will provide teachers with materials that can be taught and examined appropriately.

Koranteng (2006:1) in her thesis, *Ghanaian English: A description of its sound systems and phonological features*, attempted to "...find what the standard to aim at is which can serve as a reference point for the teachers and examiners - a norm which will be distinctively Ghanaian and be acceptable to the Ghanaian as well as to other users of English elsewhere."

Finding a national standard is important because,

> "...as Kachru states, in an L2 situation, speakers ought to be able to distinguish between mistakes and deviations because in the final analysis, Ghanaians must be known to be using an accent of English, and not a different language. Setting up parameters will also help eliminate a possible 'anything-goes-attitude' among Ghanaians and help speakers strive after a form of GE target" (Koranteng, 2006:53)

To create this national standard, RP must be used, not, however, as a norm, but as a model, a reference point. Dalton and Seidlhofer (1994b) explain (as quoted in Jenkins, 2000:18):

If we treat RP and/or General American as a norm, we connect them strongly with ideas of correctness.

But:

If we treat RP and/ or General American as a model, we use them as points of reference and models for guidance.

### 1.1.2 L1 TRANSFERS

"L1 transfer usually refers to the incorporation of features of the L1into the knowledge system of the L2 which the learner is trying to build" (Ellis, 1994:28). It is assumed that the habits of the L1 will be carried over into the L2. The importance of L1 transfers in second language research cannot be overemphasized. As Ellis (p.300) instructs "...no theory of L2 acquisition that ignores the learner's prior linguistic knowledge can be considered complete".

In some countries, like Nigeria, it has become impossible to find a monolithic pronunciation of English to use as a national standard. This is because of the influence of L1 transfers. For this reason, linguists recognize three geographical accents, the Northern, Western and Eastern, each of which has its own characteristics (Dadzie, 2004:90).

Many statements have been made over the years about the English spoken in Ghana. Some writers, like Dolphyne (1999:97), believe that the L1 has so much influence on the Ghanaian that it is possible to identify the linguistic background of a Ghanaian just by

listening to him (or her) speak English. The question that arises then is whether it is as true today as it might have been some years ago that one can tell the L of any Ghanaian just by listening to him or her speak English.

## 1. 2 AIMS OF THE STUDY

This thesis identifies the phonological features of the spoken English of twenty respondents, two groups of final year Senior High School students: one whose L1 is Asante-Twi, and one whose L1 is Ga.

The aim of this study is to determine if any trends can be detected in the English spoken by these students. There are two things that are of interest. The first is to see where similarities, approximations and differences occur between the English spoken by the students and RP. The second is to find out if there are any differences between the way students whose L1s are Ga or Asante-Twi speak English, and if these differences can help identify the student's L1.

## 1. 3 SIGNIFICANCE OF STUDY

In the first place, this study seeks to add to the work that has been done on the phonology of the English spoken in Ghana.

The reason why final year Senior High School students are being used for this study is that it is hoped that the results from this study will be a wake up call to educators and

teachers that there is a need to take serious interest in the way students leaving secondary school speak English.

The researcher believes that, examining the English of these students will provide information that will be helpful to those working to find an appropriate model of pronunciation for Ghanaians.

This study seeks to either confirm or deny the widely held assertion that it is possible to identify an English speaker whose L1 is Asante-Twi or an English speaker whose L1 is Ga.

## 1. 4 LIMITATIONS

This is purely a descriptive and comparative study. The study identifies the differences between the way 10 Ga and 10 Asante-Twi final year Senior High School students speak English, on the one hand, and then identify differences between the speakers' English and RP, on the other. This study, however, will not go as far as stating which of the differences found between the twenty students' English and RP must be accepted as nativised forms and which should be discarded as errors. This is beyond the scope of this work, since to answer these questions would take much further research. But at least, describing and comparing the way these two groups speak English can be said to be a step towards answering this question.

The respondents in this study are from two languages groups - Ga and Akan. The respondents who fall under the Akan group are speakers of the Asante-Twi dialect of Akan. Any comment made about the Akan group is in reference to only the Asante-Twi speakers in this study, who come from the Eastern Region of Ghana (Akim-Oda, and its close environs). Also, any comment made about the Ga group is in reference to only the Ga speakers in this study, who come from the predominant Ga settlements in the capital city, Accra (Osu, and its close environs).

Again, this research is a micro study with only 20 respondents. The researcher is aware that because of this small sample, certain generalizations cannot be made, and it would be difficult to extrapolate with findings made here. However, results from this study will give an idea as to how at least two groups of students from two schools in Ghana are speaking English, and also whether there are differences between the way they speak English depending on their L1.

## 1. 5 LITERATURE ON ENGLISH PRONUNCIATION IN GHANA

### 1.5.1 CONSONANTS AND VOWELS

Not much work has been done on the pronunciation of English in Ghana. An attempt is made in the following pages to a review some of the relevant work done on the pronunciation of English in Ghana, by showing how similar or different they are from the present one.

In her PhD thesis of 1987 and published in 2005, Adjaye compared and contrasted the English pronunciation of thirty-eight Akan, Ewe and Ga speakers with RP. The respondents, apart from being native speakers of those languages, also represented the 'educated Ghanaian' who had gone through the first, second and third cycle institution of education. Her work was analytic and covered both segmental and prosodic features.

As she herself states, the respondents she used, whose mean age was 32 years, were drawn from an earlier educational system: ten years first cycle: six years of primary education, followed by a four-year Middle school education five years secondary education that led to the General Certificate of Education Ordinary Level, followed by two years of Advanced Level for entry into the university, which generally took three years (Adjaye, 2005:30). That system of education has been reformed. Currently, the system runs thus: three years of pre-school, six-year basic education, three years Junior High, four years Senior High and four years of university education.

Adjaye also noted that the accent of most speakers of English at the time she collected her data was influenced by English- speaking missionaries and teachers. Her respondents mentioned that they had English, Irish, American and West Indian teachers. Today, it is very rare to find such foreign teachers, as almost all the teachers are Ghanaians, most of whom have also had Ghanaian teachers.

This current study will see whether the above changes have caused a change in the English spoken by the twenty respondents in this study.

According to Dolphyne (1999:97), most of the errors of spelling can be attributed to mispronunciation. Some of the examples she gives are:

| | |
|---|---|
| People turn to do something | ('turn', instead of 'tend') |
| Prices will be awarded | ('prices', instead of 'prizes') |
| Poor leaving conditions | ('leaving', instead of 'living') |
| Seating allowance | ('seating', instead of 'sitting') |
| Touch-bearer | ('touch', instead of 'torch') |

(Dolphyne, p.98)

It is obvious that these errors are frequently found in Ghana, and they border on the choice of vowels and voicing qualities. She goes on to highlight some of the factors that affect the way Ghanaians speak English as L1 transfers, social attitudes (conformity), the environment in which the individual grew up, the influence of teachers who themselves do not speak good English, and the lack of a standard for Ghanaians.

Bobda's (2000b) paper on the uniqueness of Ghanaian English pronunciation shows that Ghanaian English stands out when compared with the English spoken in the other West African countries with which it shares colonial, sociolinguistic and sociological experience. These differences are seen in the way Ghanaians produce RP / ʌ/, /ɜ:/ and /ə/.

He mentions that while /ʌ/ is generally produced as /ɔ/ in most West African countries that were colonized by the British, in Ghana, it is produced as /ɔ/, /a/ or /ɛ/, depending on the speakers' age, ethnic background, some assimilation processes or the orthography of the word in question, though there is an increase in use of /a/ by all. Ghanaians are also unique in their use of /ɛ/ for RP /ɜ:/, and for the use of /a/ for RP /ə/ in all environments that these sounds appear. Thus, Bobda(2000b:196) concludes that Gyasi (1991:27), was right when he said that "much work is done by the vowel /a/ in Ghanaian English". The current study shows that this is true.

In 'The Sound System of Ghanaian English', Dako (2001) explores the recordings of the speech of students of the Department of English, University of Ghana. The L1s of the students selected were Akan (Asante Twi and Akuapim Twi dialects), Ga, Ewe and Dagaare. Her aim was to find out the sound features common to these students' English, regardless of their L1s. She admits that L1 transfers do affect the way Ghanaians speak; nonetheless, there are certain features which are common to all Ghanaians, irrespective of their native languages.

It would be difficult to draw conclusions that the features she identifies are really indicative of all Ghanaians because of the small size of respondents.

Koranteng (2006) examined the sound system of Ghanaian English in a bid to find a suitable model for Ghanaians, for which her respondents were a "prototype of what has been labelled as stage three on the 4-tier cline of bilingualism" (p.60). It is this same label that Sey (1973) refers to as 'ambilingualism', and Schneider (2003) as 'functional nativeness'.

Just like other researchers have stated, Koranteng also found that Ghanaian English has five out of the twelve RP pure vowels (/i/, /ɛ/, /a/, /ɔ/, and /u/). She also noted that the diphthongs in Ghanaian English can be described thus:

| | |
|---|---|
| [aɪ-ai] | /ɪə/ is replaced by [ɪɛ] |
| [aʊ-au] | /eɪ/ is replaced by [e] |
| /ɔɪ/ | /əʊ/ is replaced by [o] |

/ɛə/ is replaced by [ɛ]

/ʊə/ is replaced by [ua,ʊə], and also by [ɔ] or [u].

Huber (2008) also points out that Ghanaians reduce the twelve RP monophthong to five; /i, ɛ, a, ɔ, u/. The explanation he gives for this is that Ghanaians reduce the length distinctions so that when /i:- ɪ/, /u:- ʊ/, /ɔ- ɒ/ appear in words, they are produced as if they were homonyms, with the second vowels having more openness. He concluded that the central vowels, which are absent in most West African languages, were realized by only

14% of the people he interviewed, most of which had Ewe, a language that has the central vowel /ə/, as their L1. He agrees with Bobda (2000b) that the /ʌ/>/ɛ/ phenomenon started with the Fantes. While Bobda claims that there is the use of /ɔ/ for words that have - o - spellings, Huber points out that it is not always the case, for in /kʌm/, for instance, Ghanaians use /a/ not /ɔ/. He also mentions that the shift from /ɔ/ to /a/ might very well have started long before the 1960s when Bobda claimed it did.

Huber also states that the monophthonisation of most of the RP diphthongs is not absolute, for "one and the same speaker may vary between monophthongs, slight diphthong or may retain the RP diphthong" (p.81).

### 1.5.2 STRESS AND INTONATION

Odamtten (1989) laments that

> "The problem of deviant pronunciation has reached a state where the deviances seem more acceptable than the appropriate pronunciation of a large number of English words previously pronounced with the appropriate sounds and stresses by educated Ghanaians..." (p.1)

She goes on to say that the Ghanaian speaker of English has not caught up on the use of stress and that the Ghanaian inculcates the feature of syllable - timing from his or her L1 into English. She explains that it is because of this last point that the Ghanaian speaker of English tends to give equal stress to each syllable in a word.

In a reaction to the description of second language speakers' tendency to give equal stress to all syllables by some writers like Odamtten, quoted above, Bobda (1997) points out that,

> In new Englishes just as in native English, one syllable in a polysyllabic word is always more prominent than the others."

He gives an example from Cameroon English, in which the words 'labourer' and 'banana' are not produced with equal stress on all the syllables, but rather as ''labourer' and 'ba'nana', respectively.

The point about Cameroon English above also applies to Ghanaian English, for this current study shows that the respondents indeed realized one syllable in a disyllabic or polysyllabic word more prominent than the others.

Dolphyne (1998) agrees that deviances occur in the stress patterns of West African speakers of English because stress is not a significant feature in the indigenous languages. She further states that West African speakers of English do not have problems with words which have different pronunciations depending on the word class (like im'port-verb, and 'import- noun) because of the association of High Tone with stress, so that *'import(* noun*)* is produced with a High-Low pattern, while *im'port (*verb) is produced with a Low-High pattern.

Koranteng's (2006) study also noted that though many English words are stressed correctly by Ghanaians, there is sometimes evidence of 'Forward Stress Shift'. Ghanaians

do not use the weak forms of grammatical words, though this, according to her, does not mean that they are not understood. One of the reasons for this is that the syllable-timing feature of most Ghanaian languages, so that every syllable is given approximately equal prominence. She claims further that Ghanaians use level tones rather than rising tones for polar questions.

According to Tchume (1999),

> ....the EL2 speaker may not achieve the right kind of stress-rhythm typical of native speakers, yet he is able to assign strong stress that makes a syllable more prominent".
>
> And
>
> "Even though there is a perceived manifestation of a primary stress on one particular syllable within a word pronounced by the educated Ghanaian, he is not able to reflect in his pronunciation, the rhythmic pattern that is associated with the obscuring of reduced vowels" (p.33).

The results from this study on stress are consistent with the statements made by Tchume (1999).

# CHAPTER TWO

# THEORETICAL FRAMEWORK & METHODOLOGY

## 2. 1 THEORETICAL FRAMEWORK

In linguistics, the word 'accent' is generally seen as the manner of pronunciation of any language, though it has been known to be used to refer to other things.(Refer to page).The development of accents cannot be prevented as long as people move and spread out.

The Accent Phonology Theory by Trubetzkoy (1931) is an approach to the study of accents. Wells (1982:72) treats differences between accents and defines the accent phonology theory as 'the synchronic approach to analyzing the differences between accents'. He also adopted this theory in a talk he gave at LAGB in Leeds, on the 6th of April, 2001 on "Phonics and accents of English: a view from Phonetics.

Gimson (2001:84) also points out some of these differences between accents. He says that accents can vary on four different levels. Following is a look at the four levels on which accents can vary as described by this theory and more especially how Gimson does it. Some very relevant examples of such accent differences are given by Wells (2001) though his work was basically on spelling. Where appropriate, therefore, such examples are cited:

- **Systemic differences**: these involve the differences that can be found between the number and identity of the phonemes of the two or more accents under study. Though there may be differences in the number of phonemes, there can also be

the presence of some phonemic contrasts in one of the accents, which may be absent in the other accent(s). An example is the RP contrast in / æ/ and /ɑ:/, which are not present in Scottish English. Another example of such differences is provided by Wells (2001) in his talk. He explains that, "In the accents of the south of England, and in RP, the system of short strong vowels typically has six terms: *pit, pet, pat, cut, pot, put*. None of these words rhymes with any of the others. But in the popular accents of the north, the system comprises only five terms: *pit, pet, pat, pot, put*. The reason is that there *cut* and *put* rhyme perfectly. So do *flood* and *good*, and there is the same vowel in *double* as in *should*."

- **Realization differences**: it is possible for two accents to have the same phonemic system. What may be different may be the way these phonemes are realized. Certain phonemes in one of the accents may be realized differently from the way they are realized in the other accent. The reason for the difference is usually based on social or regional factors. Wells (2001) provides this example of "the different varieties of l-sound, including the vocalized variety that we now usually get in London. Speakers are able to identify [fɪl] and [fɪʊ] as repetitions of the same word, *fill*, and they know that this is the same item as the first part of ['fɪlɪŋ] or ['fɪlɪŋ] *filling*. That is to say, the existence of allophonic differences – dark l, vocalized l, clear l – causes no special problem."
- **Lexical differences**: Apart from the incidence of two accents with the same phonemic system having different phonemic realizations, these two accents can also vary based on lexical distribution. One of the accents may make some selectional differences in some lexical items which the other will not. An example

between RP and General American (GA) is the selectional differences made in 'tomato' (RP [a:] and GA [ei], and 'ecological' RP [i] and GA[e]. "Virtually everywhere where English is spoken there is a social-stylistic variability in the pronunciation of the suffix and word ending that we spell **ing**, as in *running, talking, eating*. We have a 'high' variant with a velar nasal, ['rʌnɪŋ,'tɔ:kɪŋ, 'ɪ:tɪŋ], and a 'low' variant with an alveolar nasal, ['rʌnɪn,'tɔ:kɪn, 'ɪ:tɪn ~ 'ɪ:tn]. Although we can simulate the low variant in spelling by showing the so-called dropped **g** by an apostrophe (*runnin'* etc.) we do not on the whole do so (though the lyrics of pop songs and contact ads on the internet may constitute an exception). More to the point, this variability applies not only to the participial/gerundive suffix of verbs but also to various other items such as *pudding, morning, ceiling* (though not, of course, words such as *king, string, sing*). And for those who often use the alveolar variant it may be less than clear how far this group extends. We hear this when we find people hypercorrecting into ['maʊntɪŋ] for *mountain* or ['kɪtʃɪŋ] for *kitchen*, and obviously people who do this have an extra problem in learning to spell such words correctly, with no **g**, as compared with those of us who have a consistent native distinction between the velar and alveolar word endings."(Wells, 2001)

- **Distributional differences**: Finally, though two accents may have the same phonemic systems, they may vary when it comes to phonotactic prospects, that is, "the context in which certain phonemes occur (in one accent) may be limited"

(Gimson, 2001:84). Wells (2001) says that, "Certain sequences of sounds are permitted in some accents but not in others. The most obvious instance of this concerns the phoneme /r/. In non-rhotic accents such as my own it cannot occur except before a vowel sound; historical /r/ has been lost when not followed by a vowel that is before a consonant or before a pause. In rhotic accents, found recessively in the west of England and part of Lancashire, and also of course in Scotland and Ireland, no such restriction applies. Thus for people like me *lava* and *larva* are homophones. I had to learn by rote that the stuff that comes from a volcano is spelt without a letter **r**, but that the caterpillar is spelt with one. The same applies to *caught* and *court, rota* and *rotor, peninsula* and *peninsular*, and the endings of *half* and *scarf*. We English face a spelling difficulty that the Scots, the Irish, and most Americans do not."

This work uses the accent phonology framework to compare the RP accent with the accent that is used by the respondents to determine the incidences of systemic, realizational, lexical and distributional variations, as well as the similarities that exist between these accents.

## 2.2 METHODOLOGY



### 2.2.1 SELECTION:

**Selection of Languages**

The two language groups from which the respondents were selected are Akan and Ga. Both languages belong to the Kwa sub-family of the Niger-Congo language family, and both are spoken in the southern part of Ghana.

According to the 2000 census, approximately 50% of the inhabitants of Ghana have Akan as L1, though not all of them are native Akans. The Akan language comprises many dialects. Three of these - Akwapim, Fante and Asante have literary status. Twi is used to refer to the Akwapim and Asante dialects, which have more features in common compared to Fante. However, because there still exist differences between the two, distinction is made between Asante-Twi and Akuapim -Twi. The Akan respondents in this research speak the Asante-Twi dialect of Akan. Akan was one of the languages selected because it has the most speakers in Ghana.

Ga -Dangbe is the language group to which the indigenous people of the Greater Accra Region belong. It is made up of two dialects - Ga and Dangbe. The 2000 census puts the number of Ga –Dangbe speakers at about 8% of the total population in Ghana, with the Dangbe speakers being in the majority.

Ga was chosen over Dangbe not only because it is the language of the indigenous people of the capital of Ghana, Accra, but also because most Dangbe natives can speak and or understand Ga, though the reverse is usually not the case.

**Selection of Schools**

Two Senior High Schools were selected for this study, one from the Greater Accra Region and the other from the Eastern Region. The criterion for the choice of school and respondents was based on the following:

- The school must be located in an area where one of the L1s under study is the predominant language.

There were not a lot of choices for Ga. The people whose L1 is Ga are found in the Greater Accra Region. Though there are many Senior High Schools in this region, the problem of urban migration to a large extent, and the use of the computerized school-placement system(when selection of schools is not done by students themselves but by a computer) to a smaller extent, have created a situation of having people resident in Accra from all over the country. This makes it difficult to find a predominantly Ga community. In fact, there are areas in this region where there are more Akan than Ga speakers. What is more, most of the very few predominantly Ga settlements do not have Senior High Schools. Osu Salem Presbyterian Senior High School was selected because it is found in a predominantly Ga settlement and most of the students are Ga. On the other hand, Attafuah Senior High School, in Akyim Oda, in the Eastern Region, was a random

selection out of many Senior High Schools in that region where students are predominantly Twi- speaking.

- The school must be a day school to ensure that the students are inhabitants of the area or its close environs. Osu Salem is a day school, and most of the students are residents of Ga settlements like Osu, Korle-Gonno, Teshie, and Bukom. Attafuah Senior High School has just recently added boarding facilities. This was not so when it was selected for this study. This notwithstanding, most of the students are day students, residing in Akyim Oda, or its environs like Akyim Eyirebi, Akyim Enyinam and Akyim Aboabo .

**Selection of Respondents:**

Twenty students were selected , ten from each school comprising five males and five females. The criteria for choosing the respondents were that:

- they should be in the final year of Senior High School,
- they, as well as both parents, should have either Ga or Asante-Twi (as the case may be) as their L1.
- they should have lived in a predominantly Ga or Twi community (as the case may be) for at least five years.

**Description of Respondents:**

The following are tables that provide information about the respondents' sex, ages, hometowns and places of resident.

Table 1: Ga respondents

| Respondent | Sex | Age | Home town | Place of Residence |
|---|---|---|---|---|
| G1 | F | 24 | La | Nungua |
| G2 | F | 19 | Teshie | Teshie |
| G3 | F | 19 | Osu | Osu |
| G4 | F | 18 | Osu | Osu |
| G5 | F | 19 | James Town | James Town |
| G6 | M | 18 | Osu | Osu |
| G7 | M | 24 | Manyia | James Fort |
| G8 | M | 20 | Bukom | Bukom |
| G9 | M | 17 | La | La |
| G10 | M | 19 | James Town | Korle-Gonno |

Table 2: Twi respondents:

| Respondent | Sex | Age | Home Town | Place of Residence |
|---|---|---|---|---|
| T1 | F | 18 | Akyim Oda | Akyim Oda |
| T2 | F | 21 | Akyim Eyirebi | Akyim Eyirebi |
| T3 | F | 18 | Akyim Oda | Akyim Oda |
| T4 | F | 20 | Akyim Oda | Akyim Oda |
| T5 | F | 18 | Akyim Aprade | Akyim Aprade |
| T6 | M | 20 | Akyim Aboabo | Akyim Aboabo |
| T7 | M | 21 | Akyim Enyinam | Akyim Enyinam |
| T8 | M | 23 | Begoro | Akyim Oda |
| T9 | M | 16 | Akyim Ofuasi | Akyim Ofuasi |
| T10 | M | 23 | Akyim Aboabo | Akyim Aboabo |

The average age of the respondents in both groups is 19 years. This means that the majority of the respondents are in their late teens.

### 2.2.2 DATA COLLECTION

The data for this study consists of words and sentences which the respondents had to read out. Their readings were recorded with a high quality recorder and transcribed later with a digital voice editor.

**Interview:**

Before being made to read out the words and sentences the researcher engaged each respondent in a short interview in which each was asked questions pertaining to his or her linguistic, educational and social background (refer to Appendix I). The interview was also designed to give them the opportunity for free speech and to help them relax before the reading.

**Reading material:**

The section for reading was divided into two: a word list (refer to Appendix II) and a list of sentences (refer to Appendix III).

The words in the list were put together to record vowel and consonant realization in different spelling environments, and word stress patterns. The words were put together alphabetically so that the respondents would not know what is being tested. Because minimal pairs were part of the list, arranging the words alphabetically was also to prevent the same minimal pairs from occurring together. Some of the minimal pairs did appear together in the list, even when it was arranged alphabetically.

The last part of the reading material section was made up of 35 sentences. These were analysed to test the use of stress in connected speech, and the respondents' intonational patterns.

### 2.2.3 PROCEDURE

The first set of respondents recorded were those in the Greater Accra Region (Ga). A random selection of native Ga speakers was made from the final year students of Salem Presbyterian Senior High School (Osu, Accra). Out of these, five females and five males who fitted the requirements needed (refer to page 21) were randomly selected. These ten formed the Ga respondents. One by one, the respondents were interviewed and then asked to read out the words and sentences at their own pace. They were also given the option of skipping words that they found difficult. This was to ensure that the respondents' realizations are not guesses, but the actual way they realized each word.

The above procedure was repeated with the Twi respondents in Attafuah Senior Secondary School, Akim-Oda ( Eastern Region).

The advice to skip difficult words was not followed by some of the respondents. After hesitating for a while, such respondents still went ahead and produced these words as they felt they should be realized. This explains the unusual realization of some sounds like *bury* /**bɛrɪ**/ as /**burɪ**/ by G5, T2 and T3 and *blouse* /**blaʊs**/ as /**blu:s**/ by G6 and as /**blous**/ by T2.

## 2. 3 DATA ANALYSIS

### Transcription

The recordings were transferred from the recorder to a computer. In a quiet room, the recordings were transcribed. The transcription was impressionistic, but based on the RP phonemes (Gimon, 2001).

### The Phonemes

For each of the vowel phonemes, all the words in the word list that are known to be produced in RP with that particular phoneme are listed. Out of these, between five and twelve words were selected for analysis, depending on in how many different environments in which that sound is found. The sound that has a lot of different environments will therefore have more words analysed. The realization of each phoneme by the ten respondents in each group was recorded. The individual realization of each sound used for that phoneme was then expressed in percentages. A score of 50% and above shows that that is the preferred sound the phoneme is represented as by that group of respondents. For example, if for 70 instances of /ʌ/ in the first group (Ga), / a/ appears 36 times, representing 51.43%, it will be interpreted that most of the Ga respondents realize /ʌ/ as/ a/. If the realization scores obtained for a phoneme are all less than 50%, then the realization with the highest score is selected. If there is a 50%-50% configuration, those two realizations will be described as free variants.

For the purposes of this study, if the percentage difference between the realizations of a sound by the two groups is 25% or more, it means that there is a significant difference

between the two groups' realization of that sound. For example, if for 70 instances of /ʌ/ in the first group (Ga), / a/ appears 36 times, representing 51.43%, and for the same 50 instances of /ʌ/ in the second group (Asante – Twi) /a / appears 10 times ( but of course, this did not happen), representing 14.29%, because the percentage difference between the realization of the sound by the two groups is more than 25%, it will be interpreted that there is a significant difference between the two groups' realization of that sound.

For each consonant, all the words in the word list (and a few from the connected speech) known to be produced in RP with that consonant are listed, depending on its position , whether word- initial, medial and final.

The dental fricatives, (/θ/ and / ð/), the glottal fricative (/h/), the post-alveolar approximant (/r/) and the alveolar approximant (/l/), were analysed as the vowels were (above). The rest of the consonants were not, however. Their analyses and discussion were done together. This is because with the exception of a few individual (not group) distinctions, realizations of these consonants are the same or very similar from one respondent to the other. Those few individual distinctions are, however, pointed out.

It must be noted here that this mode of data analysis is not a formular selected from the framework: it was created by the researcher merely to make it possible to draw conclusions about the findings.

# CHAPTER THREE

# THE VOWELS

## 3. 1 RP VOWELS

### INTRODUCTION

RP has 20 distinctive vowels - twelve pure vowels and eight diphthongs; all writers on RP agree on this. However, disagreements arise when it comes to which symbols to use to identify these distinctive sounds. At least, eight different transcription systems can be identified. These are ( as cited by Koranteng, 2006: 56), Daniel Jones'(1918), Trager & Smith's (1951), MacCarthy's (1952), Ida Ward's (1958), David Abercrombie's (1967), Wells & Colson's (1971), Fromkin &Rodman's (1974: 5th ed), and A.C Gimson's (1980:3rd ed).

For the purposes of this study, the transcription system used is Gimson's. But there is one change. Vowel number 3 is transcribed by Gimson as /e/; in this study, it is transcribed as /ɛ/, after Ida Ward (1958), Wells & Colson (1971), and Fromkin & Rodman (1974). The rationale for this change is that using /ɛ/ instead of /e/ for vowel number 3 makes it easy to identify and therefore analyze respondents' realization of the pure vowel (in words like 'dead' and 'bury') and keep it apart from the initial vowel sound in the diphthong /eɪ/ (in words like 'eight' and 'waist'). It must be noted also that Akan and Ga make a distinction between /ɛ/ and /e/. The realization of /ɛ/ in Ga and Akan is similar to the Vowel number 3 in English. This is another reason why /ɛ/, and not /e/ is used as RP vowel number 3 in this study.

The table below summarizes the different transcription systems made mentioned of above:

| Vowel No. | Jones (1918) | Trager & Smith (1951) | MacCarthy (1952) | Ward (1958) | Abercrombie (1967) | Wells & Colson (1971) | Fromkin & Rodman (1974) ( 5th ed) | Gimson (1980) (3rd ed) |
|---|---|---|---|---|---|---|---|---|
| 1 | i: | ij | ii | i | i | i | i | i: |
| 2 | i | ɪ | i | ɪ | ɪ | ɪ | ɪ | ɪ |
| 3 | e | e | e | ɛ | e | ɛ | ɛ | e |
| 4 | æ | æ | a | æ | æ | æ | æ | æ |
| 5 | ɑ: | ɑh | aa | ɑ: | ɑ: | ɑ | a | ɑ: |
| 6 | ɔ | ɔ | ɔ | ɒ | ɒ | ɒ | a | ɒ |
| 7 | ɔ: | ɔh | ɔɔ | ɔ | ɔ | ɔ | ɔ | ɔ: |
| 8 | u | u | u | ʊ | ɷ | ʊ | ʊ | ʊ |
| 9 | u: | uw | uu | u | u | u | u | u: |
| 10 | ʌ | ʌ | ʌ | ʌ | ʌ | ʌ | ʌ | ʌ |
| 11 | ə: | əh | ɜ | ɜ | ɜ | ɜ | ɜ + r | ɜ: |
| 12 | ə | ə | ə | ə | ə | ə | ə | ə |
| 13 | ei | ej | ei | eɪ | e | e | e | e |
| 14 | ou | əw | ou | oʊ | oɷ | əʊ | o | əʊ |
| 15 | ai | aj | ai | aɪ | aɪ | aɪ | aj | aɪ |
| 16 | au | aw | au | aʊ | aɷ | ɑʊ | aw | ɑʊ |
| 17 | ɔi | oj | ɔi | ɔɪ | ɔɪ | ɔɪ | ɔj | ɔɪ |
| 18 | ə | ih | iə | ɪə | ɪə | ɪə | ɪ + r | ɪə |
| 19 | eə | eh | eə | ɛə | ɛə | ɛə | e + r | ɛə |
| 20 | uə | əh | uə | ʊə | ʊə | ʊə | u + r | ʊə |

English Transcription Systems (Koranteng, 2006: 57)

Thus, the sounds to be looked at are:

**Pure Vowels**

| |
|---|
| i: |
| ɪ |
| ɛ |
| æ |
| ɑ: |
| ɒ |
| ɔ: |
| ʊ |
| u: |
| ʌ |
| ɜ: |
| ə |

**Diphthongs**

| |
|---|
| eɪ |
| əʊ |
| aɪ |
| ɑʊ |
| ɔɪ |
| ɪə |
| ɛə |
| ʊə |

The realizations of the above vowels by the respondents are marked for length: [:] fully long, [·] half-long, or short. For instance, /i:/ is a longer vowel than /i·/ which is longer than /i/.

## 3. 2 GA VOWELS

According to Dakubu (2002: 49-50), "Ga has seven oral and five nasal vowel phonemes". The main difference between the oral and nasal vowels is that the latter do not have the half- close pair. Adjaye(2005), who has also done excessive work on the Ga and Akan languages, agrees with Dakubu above. Her diagrammatical presentation of the Ga vowels is reproduced below:

**Ga Oral Vowels**

| | Front | Central | Back |
|---|---|---|---|
| | Spread | Spread | Round |
| Close | i | | u |
| Half-Close | e | | o |
| Half-Open | ɛ | | ɔ |
| Open | | a | |

**Ga Nasal Vowels**

ĩ ũ

ɛ̃ ɔ̃

ã

(Adjaye, 2005:19- 20)

### 3.3 AKAN VOWELS

Akan has nine oral vowels and five nasal vowels (Adjaye, 2005:18). The oral vowels of Akan that Ga do not have are /ɪ/ and /ʊ/. Following is Adjaye's (2005) presentation of Akan vowels:

**Akan Oral Vowels**

| | Front | Central | Back |
|---|---|---|---|
| | Spread | Spread | Round |
| Close | i | | u |
| | ɪ | | ʊ |
| Half-Close | e | | o |
| Half-Open | ɛ | | ɔ |
| Open | | a | |

**Akan Nasal Vowels**

ĩ ũ

ɪ̃ ʊ̃

ã

(Adjaye, 2005:19- 20)

The vowels of Akan and Ga can occur as long vowels and short vowel. When a sequence of two of the same vowel occurs in an environment, it is said to be long:

Akan [ **pʰi:**] = /**p̃ĩĩ**/ - plenty, many

Ga [ **bu:**] = /**búú**/ - mosquito net

"Similarly, phonetic diphthongs, that is, where the two vowels are different, are interpreted as vowel sequences and not as unit phonemic diphthongs", Adjaye (2005: 20).

## 3. 4 FINDINGS ON VOWELS

The realization of the vowels is presented by tables in two groups, the G (Ga) group and the T (Twi) group, respectively, representing the two groups of speakers under study.

### 3.4.1 PURE VOWELS

#### 1. /i:/

Words that have this vowel include: *cheap, complete, beads, be, deep, feels, field, key, machine, magazine, people, piece, key, reaches, seen, sheep, teacher, tea cup, police, siege, week.* Out of these, the following words were selected for analysis:

| Word | Realizations | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
| CHEAP | i· | i | i· | i: | i | i | i | i: | i | i |
| BEADS | i: | i· | i· | i: | i | i: | i: | i· | i | i |
| FEELS | i | i: | i· | i: | i | i | i· | i | i | i |
| SEEN | i | i: | i· | i· | i | i | i | i | i· | i |
| PEOPLE | i | i: | i | i: | i· | i: | i· | i: | i· | i |
| KEY | i | i: | i: | i: | i | i | i: | i: | i: | i: |
| PIECE | i· | i· | i | i· | i | i | i | i | i | i |
| SIEGE | i | i· | i | i· | i | i | i· | i | i | i |
| MACHINE | i: | i | i | i: | i | i | i | i | i: | i |
| POLICE | i | i | i | i | i | i | i | i | i· | i· |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| i: | 23/100 | 23% |
| i· | 21/100 | 21% |
| i | 56/100 | 56% |

| Word | Realizations | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
| CHEAP | i· | i | i | i· | i | i | i: | i· | i | i |
| BEADS | i· | i: | i· | i | i: | i: | i· | i: | i | i |
| FEELS | i· | i | i· | i | i: | i | i | i: | i | i· |
| SEEN | i | i· | i· | i | i: | i | i: | i | i· | i· |
| PEOPLE | i | i: | i· | i | i: | i: | i· | i | i | i: |
| KEY | i: | i | i: | i: | i: | i: | i: | i: | i | i: |
| PIECE | i | i | i | i | i· | i | i | i | i | i |
| SIEGE | i | i: | i | i | i: | i | i: | i | i | i |
| MACHINE | i | i· | i: | i | i | i· | i | i | i | i |
| POLICE | i | i | i | i | i | i | i | i | i | i |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| i: | 25/100 | 25% |
| i· | 18/100 | 18% |
| i | 57/100 | 57% |

**The general realization of RP/ i: / by both groups of respondents is/ i/. There is no significant difference between the way Ga and Twi speakers in this study realize this vowel.**

## 2. / ɪ/

Words that have /ɪ/ include: *approximate, assist, eventually, exactly, exams, favourite, fills, figure, infestation, happy , lady, lip, missed, reside, riches, ship, sin, thimble, thin, wick, will, distributed, started, cauliflower, chip, village, private*. Words chosen for analysis were the following:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **CHIP** | ɪ | ɪ | ɪ | ɪ | ɪ | i | i | ɪ | i | ɪ |
| **SIN** | i | i | i | ɪ | ɪ | ɪ | i | i | i | ɪ |
| **PRETTY** | i | i | i | i | i | i | i | i | i | i |
| **NEED** | i | i | ɪ | i | ɪ | i | ɪ | i | ɪ | ɪ |
| **RICHES** | i | i | ɪ | ɪ | ɪ | ɪ | i | i | i | ɪ |
| **LADY** | i | i | i | i | i | i | i | i | i | i |
| **HAPPY** | i | i | i | i | i | i | i | i | i | i |
| **VILLAGE** | e | ei | e | ei | ei | e | e | ei | e | e |
| **PRIVATE** | ei | ei | ei | e | e | e | ei | e | e | ei |
| **EXAMS** | ɛ | ɛ | ɛ | i | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **FAVOURITE** | e | e | e | e | ei | e | e | ei | e | ei |
| **WILL** | i | i | u | i | i | i | i | u | i | i |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɪ | 20 /120 | 16.67% |
| i | 59/120 | 49.17 % |
| e | 18/120 | 15% |
| ei | 12/120 | 10% |
| ɛ | 9/120 | 7.5% |
| u | 2/120 | 1.67% |

| Words | Realizations | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
| CHIP | ɪ | ɪ | ɪ | ɪ | ɪ | i | ɪ | ɪ | i | i |
| SIN | i | i | ɪ | ɪ | i | ɪ | i | i | i | i |
| PRETTY | i | i | i | i | i | i | i | i | i | i |
| NEED | i | ɪ | ɪ | i | ɪ | i | i | ɪ | ɪ | i |
| RICHES | ɪ | i | i | i | i | i | ɪ | i | ɪ | ɪ |
| LADY | i | i | i | i | i | i | i | i | i | i |
| HAPPY | i | i | i | i | i | i | i | i | i | i |
| VILLAGE | ei | ei | ei | e | ei | e | e | e | ei | e |
| PRIVATE | ei | ei | e | ei | e | e | ei | ei | ei | ei |
| EXAMS | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| FAVOURITE | ei | e | e | e | e | ei | e | e | e | e |
| WILL | u | i | i | i | i | i | i | u | i | u |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɪ | 19/120 | 15.83% |
| i | 58/120 | 48.33 % |
| e | 16/120 | 13.33% |
| ei | 14/120 | 11.67% |
| ɛ | 10/120 | 8.33% |
| u | 3/120 | 2.5% |

The results show that there were about 20 instances from both groups of the realization of vowel number 2 (/ɪ/). /e/ as realized here is not Gimson's vowel number 3. In fact, it is not even an RP vowel; it is rather the vowel number 3 in Ga and Akan. As noted, RP vowel number 3 is represented here as /ɛ/. The diphthong appeared in words like *village, private* and *favourite*. These pronunciations confirm Dolphyne's (1999:97) point that sometimes vowel realisation relates to spelling conventions (for instance, '*age*' in '*village*'). / u/ also appeared in *will*, and in such cases it is the dark /l/ which is used.

**Though none of the phonemes was realized in 50% or more in the occurrences of /ɪ/, /i/ appeared more than any of the rest. This means that the preferred realization of RP /ɪ/ by both groups of respondents is /i/. There is no difference between the two groups' realizations of this vowel.**

### 3. /ɛ/

Words that have this vowel include: *bed, set, dead, bury, resident, educate, get, leg, then, says, yet.* Out of these, six words were selected for analysis:

**Words** **Realization**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **BED** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **BURY** | ɛ | ɛ | a | ɛ | u | ɛ | ɛ | a | ɛ | ɛ |
| **EDUCATE** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **GET** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **DEAD** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **SAYS** | ei | ei | ei | ɛ | ei | ei | ei | ei | ei | ei |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɛ | 48/60 | 80% |
| a | 2/60 | 3.33% |
| ei | 9/60 | 15% |
| u | 1/60 | 1.67% |

**Words** **Realization**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **BED** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **BURY** | a | u | u | a | ɛ | ɛ | ɛ | ɛ | a | ɛ |
| **EDUCATE** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **GET** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **DEAD** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **SAYS** | ei | ei | ɛ | ei | ei | ɛ | ɛ | ei | ei | ei |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɛ | 48/60 | 80% |
| a | 3/60 | 5% |
| ei | 7/60 | 11.67% |
| u | 2/60 | 3.33% |

**The preferred vowel is the same /ɛ/ as in RP for both groups.**

**4. /æ/**

Words that have /æ/ include*: hand, cab, bad, madam, magazine, brand, bags, absolute, allocated, cab, cap, character, exams, exactly, gang, jacket, matter, sandal, yam.* Out of these, five words were selected for analysis:

**Words** **Realization**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| HAND | a | a | a | æ | a | a | a | a | a | a |
| CAB | a | a | a | æ | a | a | a | a | a | a |
| CAP | a | a | a | æ | a | a | a | a | a | a |
| ABSOLUTE | a | a | a | æ | a | a | a | a | a | a |
| JACKET | a | a | a | a | a | a | a | a | a | a |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| a | 46/50 | 92% |
| æ | 4/ 50 | 8% |

**Words** **Realization**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| HAND | a | a | a | a | a | a | a | a | a | a |
| CAB | a | a | a | a | a | a | a | a | a | a |
| CAP | a | a | a | a | a | a | a | a | a | a |
| ABSOLUTE | a | a | a | a | a | a | a | a | a | a |
| JACKET | a | a | a | a | a | a | a | a | a | a |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| a | 50/50 | 100% |

**Apart from G4 who uses /æ/ in four of the five words, this vowel is absent in the speech of the respondents from the two groups. The preferred vowel is /a/, which is not vowel in RP, but the low central vowel in Ga and Akan.**

**There is no significant difference between the two groups' realization of this vowel.**

### 5. /ɑ:/

Words that have this vowel include: *card, cart, heart, harm, half, lark, lather, laugh, palm, photograph, started, vantage, dances, marches.* Out of these, seven words were selected for analysis:

**Words** **Realization**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| CARD | a | a | a | a· | a | a | a· | a | a | a |
| AFTER | a | a | a | a | a | a | a | a | a | a |
| LARK | a | a | a | ei | a | a | a | a | a | a |
| HEART | a: | a | a | a: | a | a | a | a· | a | a |
| HALF | a | a | a | a | a | a | a | a | a | a |
| PALM | a· | a· | a | a: | a: | a | a | a· | a· | a· |
| LAUGH | a | a | a | a | a | a | a | a | a | a |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| a | 57/70 | 81.43% |
| a· | 8/70 | 11.43% |
| a: | 4/70 | 5.71% |
| ei | 1/70 | 1.43% |

| Words | Realization | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
| CARD | a | a | a | a | a | a· | a | a | a | a |
| AFTER | a | a | a | a | a | a | a | a | a | a |
| LARK | a: | a | a | a | a | a· | a | a | a | a |
| HEART | a | a | a· | a | a· | a· | a | a· | a | a |
| HALF | a | a | a | a | a | a | a | a | a | a |
| PALM | a: | a· | a· | a· | a: | a· | a: | a | a: | a |
| LAUGH | a | a | a | a | a | a | a | a | a | a |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| a | 57/70 | 78.57% |
| a· | 8/70 | 14.29% |
| a: | 4/70 | 7.14% |

**RP vowel number 5 is not realized by the respondents; /a/ with different levels of length, replaces it in both groups.**

**There is no significant difference between the two groups' realization of this vowel.**

### 6. /ɒ/

Words that have /ɒ/ include: *cloth, accommodation, approximate, compensate, cough, locked, photographer, quality, wash, what*. Out of these, eight words were selected for analysis:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| COUGH | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| WASH | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| LOCKED | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| CLOTH | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| COMPENSATE | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| QUALITY | ɔ | a | a | ɔ | a | a | ɔ | a | ɔ | a |
| CAULIFLOWER | a | ɔ | a | ɔ | ɔ | ɛ | a | ɔ | a | a |
| SQUASH | a | ɔ | a | a | a | ɔ | ɔ | ɔ | a | a |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɔ | 62/80 | 77.5% |
| a | 17/80 | 21.25% |
| ɛ | 1/80 | 1.25% |

**Words** **Realizations**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| COUGH | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| WASH | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| LOCKED | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| CLOTH | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| COMPENSATE | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| QUALITY | a | a | a | a | a | a | a | a | a | a |
| CAULIFLOWER | a | a | a | a | a | a | a | ɔ | a | a |
| SQUASH | a | a | a | a | a | a | a | a | a | a |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɔ | 51/80 | 63.75% |
| a | 29/80 | 36.25% |

**The preferred realization of RP /ɒ/ by both groups of respondents is /ɔ/. It is worth noting that especially for words spelled with <o > and <a>, /ɔ/ is the preferred sound. However, for <ua> or <au> spellings (*cauliflower, squash, quality*), there is**

**the use of /a/ instead of /ɒ/ by most speakers in both groups. This is no doubt because of spelling pronunciation.**

### 7. /ɔ:/

Words that have /ɔ:/ include: *door, more, war, court, fault, forward, George, lawn, talk, taller, although, always*. Eight words were analyzed:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| TALK | ɔ | ɔ | ɔ· | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| WAR | ɔ: | ɔ: | ɔ: | ɔ: | ɔ | ɔ: | ɔ: | ɔ: | ɔ: | ɔ |
| DOOR | ɔ: | ɔ | ɔ: | ɔ: | ɔ | ɔ· | ɔ· | ɔ· | ɔ· | ɔ· |
| MORE | ɔ: | ɔ: | ɔ | ɔ: | ɔ: | ɔ: | ɔ· | ɔ· | ɔ· | ɔ· |
| FAULT | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ· | ɔ: | ɔ· | ɔ |
| COURT | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| ALWAYS | ɔ: | ɔ: | ɔ: | ɔ: | ɔ | ɔ | ɔ: | ɔ: | ɔ: | ɔ: |
| LAWN | ɔ | o· | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɔ | 42/80 | 52.5% |
| ɔ· | 12/80 | 15% |
| ɔ: | 25/80 | 31.25% |
| o: | 1/80 | 1.25% |

**Words** **Realizations**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| TALK | ɔ· | ɔ | ɔ: | ɔ | ɔ· | ɔ: | ɔ | ɔ | ɔ | ɔ |
| WAR | ɔ: | ɔ· | ɔ | ɔ: | ɔ: | ɔ: | ɔ: | ɔ: | ɔ: | ɔ |
| DOOR | ɔ: | ɔ· | ɔ: | ɔ | ɔ· | ɔ: | ɔ | ɔ· | ɔ: | ɔ: |
| MORE | ɔ: | ɔ: | ɔ: | ɔ· | ɔ· | ɔ | ɔ: | ɔ: | ɔ | ɔ |
| FAULT | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| COURT | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| ALWAYS | ɔ: | ɔ: | ɔ: | ɔ: | ɔ: | ɔ | ɔ | ɔ: | ɔ: | ɔ |
| LAWN | ɔ | ɔ· | ɔ· | ɔ· | ɔ | ɔ | ɔ | ɔ | ɔ: | ɔ: |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɔ | 41/80 | 51.25% |
| ɔ· | 11/80 | 13.75% |
| ɔ: | 28/80 | 35 % |

**The preferred realization of RP/ɔ:/ by both groups of respondents is /ɔ/. There is no significant difference between the two groups' realizations of this vowel.**

## 8. /ʊ/

Words that have /ʊ/ include: *cooker, could, book, full, looked, put, sugar, woman, wood.*

The realizations were as follows:

**Words** **Realization**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| FULL | u: | u: | u | u | u | u | u | u | u | u |
| WOOD | u | u: | u | u | u· | u | u | u | u | u: |
| PUT | u | u | u | u | u | u | u | u | u | u |
| WOMAN | u | u | u | u | u | u | u | u | u | u |
| BOOK | u· | u | u | u | u | u | u | u | u | u |
| COULD | u | u | u | u | u | u | u | u | u | u |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| u | 54/60 | 90% |
| u· | 2/60 | 3.33% |
| u: | 4/60 | 6.67% |

**Words** **Realization**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **FULL** | u: | u | u | u | u | u | u· | u· | u | u |
| **WOOD** | u· | u | u | u | u: | u | u | u | u | u |
| **PUT** | u | u | u | u | u | u | u | u | u | u |
| **WOMAN** | u | u | u | u | u | u | u | u | u | u |
| **BOOK** | u | u | u | u | u | u | u | u | u | u |
| **COULD** | u | u | u | u | u | u | u | u | u | u |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| u | 55/60 | 91.67% |
| u· | 3/60 | 5% |
| u: | 2/60 | 3.33% |

**RP vowel number 8 is not realized by either of the groups. Rather, number 9 (/u /) is used.**

**There is no significant difference between the two groups' realizations of this vowel.**

### 9. /u:/

Words that have /u:/ include: *chew, shoe, do, fool, brutal, move, wooed, suitcase, you, youth, loose.*

**Words** **Realization**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **FOOL** | u: | u· | u | u· | u | u: | u: | u: | u | u |
| **BRUTAL** | u· | u | u· | u | u | u· | u | u | u | u |
| **SUITCASE** | u | u | u | u | u | u | u | u | u | u |
| **YOUTH** | u: | u | u | u: | u | u: | u: | u· | u | u: |
| **MOVE** | u | u | u: | u: | u: | u | u: | u | u: | u |
| **CHEW** | iu | iu | iu | iu | iu | iu | iu | iu | iu | iu |
| **DO** | u: | u | u· | u | u | u· | u: | u | u· | u |
| **SHOE** | u: | u | u | u | u: | u: | u | u | u: | u: |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| u | 40/80 | 50% |
| u· | 9/80 | 11.25% |
| u: | 21/80 | 26.25% |
| iu | 10/80 | 12.5% |

**Words** **Realization**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **FOOL** | u· | u: | u: | u | u | u | u | u: | u: | u |
| **BRUTAL** | u | u· | u· | u· | u | u | u | u | u | u |
| **SUITCASE** | u | u | u | u | u | u | u | u | u | u |
| **YOUTH** | u: | u: | u· | u | u | u | u: | u· | u | u |
| **MOVE** | u: | u | u | u: | u | u· | u: | u: | u· | u |
| **CHEW** | iu | iu | iu | iu | iu | iu | iu | iu | iu | iu |
| **DO** | u | u | u· | u | u | u | u· | u: | u | u |
| **SHOE** | u: | iu | u | u: | u: | u | u: | u | u: | u: |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| u | 41/80 | 51.25% |
| u· | 10/80 | 12.5% |
| u: | 18/80 | 22.5% |
| iu | 11/80 | 13.75% |

**The preferred realization of RP/u:/ by both groups of respondents is /u/.**

**There is no significant difference between the two groups' realization of this vowel.**

## 10. /ʌ/

Words which have this vowel include: *cut, hum, much, luck, dung, brother, flood, tough, judge, lovely, sunrise, teacup, glove, thus, wonder, nothing, thumb*. Out of these, seven words were selected for analysis:

**Words** **Realization**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **JUDGE** | a | a | a | a | ɛ | a | a | ɛ | a | a |
| **MUCH** | a | a | a | a | a | a | a | a | a | a |
| **BROTHER** | a | a | ɔ | a | a | ɔ | ɔ | a | a | a |
| **NOTHING** | a | a | a | a | a | a | a | a | a | a |
| **FLOOD** | ɔ | a | a | a | a | ɔ | a | a | a | a |
| **WONDER** | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| **TOUGH** | ɔ | a | a | ɔ | ɔ | a | ɔ | ɔ | a | ɔ |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| a | 47/70 | 67.14% |
| ɛ | 2/70 | 2.86% |
| ɔ | 21/70 | 30% |

**Words** **Realization**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **JUDGE** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **MUCH** | a | a | a | a | a | a | a | a | a | a |
| **BROTHER** | a | ɔ | a | a | a | a | ɔ | a | a | ɔ |
| **NOTHING** | a | a | a | a | a | ɔ | a | a | a | ɔ |
| **FLOOD** | a | ɔ | a | a | a | ɔ | a | ɔ | a | a |
| **WONDER** | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| **TOUGH** | ɔ | a | ɔ | ɔ | a | ɔ | ɔ | ɔ | a | a |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| a | 36/70 | 51.43% |
| ɛ | 10/70 | 14.28% |
| ɔ | 24/70 | 34.28% |

**The strut vowel is not present in the speech of these two groups of respondents. The preferred vowel is /a/.**

**The results also show that the Twi respondents used vowel number 3 for vowel number 10 more than the Ga respondents did.**

**11. /ɜ:/**

Words that have this vowel include: *bird, church, her, heard, serve, turn, nurse, journal, determine.* Out of these, six words were selected for analysis:

**Words** **Realization**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **HER** | ɛ· | ɛ: | ɛ | ɛ: | ɛ | ɛ· | ɛ· | ɛ: | ɛ | ɛ: |
| **CHURCH** | ɛ | ɛ | ɛ | ɛ· | ɛ | ɛ: | ɛ | ɛ | ɛ | ɛ |
| **BIRD** | ɛ | ɛ· | ɛ: | ɛ: | ɛ | ɛ· | ɛ | ɛ: | ɛ | ɛ |
| **JOURNAL** | ɛ | ɔ | ɔ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **DETERMINE** | ɛ | ɛ | ɛ | ɛ· | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **HEARD** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɛ | 43/60 | 71.67% |
| ɛ· | 7/60 | 11.67% |
| ɛ: | 8/60 | 13.33% |
| ɔ | 2/60 | 3.33% |

**Words** **Realization**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **HER** | ɛ: | ɛ: | ɛ | ɛ | ɛ | ɛ: | ɛ: | ɛ: | ɛ | ɛ· |
| **CHURCH** | ɛ | ɛ | ɛ | ɛ· | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **BIRD** | ɛ | ɛ: | ɛ | ɛ | ɛ: | ɛ: | ɛ | ɛ | ɛ | ɛ: |
| **JOURNAL** | ɛ· | ɛ | ɛ | ɛ | ɛ· | ɛ | ɛ | ɛ | ɛ | ɛ |
| **DETERMINE** | ɛ | ɛ | ɛ | ɛ· | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **HEARD** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɛ | 46/60 | 76.67% |
| ɛ· | 5/60 | 8.33% |
| ɛ: | 9/60 | 15% |

**This vowel is not realized by any of the respondents. It is the fronted /ɛ/ (vowel number 3) that is used by both groups.**

**There is no significant difference between the two groups' realization of this vowel.**

## 12. /ə/

Words that have this vowel include: *about, colour, waiter, possible, razor, figure, lower, brother, famous, forward, lather, leather, leisure, madam, entertain.* Out of these, eight words were selected for analysis:

**Words** **Realization**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **ABOUT** | ɛ | a | a | a | a | a | a | a | a | a |
| **WAITER** | a | a | a | a | a | a | a | a | a | a |
| **FORWARD** | ɛ | ɛ | ɛ | ɔ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **ENTERTAIN** | ɛ | a | a | a | a | a | ɛ | a | a | a |
| **POSSIBLE** | i | i | i | i | i | i | i | i | i | i |
| **FAMOUS** | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| **FIGURE** | a | a | a | a | a | a | a | a | a | a |
| **COLOUR** | a | a | a | a | a | a | a | a | a | a |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| a | 47/80 | 58.75% |
| ɛ | 12/80 | 15% |
| i | 10/80 | 12.5% |
| ɔ | 11/80 | 13.75% |

| Words | Realization | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
| ABOUT | a | a | a | a | a | a | a | a | a | a |
| WAITER | a | a | a | a | a | a | a | a | a | a |
| FORWARD | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| ENTERTAIN | a | ɛ | ɛ | ɛ | a | a | ɛ | ɛ | a | a |
| POSSIBLE | i | i | i | i | i | i | i | i | i | i |
| FAMOUS | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ | ɔ |
| FIGURE | a | a | a | a | a | a | a | a | a | a |
| COLOUR | a | a | a | a | a | a | a | a | a | a |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| a | 45/80 | 56.25% |
| ɛ | 18/80 | 18.75% |
| i | 10/80 | 12.5% |
| ɔ | 10/80 | 12.5% |

**The schwa is absent in the speech of the two groups, /a/ is the preferred vowel, though other vowels are used in different environments. In initial position (*about*) and final position (*waiter, figure, colour)* /ə/ is replaced by /a/. In medial position (*forward* and *entertain*), vowel number 3 is used instead. Again, some of the phonemes selected (/i/ and / ɔ/) had to do with spelling pronunciation (*possible* and *famous* respectively*).***

**There is no significant difference between the two groups' realization of this vowel.**

### 3.4.2 SUMMARY ON PURE VOWELS

The following are the RP pure vowels and their realizations:

| | |
|---|---|
| /iː/ → /i/ | /ɪ/ → /i/ |
| /ɔː/ → /ɔ/ | /ɒ/ → /ɔ/ |
| /ʊ/ → /u/ | /uː/ → /u/ |
| /æ/ → /a/ | /ɑː/ → /a/ |
| /ʌ/ → /a/ | /ə/ → /a/ |
| /ɜː/ → /ɛ/ | /ɛ/ → /ɛ/ |

From the above it is evident only 5 out of the 12 pure vowels in RP are realized by the respondents. Two factors account for this reduction:

The first has to do with the absence of central vowels (/ʌ/, /ɜː/, /ə/). The absence of these vowels has been reported by many writers, who also mention that this is a feature of most West African English speakers, and it is so because these vowels are absent in the phonology of most of the indigenous languages spoken in this area. Bobda (2000b), states that in the absence of these vowels, either front or back vowels are used.

This research however shows that this is not really the case in Ghana. With the respondents in this study, the tendency is to replace /ʌ/ and /ə/ with the Ga and Akan central vowel /a/, while the front vowel /ɛ/ replaces /ɜː/.

The second factor which accounts for the reduction of vowels is that some pairs of vowels are realized with only one vowel. So that /**i:**/ and /**ɪ**/ are preferably realized as /**i**/; /**æ**/ and /**ɑ:**/ as /**a**/; /**ɒ**/ and /**ɔ:**/ as /**ɔ**/; and /**u:**/ and /**ʊ**/ as /**u**/ by respondents from both groups.

The above does not mean for instance, that in the production of these pairs, there is no distinction at all. Quite a number of respondents used /**ɪ**/, and one used /**æ**/.

The only pure RP vowel that does not undergo much change is RP vowel number 3 (/**ɛ**/).

Two vowels which are not RP vowels were used by the respondents. The first is the Akan and Ga vowel number 3 (/**e**/) and the second is the Ga and Akan central vowel (/**a**/). Though the former does not appear as the preferred vowel for any of the RP pure vowels, its use substantiates that certain vowels in the L1 of the respondents are transferred into their English repertoire by the respondents in this study.

On the other hand, /**a**/ is the most frequently used pure vowel by the respondents. It is the preferred vowel for **/æ/, /ʌ/, /ɑ:**/and **/ə/.** No wonder Gyasi (1991:27) says that "much work is done by the vowel /**a**/ in Ghanaian English".

There is no significant difference between the way the Ga respondents and the Twi respondents in this study realize the RP pure vowels. Having said this, it is also important to mention that with the strut vowel, the Twi respondents reported a higher percentage of /ɛ/, though the preferred vowel for the strut vowel by both groups is /**a**/.

The findings here, especially pertaining to the respondents' realization of the pure vowels in relation to RP, are consistent with findings by Koranteng (2006) and Huber (2008).

### 3.4.3 DIPHTHONGS

**Closing Diphthongs**

**1. /eɪ/**

Words containing this vowel include: *waist, day, eight, great, gape, safe, label, lady, great, paper, razor, accommodation, always, approximate, congratulate, exchange, entertain, educate, favour, grave, infestation, investigate, waiter, stadium.* Six of these were selected for analysis:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| WAIST | ei | e· | e | ei | e | e· | e | e | e | e· |
| EIGHT | e | e· | e | e | e | e | e | e | e | e |
| LABEL | e | e | e | e | e | e· | e | e | e | e |
| FAVOUR | ei | ei | ei | ei | e | e | e | ei | ei | e |
| ACCOMODATE | ei | e | e | e· | e | e | e | e | e | e |
| GREAT | e· | ei | e | ei | e | ei | ei | e· | e | e |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ei | 13/60 | 21.67% |
| e | 39/60 | 65% |
| e· | 8/60 | 13.33% |

**Words** **Realizations**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **WAIST** | ei | ei | e· | e | e· | e | e | e | e | e· |
| **EIGHT** | eɪ | e· | e· | e | e | e | e | e | e | e |
| **LABEL** | e | e | e | e | e | e | e | e | e | e |
| **FAVOUR** | ei | e | e | ei | e | e | e | e | e | e· |
| **ACCOMMODATE** | e | e | e | ei | e | e | e | e | e | e |
| **GREAT** | ei | e | e· | ei | e | e | e | ei | ei | e· |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ei | 10/60 | 16.67% |
| e | 42/60 | 70% |
| e· | 8/60 | 13.33% |

**The monophthong /e/, which is a front vowel in Ga and Akan, is the preferred vowel for RP /eɪ/ for both groups.**

**There is no significant difference between the two group's realizations of this vowel.**

## 2. /aɪ/

Words that contain this vowel include: *die, climb, child, digestion, time, high, idea, wife, reside, primary, lighted, divine, time.* Six words were chosen for analysis:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **DIE** | ai | ai | ai | ai | ai | ai | ai | ai | ai | ai |
| **CLIMB** | aɪ | ai | ai | aɪ | ai | ai | aɪ | ai | ai | ai |
| **CHILD** | ai | ai | ai | ai | a· | ai | ai | ai | ai | a· |
| **HIGH** | ai | aɪ | aɪ | aɪ | ai | ai | aɪ | ai | aɪ | aɪ |
| **IDEA** | ai | ai | a | ai | ai | ai | ai | ai | ai | ai |
| **TYPE** | ai | ai | ai | ai | ai | ai | ai | ai | ai | ai |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ai | 48/60 | 80% |
| aɪ | 9/60 | 15% |
| a· | 2/60 | 3.33% |
| a | 1/60 | 1.67% |

**Words** **Realizations**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **DIE** | ai | ai | ai | ai | ai | ai | ai | ai | ai | ai |
| **CLIMB** | ai | ai | ai | aɪ | aɪ | ai | ai | ai | ai | ai |
| **CHILD** | aɪ | a | a· | a· | a | ai | a | aɪ | aɪ | a |
| **HIGH** | ai | aɪ | aɪ | aɪ | ai | aɪ | aɪ | aɪ | ai | ai |
| **IDEA** | ai | ai | ai | ai | a | ai | ai | ai | ai | ai |
| **TYPE** | ai | ai | ai | ai | ai | ai | ai | ai | ai | ai |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ai | 43/60 | 71.67% |
| aɪ | 18/60 | 18.33% |
| a· | 2/60 | 3.33% |
| a | 4/60 | 6.67% |

**The preferred vowel for both groups is /ai/.**

**There is no significant difference between the two group's realizations of these vowels.**

3. /ɔɪ/

Words that contain this vowel include: *noise, voice, void, coiled, boy, enjoy*. These were analyzed:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **NOISE** | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi |
| **VOICE** | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi |
| **COILED** | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi |
| **BOY** | ɔɪ | ɔɪ | ɔɪ | ɔi | ɔɪ | ɔɪ | ɔɪ | ɔɪ | ɔɪ | ɔɪ |
| **ENJOY** | ɔi | ɔɪ | ɔɪ | ɔɪ | ɔi | ɔɪ | ɔɪ | ɔi | ɔɪ | ɔɪ |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɔi | 34/50 | 68% |
| ɔɪ | 16/50 | 32% |

**Words** **Realizations**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **NOISE** | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi |
| **VOICE** | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi | ɔi |
| **COILED** | ɔi | ɔi | ɔi | ɔi | ɔɪ | ɔi | ɔɪ | ɔi | ɔi | ɔi |
| **BOY** | ɔɪ | ɔɪ | ɔɪ | ɔi | ɔɪ | ɔɪ | ɔɪ | ɔi | ɔɪ | ɔi |
| **ENJOY** | ɔɪ | ɔɪ | ɔɪ | ɔɪ | ɔi | ɔɪ | ɔɪ | ɔɪ | ɔɪ | ɔɪ |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɔi | 31/50 | 62% |
| ɔɪ | 19/50 | 38% |

**The preferred vowel for both groups is /ɔi/.**

**There is no difference between the group's realizations of this vowel.**

4. /əʊ/

Words containing this vowel are: *both, cocoa, know, home, loaf, soldier, lower, opponent, soap, soul, photograph, total, although.* Five of these were analyzed:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **BOTH** | o | o | o | o | o | o | o | o | o | o |
| **HOME** | o | o· | o· | o· | o· | o: | o: | o· | o· | o: |
| **KNOW** | o· | o | o | ou | o· | ou | o | o | o | o |
| **SOUL** | o | o· | ou | ou | o | o | ou | o | ou | o |
| **SOAP** | o | o | o | o | o | o | o | o | o | o |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| o | 32/50 | 64% |
| o· | 9/50 | 18% |
| o: | 3/50 | 6% |
| ou | 6/50 | 12% |

**Words** **Realizations**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **BOTH** | o | o | o | o | o | o | o | o | o | o |
| **HOME** | əʊ | o· | o· | o· | o | o· | o· | o: | o· | o: |
| **KNOW** | o· | o | o· | o· | o | ou | o· | ou | o | o |
| **SOUL** | ou | o: | ou | ou | o | o· | ou | o | o | o |
| **SOAP** | o | o | o | o | o | o | o | o | o | o |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| o | 29/50 | 58% |
| o· | 11/50 | 22% |
| o: | 3/50 | 6% |
| ou | 6/50 | 12% |
| əʊ | 1/50 | 2% |

**/o/ is the preferred vowel for /əʊ/ in both groups. /o/ is however not an RP vowel; it is a back vowel in Ga and Akan.**

**There is no significant difference between the two groups' realizations.**

5. /aʊ/

Words that contain this vowel include: *blouse, town, how, doubt, house, about, brown.*

Five of these were analyzed:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| BLOUSE | au | au | au | au | au | u: | au | au | au | au |
| DOUBT | ɔ | au | au | au | ɔ | au | au | au | au | au |
| BROWN | au | au | au | au | au | au | au | au | au | au |
| HOUSE | au | au | au | au | au | au | au | au | au | au |
| TOWN | au | au | au | au | au | au | au | au | au | au |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| au | 47/50 | 94% |
| ɔ | 2/50 | 4% |
| u: | 1/50 | 2% |

**Words** **Realizations**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| BLOUSE | au | ou | au | au | au | au | au | au | au | au |
| DOUBT | au | ɛ | au | ɔ | au | ɔ | au | au | au | au |
| BROWN | au | au | au | au | au | au | au | au | au | au |
| HOUSE | au | au | au | au | au | au | au | au | au | au |
| TOWN | au | au | au | au | au | au | au | au | au | au |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| au | 46/50 | 92% |
| ɔ | 2/50 | 4% |
| ou | 1/50 | 2% |
| ɛ | 1/50 | 2% |

**The preferred vowel is /au/ for both groups.**

**There is no significant difference between the group's realizations of this vowel.**

**Centring Diphthongs**

**6. /ɪə/**

Words that contain this vowel are: *zero, dear, here, stadium, million, familiar, museum, cheered, idea, really.* These were analyzed:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **ZERO** | i | i | i | i | ɛ | i | i | ɛ | i | i |
| **DEAR** | iɛ | iɛ | iɛ | ɪɛ | iɛ | iɛ | ɪɛ | iɛ | iɛ | iɛ |
| **HERE** | iɛ | iɛ | iɛ | iɛ | iɛ | iɛ | iɛ | iɛ | iɛ | iɛ |
| **STADIUM** | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ |
| **MILLION** | iɛ | iɔ | iɔ | iɛ | iɛ | iɔ | iɔ | iɛ | iɔ | iɔ |
| **MUSEUM** | iɔ | iɔ | ɪɔ | iɔ | iɔ | iɔ | iɔ | ɪɔ | iɔ | iɔ |
| **FAMILIAR** | ia | ia | ia | ia | ia | ia | ia | ia | ia | ia |
| **CHEERED** | iɛ | iɛ | iɛ | iɛ | iɛ | iɛ | iɛ | iɛ | iɛ | iɛ |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| i | 8/80 | 10% |
| ɛ | 2/80 | 2.5% |
| iɛ | 32/80 | 40% |
| iɔ | 24/80 | 30% |
| ia | 10/80 | 12.5% |
| ɪɛ | 4/80 | 5% |

**Words** **Realizations**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| ZERO | ɛ | ɛ | i | ɛ | ɛ | i | i | ɛ | ɛ | ɛ |
| DEAR | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ |
| HERE | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ |
| STADIUM | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ |
| MILLION | iɔ | ɪɛ | iɔ | iɔ | iɐ | iɔ | iɔ | iɔ | iɐ | iɔ |
| MUSEUM | iɔ | iɔ | iɔ | iɔ | ɪɛ | iɔ | iɔ | iɔ | iɔ | ɪɛ |
| FAMILIAR | ia | ia | ia | ia | ia | ia | ia | ia | ia | ia |
| CHEERED | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ | iɐ |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| i | 3/80 | 3.75% |
| ɛ | 7/80 | 8.75% |
| iɐ | 32/80 | 40% |
| iɔ | 25/80 | 31.25% |
| ia | 10/80 | 12.5% |
| ɪɛ | 3/80 | 3.75% |

**The phonemes selected for each word has to do with the way the word is spelled. Depending on the spelling, the phoneme selected could be any of the ones above. None of the phonemes had a percentage of 50% or more. However, /iɐ/ had the highest percentage.**

**There is no significant difference between the two group's realizations of this vowel.**

### 7. /ɛə/

Words that contain this vowel include: *parented, affair, hair, aware, their*. These were analyzed as follows:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PARENTED** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **AFFAIR** | ɛ· | ɛː | ɛ· | ɛː | ɛ· | ɛ· | ɛ· | ɛː | ɛ· | ɛ· |
| **HAIR** | ɛ· | ɛ· | ɛː | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· |
| **AWARE** | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· |
| **THEIR** | ia | ia | ɛa | ɛa | ia | ia | ia | ɛa | ia | ia |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɛ | 10/50 | 20% |
| ɛ· | 26/50 | 52% |
| ɛː | 4/50 | 8% |
| ia | 7/50 | 14% |
| ɛa | 3/50 | 6% |

**Words** **Realizations**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PARENTED** | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ | ɛ |
| **AFFAIR** | ɛː | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· |
| **HAIR** | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· |
| **AWARE** | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛ· | ɛː | ɛ· | ɛ· | ɛ· |
| **THEIR** | ia | ia | ia | ia | ia | ia | ia | ia | ia | ia |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| ɛ | 10/50 | 20% |
| ɛ· | 28/50 | 56% |
| ɛː | 2/50 | 4% |
| ia | 10/50 | 20% |

**The vowels realized in the above tables are consistent. /ɛ/ was used for parented and /ɛ·/ for *affair*, *hair* and *aware* in the two groups. Except for the three instances of /ɛa/**

**by G3, G4 and G8, the vowel used for *their* was /ia/. The preferred vowel for RP /ɛə/ is therefore /ɛ·/ for both groups.**

**There is no significant difference between the two group's realizations of this vowel.**

### 8. /ʊə/

Words that contain this vowel are: *poor, curious, cure, pure, tour, aspectual*. These were analyzed as follows:

**Words** **Realizations**

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| POOR | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ |
| CURIOUS | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ |
| CURE | ıɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ |
| TOUR | ɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | ɔ |
| ASPECTUAL | ua | ua | ua | ua | ua | ua | ua | ua | ua | ua |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| uɔ | 18/50 | 36% |
| iɔ | 20/50 | 40% |
| ɔ | 2/50 | 4% |
| ua | 10/50 | 20% |

**Words** **Realizations**

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| POOR | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ | uɔ |
| CURIOUS | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ |
| CURE | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ | iɔ |
| TOUR | ɔ | ɔ | uɔ | uɔ | uɔ | ɔ | uɔ | uɔ | uɔ | uɔ |
| ASPECTUAL | ua | ua | ua | ua | ua | ua | ua | ua | ua | ua |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| **uɔ** | 17/50 | 34% |
| **iɔ** | 20/50 | 40% |
| **ɔ** | 3/50 | 6% |
| **ua** | 10/50 | 20% |

**RP /ʊə/ is realized by the two groups as /iɔ/.**

**There is no difference between the two groups' realization of this vowel.**

### 3.4.4 SUMMARY ON DIPHTHONGS

The issue that comes up most often in the discussion of diphthongs among second language speakers is that of the monophthonization of RP diphthongs.

Below is a summary of how the diphthongs in RP were represented by the respondents in this study:

**CLOSING DIPHTHONGS**

**/eɪ/ → /e/**

**/aɪ/ → /ai/**

**/ɔɪ/ → /ɔi/**

**/əʊ/ → /o/**

**/aʊ/ → /au/**

**CENTRING DIPHTHONGS**

/ɪə/ → /iɛ/

/ɛə/ → /ɛ·/

/ʊə/ → /iɔ/

Out of the 8 RP diphthongs, the preferred phonemes for three of them (**/eɪ/, /əʊ/,** and **/ɛə/**) were monophthongs, (/**e**/, /**o**/ and **/ɛ·**/ respectively). Two of these monophthongs are not RP vowels. /**e**/ is a front vowel in Ga and Akan, while /**o**/ is a back vowel.

Except for his use of /**uɛ**/ for /ʊə/, these findings are not different from Huber's (2008:81-82).

# CHAPTER FOUR

# THE CONSONANTS

## 4.1 RP CONSONANTS

English has 24 distinct consonantal phonemes. These are identified by their phonation, place of articulation and manner of articulation. A consonant sound can either be voiced (produced with vibration of the vocal cords) or voiceless (produced with no vibration of the vocal cords).

The places of articulation give bilabial, labiodental, dental, alveolar, post- alveolar, palato- alveolar, palatal, velar and glottal sounds.

The stricture or manner in which each sound is produced determines if the sound is a plosive, fricative, affricate, nasal or approximant.

Each consonant is given a three-term label, drawn from its phonation, place of articulation and manner of articulation. For instance, /s/ is the voiceless alveolar fricative.

Gimson (2001: 149) makes the further distinction between obstruent sounds. Those in whose production "there is a total closure or stricture causing friction" (plosives, fricatives and affricates), and sonorant sounds, in whose production "there is only a partial closure or an unimpeded oral or nasal escape of air" (nasals and approximants). Obstruents can be voiced or voiceless, while sonorants are typically voiced.

The English consonants have been summarized thus (Gimson, 2001:149):

| | Plosive | Affricate | Fricative | Nasal | Approximant |
|---|---|---|---|---|---|
| Bilabial | p b | | | m | (w) |
| Labiodental | | | f v | | |
| Dental | | | θ ð | | |
| Alveolar | t d | | s z | n | l |
| Post-alveolar | | | | | r |
| Palato-alveolar | | tʃ dʒ | ʃ ʒ | | |
| Palatal | | | | | j |
| Velar | k g | | | ŋ | |
| Glottal | | | h | | |

## 4.2 GA CONSONANTS

Ga has 31 consonant phonemes (Dakubu, 2002:61), and these have been presented below:

| | | L | L.D. | A | P.P. | L.P.P. | V | L.V.1 | L.V.2 |
|---|---|---|---|---|---|---|---|---|---|
| **Stops** | **Voiceless** | p | | t | | | k | kw | kp |
| | **Voiced** | b | | d | | | g | gw | gb |
| **Affricates** | **Voiceless** | | | | ts | tsw | | | |
| | **Voiced** | | | | j | jw | | | |
| **Fricatives** | **Voiceless** | | f | s | sh | shw | h | hw | |
| | **Voiced** | | v | z | | | | | |
| **Continuants** | **Nasal** | m | | n | ny | | ŋ | | ŋm |
| | **Oral** | | | | y | (w) | | w | |
| | **Oral lateral** | | | l (r) | | | | | |

(Dakubu, 2002:61)

KEY:

**L** → Labial **L.D.** → Labiodental

**A** → Alveolar **P.P.** → Pre-palatal

**L.P.P.** → Labialized Pre- palatal **V.** → Velar

**L.V.1** → Labialized velar **L.V.2** → Labial-velar

According to Dakubu, (2002:61):

- "the voiceless alveolar stop /**t**/ is sometimes pronounced as a dental rather than alveolar, and the two sounds seem to be in free variation".
- The alveolar retroflex /**r**/ is in free variation with the alveolar lateral /**l**/, but the converse is not always the same.
- The alveolar retroflex /**r**/ is also in complementary distribution with /**d**/.
- All the labialized consonants in Ga, except /**kw**/ and /**tsw**/, only occur before the front or central vowels. /**kw**/ and /**tsw**/ on the other hand occur before /**o**/ and /**ɔ**/.

Adjaye (2005:24) also says that, "/v/and /**z**/ are rare and occur mainly in loan words."

## 4.3 AKAN CONSONANTS

Dolphyne (1987:29), made the following assertions about the Akan consonant system:

- Only plosives and affricate have voiced and voiceless counterparts
- Akan fricative sounds are voiceless
- The nasals, the lateral, the trill and the approximants are voiced
- Palatal (including alveolo-palatal), velar and glottal consonants have labialized and non-labialized counterparts.

The 35 Akan consonants have been presented below (Dolphyne, 1987:29):

| | Bilabial | Labiodental | Alveolar | Pre -palatal/ Palatal | Velar | Glottal |
|---|---|---|---|---|---|---|
| Plosive | p<br>b | | t<br>d | | k kw<br>g gu | |
| Affricate | | | ts (Fa)<br>dz | ky [tc]<br>gy [dz]<br>t w [tcɥ]<br>dw [dzɥ] | | |
| Nasal | m | | n | ny [ɲ]<br>nw[ɲɥ] | n [ŋ]<br>nw[ŋw] | |
| Lateral | | | l | | | |
| Trill | | | r(Ak) | | | |
| Fricative | | f | s<br>si [sy]<br>su | | | h<br>hu |
| Approximant/ Glide | w<br>w [ɥ] | | r | y | (w) | |

## 4.4 FINDINGS ON CONSONANTS

### 4.4.1 PLOSIVES

**1. Voiceless bilabial plosive: /p/**

Initial: *paper, parented, pause, perhaps, pleasure, poor, primary, pure, put*

Medial: *approximate, compensate, complete, opponent*

Final: *cheap, sheep, ship, tea cup, gape, deep, mop, cup, rope*

**Respondents in both groups realized this sound as it is in RP.**

**2. Voiced bilabial plosive: /b/**

Initial: bad, bags, beads, bed, behave, blouse, books, brand, brothers, brutal, bury, boy

Medial: about, absolute, contributed, distribute, label, vegetables

Final: cab, mob, cub, robe

**Respondents realized this sound as it is in RP in word initial and word medial positions. G3, G5, G1, G9, T1, T4 and T10 devoiced the /b/ in 'cab', 'robe, and 'cub', while G3, G5, G7, T10, T5, T6 and T1 devoiced it in 'mob'.**

**3. Voiceless alveolar plosive: /t/**

Initial: talk, taller, teacher, teacup, television, time, together, total, town, treasure, turn

Medial: kettle, lighted, matter, parented, question, suitcase, started, waiter, brutal, entertain, determine, eventually

Final: opponent, put, quality, resident, resurrect, set, shout, yet, waist, about, assist, compensate, cut, correct, court, doubt, eight, fault, cigarette, educate, estate, get, favourite, goat, great, jacket.

**Respondents realized this sound as it is in RP, except for T3, who articulated 'time', 'teacher' and 'town', with the involvement of the front teeth and the alveolar ridge, as if a dental sound follows the voiceless alveolar stop. The phonetic sound she used can be said to be a dentalized /t/. It must be noted that this respondent could not have been lisping since the same phenomenon was not noticed in her realization of /s/ and /z/, the two phonemes identified with lisping.**

**4. Voiced alveolar plosive: /d/**

Initial: dances, day, dear, deep, determine, die, digestion, distribute, divine, doubt, doing, dead

Medial: accommodate, sandal

Final: bad, bed, beads, cheered, child, coiled, dead, forward, void, wooed, wood

**Respondents realized this sound as it is in RP.**

**5. Voiceless velar plosive: /k/**

Initial: kerosene, kettle, quality, question, cab, cart, cave, character, climb, coiled, compensate, complete, congratulate, contribute, cooker, correct, cub, cup, cut, cough

Medial: locked, looked, jacket, educate, exactly, exchange, suitcase

Final: lark, luck, week, joke, resurrect

**/k/ was voiced by G3, G5, and T10 in 'exchange'. Also noted was the reduction of consonant clusters involving this consonant. Most of the respondents reduced the [kt] in 'correct' to /t/. G3, G8 and T5 reduced the [kt] in 'exactly' to /t/, while T1 and T3 reduced it to /k/.**

**Apart from these, the respondents did not show any variation from the RP.**

**6. Voiced velar plosive: /g/**

Initial: gang, gape, get, glove, goats, great, grave

Medial: cigarette, congratulate, figure, investigation, photograph, sugar, together

Final: bag.

**Respondents did not show any variation from the RP.**

### 4.4.2 AFFRICATES

**7. Voiceless palato-alveolar affricate: /tʃ/**

Initial: cheap, chips, cheered

Medial: riches, reaches, exchange, teacher

Final: fetch, such, starch, much

**Respondents did not show any variation from the RP**

**8. Voiced palato-alveolar affricate: / dʒ/**

Initial: jacket, journal, judge, judges, gem, George, journalist

Medial: educate, vegetables, digestion

Final: judge, George

**All the respondents realized 'educate' with a / d/ instead of a/ dʒ/. G1, G6, G10, T5 and T7 used /g/ in 'gem'. In all the other words, /dʒ/ was used as in RP.**

### 4.4.3 FRICATIVES

**9. Voiceless labiodental fricative: /f/**

Initial: face, famous, fashion, fault, favour, favourite, feels, fills, figure, forward, full,

Medial: affair, cauliflower, infestation

Final: cough, loaf, photograph, safe, wife

**Respondents did not show any variation from the RP.**

**10. Voiced labiodental fricative: /v/**

Initial: vantage, vegetables, void

Medial: several, lovely, investigate, eventually, envy

Final: save, glove, serve, grave, cave

**Respondents did not show any variation from the RP, except for a slight de-voicing of /v/ in word final positions by G3, G5, G9, G10, T1, T2, T6, T8, and T10.**

**Dental Fricatives**

The dental fricatives are of much interest especially in second language acquisition. As Gimson (2001: 184-185) explains,

> "Most learners will have an L1 which does not have/θ, ð/ (although Arabic and European Spanish speakers do) and will usually replace them with /t,d/, two exceptions being French and German which are more likely to replace by /s,z/, and Hindi speakers who use their /t̪,d̪/".

The L1s of the respondents in this research do not have the dental fricatives, neither do they have equivalents. Their realizations of these sounds are as follows:

**11. Voiceless dental fricative: /θ/**

Initial: thin, thimble, thrash, thumb, thoroughly

Medial: method, anthem, ethics, author, worthless

Final: cloth, both, length, Judith, oath

Word Realization

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| THIMBLE | t | θ | θ | θ | t | t | θ | t | t | t |
| THIN | t | θ | t | θ | t | θ | θ | t | t | t |
| THUMB | t | θ | t | θ | t | θ | θ | θ | t | t |
| METHOD | t | θ | θ | θ | θ | t | θ | θ | θ | θ |
| ANTHEM | t | t | t | θ | t | θ | θ | t | t | t |
| BOTH | t | θ | t | θ | f | θ | θ | f | θ | f |
| CLOTH | t | f | t | θ | t | θ | θ | f | θ | f |
| LENGTH | f | θ | θ | θ | f | t | θ | f | t | θ |

/θ/ in initial and medial positions is realized as /t/, or /θ/, but in the final position, it is /t/, /θ/ or /f/. However, G4, and G7 realized this sound as it is in RP.

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| /t/ | 33/80 | 41.25% |
| /θ/ | 38/80 | 47.5% |
| /f/ | 9/80 | 11.25% |

Word Realization

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| THIMBLE | t | t | θ | t | θ | t | θ | t | θ | t |
| THIN | θ | θ | θ | t | θ | t | θ | θ | θ | t |
| THUMB | t | t | t | t | θ | t | t | θ | t | t |
| METHOD | θ | t | t | θ | θ | θ | θ | t | t | θ |
| ANTHEM | t | θ | t | t | θ | θ | t | t | θ | t |
| BOTH | f | θ | t | θ | θ | t | f | θ | f | θ |
| CLOTH | θ | θ | θ | f | θ | θ | f | θ | f | f |
| LENGTH | f | f | θ | θ | θ | t | t | f | f | f |

Here too, /θ/ in initial and medial positions is realized as /t/, or /θ/, but in the final position, it is can /t/, /θ/ or /f/. However, T5 realized this sound as it is in RP.

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| /t/ | 31/80 | 38.75% |
| /θ/ | 36/80 | 45% |
| /f/ | 12/80 | 15% |

**Since none of the realizations appeared 50% or more of the time, it can only be said that there is a high frequency of the use of /t/ and a higher frequency of the use of /θ/**

**among the respondents from both groups. However, since /θ/ has the highest percentage, it can be said to be the preferred phoneme for RP /θ/ by the two groups in this study. This clearly goes against the general belief that Ghanaians substitute the alveolar stop with the voiceless dental fricative.**

**12. Voiced dental fricative: /ð/**

Initial: thus, then, there, this, though

Medial: together, brother, although, lather, leather

Final: with

Word Realization

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| THUS | **d** | **d** | **d** | **θ** | **d** | **d** | **d** | **d** | **d** | **ð** |
| THEN | **d** | **d** | **d** | **θ** | **ð** | **d** | **d** | **d** | **d** | **d** |
| BROTHER | **d** | **d** | **d** | **θ** | **d** | **d** | **d** | **d** | **d** | **d** |
| LATHER | **d** | **d** | **d** | **θ** | **d** | **d** | **d** | **d** | **d** | **d** |
| WITH | **θ** | **f** | **θ** | **θ** | **θ** | **t** | **t** | **f** | **f** | **t** |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| /ð/ | 2/50 | 4% |
| /d/ | 34/50 | 68% |
| /t/ | 3/50 | 6% |
| /θ/ | 7/50 | 14% |
| /f/ | 3/50 | 6% |

Word Realization

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| THUS | d | d | d | d | d | d | d | d | d | d |
| THEN | d | d | d | d | d | d | d | d | d | d |
| BROTHER | d | d | d | d | d | d | d | d | d | d |
| LATHER | d | d | d | d | d | d | d | d | d | d |
| WITH | f | f | f | θ | t | θ | f | θ | f | f |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| /d/ | 40/50 | 80% |
| /t/ | 1/50 | 2% |
| /θ/ | 3/50 | 6% |
| /f/ | 6/50 | 12% |

The voiced dental fricative does not show as much variation as its voiceless counterpart does. G4 seems to have knowledge of how the dental fricatives are articulated, but does not make the voicing distinctions, so that she uses the voiceless for the voiced. The realization of the voiced dental fricative in 'with' is rather interesting. Here, unlike the rest, the voiced alveolar plosive is not used, but rather /t/. /θ/ or /f/, the same consonants used to realize /θ/ in final positions (above).

**The preferred sound for RP /ð/ by both groups is the voiced alveolar plosive /d/.**

**13. Voiceless alveolar fricative: /s/**

Initial: safe, sandal, save, seen, serves, several, sing, soldier, squash, stadium, stash, suitcase, sunrise, sin, sugar, cigarette

Medial: necessary, absolute, assist, estate, infestation, question, kerosene

Final: pause, ice, mouse, face, lose, famous, books, chips, lips goats

**Apart from 'kerosene' which G3, G8, G9 and T3 produced with /z/, all the other respondents did not show any variation from RP.**

**14. Voiced alveolar fricative: /z/**

Initial: zero

Medial: exactly, exams, magazine, razor, reside, resident, resurrect

Final: feels, fills, noise, matches, reaches, riches, sunrise.

**In the medial position, 'resided' and 'resurrect' were produced with the voiceless alveolar fricative /s/ by six respondents (G1, G6, G10, G5, T4 and T7). In the final position, all the words were produced with the voiceless alveolar fricative /s/. There was complete devoicing in the final position.**

**15. Voiceless palato-alveolar fricative: /ʃ/**

Initial: ship, shout, sugar, sheep

Medial: initial, fashion, machine

Final: wash, stash, squash

**Respondents did not show any variation from RP.**

**16. Voiced palato-alveolar fricative /ʒ/**

Initial:-

Medial: treasure, pleasure, measure, leisure, television

**Although this consonant is absent from Ga and Twi, all the words were realized as in RP except for 'television' for which all respondents used /ʃ/.**

**17. Voiceless glottal fricative: /h/**

Most Ghanaians believe that if someone fails to articulate the glottal fricative while speaking English, that person must be a Ga, though the sound itself does exist as a consonant in the Ga language. This research however came out with the following:

Initial: hair, hand, house, her, how, hum, *hospital, *have, *hundred, *him

Medial: behave, perhaps, manhood

Word Realization

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| HAIR | + | + | + | + | - | + | - | - | + | - |
| HAND | + | + | + | + | - | + | - | + | + | + |
| HOUSE | + | + | + | + | - | + | - | + | - | - |
| HOW | + | + | + | + | - | + | - | + | + | - |
| PERHAPS | + | + | + | + | + | + | + | + | + | + |
| BEHAVE | + | + | + | + | + | + | + | + | + | + |
| MANHOOD | + | + | + | + | + | + | + | + | + | + |
| HOSPITAL | + | - | - | + | - | + | - | - | - | + |
| HAVE | + | + | - | + | - | + | - | + | - | - |
| HUNDRED | + | + | + | + | - | + | - | - | - | - |

*These words are from the connected speech, not the word list.

\+ Sound present

\- Sound absent

| No. of occurrences | Percentage |
|---|---|
| 71/100 | 71% |
| 29/100 | 29% |

G1, G4 and G6 realized the glottal fricative at the initial and medial position of words in isolation, and also in words in connected speech. G7, on the other hand, only realized this sound in the medial position of words in isolation. The other respondents showed variations, but they all realized the glottal fricatives in medial position of words. In connected speech, respondents did not realize the sound in 16 out of 30 instances (53%). This means that Ga speakers of English are more likely to drop the glottal fricative in connected speech than when speaking words in isolation.

**In all, out of the 100 instances of use, the glottal fricative appeared 71 (71%) times. This means that the Ga respondents in this study do realize the glottal fricative.**

Word Realization

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| HAIR | + | + | + | + | + | + | + | + | + | + |
| HAND | + | + | + | + | + | + | + | + | + | + |
| HOUSE | + | + | + | + | + | + | + | + | + | + |
| HOW | + | + | + | + | + | + | + | + | + | + |
| PERHAPS | + | + | + | + | + | + | + | + | + | + |
| BEHAVE | + | + | + | + | + | + | + | + | + | + |
| MANHOOD | + | + | + | + | + | + | + | + | + | + |
| HOSPITAL | + | + | + | + | + | + | + | + | + | + |
| HAVE | + | + | + | + | + | + | + | + | + | + |
| HUNDRED | + | + | + | + | + | + | + | + | + | + |

The Twi respondents showed a 100% rate of articulation of this sound.

**When the use of the glottal fricative of the two groups is compared, it reveals that the percentage difference between the absence of use of /h/ is 29% more with Ga speakers than Twi speakers. Thus, there is a significant difference between the use of /h/ by the two groups.**

### 4.4.4 NASALS

**18. Bilabial nasal: /m/**

Initial: madam, magazine, marches, matter, measure, method, missed, mixed, mob, mop much

Medial: determine, woman, thimble, primary, compensate, accommodate, approximate

Final: madam, yam, time, stadium, journalism, hum, harm, gem, lum, gem, exam

**Respondents showed no variation from RP.**

**19. Alveolar nasal: /n/**

Initial: necessary, noise, nurse, know, nothing, fashion, divine, distribution, entertain, lawn, magazine, seen, sin, then, turn

**Respondents showed no variation from RP.**

**20 .Velar nasal: /ŋ/**

Final: sing, gang, nothing, loving

**Though the velar nasal is present in the Ga and Twi, respondents did not articulate it in English. The –ing forms in 'nothing' and 'loving' were realized as [ɪn], while 'sing' and 'gang' were realized with either [ng] or [ŋg].**

### 4.4.5 APPROXIMANTS

Both Ga and Akan do not contrast /l/ and /r/. In Ga, /r/ is in free variation with /l/, while /l/ is in free variation with [ɹ], an allophone of /r/ only when it occurs in the second position of a CCV structure. In some dialects of Akan, /l/ is in free variation with [ɹ] or [d] (Adjaye, 2005: 26).

The following is how the respondents realized these two approximants:

**21. Post-alveolar approximant: /r/**

Initial: rain, razor, reaches, really, reside, resident, resurrect, riches, robe, rope

Mediai: kerosene, parented, photograph, primary, serves, several, started, sunrise, thoroughly, thrash, treasure, zero, George, forward, favourite, distribute, congratulate, curious, character, brand, brutal, brother, approximate

Word Realization

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| RAIN | r | r | r | r | r | r | r | r | r | r |
| REALLY | r | r | r | r | r | r | r | r | r | r |
| RICHES | r | r | r | r | r | r | r | r | r | r |
| RAZOR | r | r | r | r | r | r | r | r | r | r |
| KEROSENE | r | r | r | r | r | r | r | r | r | r |
| BRAND | r | r | r | r | r | r | r | r | r | r |
| CONGRATULATE | r | r | r | r | r | r | r | l | r | r |
| APPROXIMATE | r | r | r | r | r | r | r | r | r | l |
| BROTHER | r | l | r | r | r | r | r | r | r | r |
| BROWN | r | r | r | r | r | r | r | r | r | l |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| /r/ | 96/100 | 96% |
| /l/ | 4/100 | 4% |

Word Realization

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| RAIN | r | r | r | r | r | r | r | r | r | r |
| REALLY | r | r | r | r | r | r | r | r | r | r |
| RICHES | r | r | r | r | r | r | r | r | r | r |
| RAZOR | r | r | r | r | r | r | r | r | r | r |
| KEROSENE | r | r | r | r | r | r | l | r | r | r |
| BRAND | r | r | l | l | r | r | r | r | r | l |
| CONGRATULATE | r | l | r | r | r | l | l | l | l | r |
| APPROXIMATE | l | r | r | l | r | l | r | r | r | r |
| BROTHER | r | r | r | l | r | r | r | r | r | l |
| BROWN | r | r | r | r | r | r | r | r | r | l |

| Phonemes | No. of occurrence | Percentage |
|---|---|---|
| /r/ | 75/100 | 75% |
| /l/ | 25/100 | 25% |

When **/r/** occurs as a single consonant, these respondents did not have any problems realizing it. It is when it occurs in consonant clusters that some of them realize it as **/l/.**

**The preferred consonant for RP /r/ is still /r/ for the respondents in both groups.**

**The percentage difference between the use of /l/ for /r/ by the two groups is 11%. This means that a Twi respondent is 11% more likely to use /l/ for /r/ when speaking English.**

**22. Alveolar approximant: /l/**

Initial: label, lark, lather, lather, leg, leisure, lighted, lip, loaf, locked, looked, lose, lovely, lower, luck, loving

Medial: absolute, allocated, although, always, blouse, cauliflower, child, climb, cloth, coiled, complete, congratulate, eventually, fault, feels, fills, glove, pleasure, quality, really, yellow

Final: brutal, journal, kettle, will

Word Realization

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
|---|---|---|---|---|---|---|---|---|---|---|
| L̲ABEL | l | l | l | l | l | l | l | l | l | l |
| L̲EATHER | l | l | l | l | l | l | l | l | l | l |
| EVENTUALL̲Y | l | l | l | l | l | l | l | l | l | l |
| PL̲EASURE | l | l | l | l | l | l | l | l | l | l |
| BL̲OUSE | l | l | l | l | l | l | l | l | l | l |
| AL̲WAYS | - | l | - | l | l | - | l | l | - | - |
| CAUL̲IFL̲OWER | l | l | l | l | l | r | l | l | l | l |
| BRUTAL̲ITY | l | l | l | l | l | l | l | l | l | l |
| JOURNAL̲IST | l | l | l | l | l | l | l | l | l | l |
| BRUTAL̲ | l | l | l | - | l | l | l | - | l | - |
| JOURNAL̲ | l | l | l | l | l | l | l | l | - | l |
| RESIDENTIAL̲ | - | l | l | l | - | l | - | - | l | - |

The alveolar approximant is realized with no problem at the initial position of words. At the medial and final positions, however, there are instances of the absence of use, so that G1for instance, realized 'residential' as /**rɛsidɛnʃia**/ and 'always' as /**ɔ·we·s**/.

**Of the 120 instance of use, The Ga respondents realized /l/ in 105 cases (87.5%). /r/ was used once. The preferred consonant for them then is /l/.**

Word Realization

| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 |
|---|---|---|---|---|---|---|---|---|---|---|
| L̲ABEL | ! | l | l | l | l | l | l | l | l | l |
| L̲EATHER | l | l | i | l | l | l | l | l | l | l |
| EVENTUALL̲Y | r | l | l | r | r | l | l | r | l | l |
| PL̲EASURE | l | l | l | r | l | r | l | r | r | r |
| BL̲OUSE | l | l | l | l | r | i | l | l | r | l |
| AL̲WAYS | l | l | - | l | - | - | l | - | l | - |
| CAUL̲IFL̲OWER | l | l | l | l | r | l | r | r | r | l |
| BRUTAL̲ITY | l | l | l | l | l | l | r | l | l | l |
| JOURNAL̲IST | l | l | l | r | l | l | l | l | l | l |
| BRUTAL̲ | - | l | l | l | - | l | l | - | l | l |
| JOURNAL̲ | l | - | l | l | l | - | l | l | - | l |
| RESIDENTIAL̲ | l | - | l | - | - | l | l | - | l | l |

With the Twi speakers too, there are no problems with /l/ at initial position. At medial positions, and especially in consonant clusters, it is realized either as /l/, /r/ or not at all. At final positions, /l/ is present or absent.

Out of the 120 instances of use, /l/ appeared 88 times (73.3%), /r/ was used for /l/ 17 times (14.1%), and the rest of the time /l/ is absent.

**This means that the preferred consonant is /l/ for the Twi respondents as well.**

**The percentage difference between the use of /r/ for /l/ by the two groups is 13.1%. This means that a Twi respondent is 13.1% more likely to use /r/ for /l/ when speaking English.**

**23. Palatal approximant: /j/**

Initial: you, yellow, yet, yam

Medial: contributed, cure, curious, distribute, pure, congratulate, absolute

In 'absolute', 'congratulate' and 'contribute', some of the respondents dropped the yod. But this is not a problem, for as Gimson (2001:212) explains, "In many cases of RP /j/ + /u:/, an alternative pronunciation without /j/ exists."

**Thus, it can be said that the respondents did not realize this sound any different from RP.**

**24. Labio-velar approximant: /w/**

Initial: waist, waiter, war, wash, week, what, wick, wife, will, with, woman, wooed, wood

Medial: forward, cauliflower, always

Final: yellow

**Respondents did not show variation from RP.**

## 4.5 SUMMARY ON CONSONANTS

Out of the 24 RP consonants looked at, the ones that present much variation by the respondents are the velar nasal /ŋ/, dental fricatives /θ, ð/, glottal fricative /h/, post-alveolar approximant /r/ and the alveolar approximant /l/.

As already mentioned, though the velar nasal /ŋ/ is a phoneme realized in Ga and Twi, it is not realized in the English of the respondents. This feature of replacing the velar nasal with [ɪn], [ng] or [ŋg] is not unique to only Ga and Twi speakers. According to Koranteng (2006: 242-243), it is a feature of Ghanaian English in general. Gimson (2001:199) also reiterates that [ŋg] forms are retained in the speech of many regional varieties of English. He also mentions that the –ing ending varies between [ɪn] and [ɪŋ] based on stylistic and social factors in areas where [n] or [ŋ] are contrastive. Data from this study, however, shows that the use of [ɪn] is consistent by the respondents, and there is no variation based on social or stylistic factors.

The dental fricatives – more so the voiceless dental fricative - are present in the speech of Ga and Twi speakers of English, though these sounds are absent in the L1s of the respondents. Respondents made use of the voiceless fricative more often than they did the voiceless alveolar plosive, which, it was believed, replaces the voiceless dental fricative in second language use. On the other hand, the voiced alveolar plosive is used in most instances where the voiced dental fricative should be used. This means that the use of the voiced dental fricative has not caught on as its voiceless counterpart has. Again, as Huber (2000:85) points out, there is no consistency of use; the same respondent varies between

the use of the dental fricatives and the alveolar stop. The only exception in this research is one respondent who used the voiceless dental fricative consistently.

Contrary to widespread believe that Ga speakers of English do not realize the glottal fricative especially in initial positions of words, this research shows that this is not entirely true. For most speakers, the glottal fricative is present; though there is no denying that in a few speakers it is absent, especially in connected speech. But it must be stated that if a student omits or inserts the / **h**/ when he should not, there is a 29% chance that he or she is Ga.

As already mentioned, /**l**/ and /**r**/ are in free variation in Akan and Ga. This, however, hardly interferes with the Ga respondents' realizations of these phonemes when speaking English. The same cannot be said of the Twi respondents. Though most of them used these two phonemes contrastively, a number of them used these phonemes as free variants even in English, especially in consonant clusters.

The assertion of Todd & Hancock (1986:9) that in West African English there is "a strong tendency to devoice in word final position…" is found to be true with the two groups of respondents used in this research. The voiced bilabial plosive in words like 'robe', 'mob', and 'cub' were devoiced by some of the respondents so that these words sounded homophonous with 'rope', 'mop' and 'cup'. The voiced labiodental fricative is also devoiced by some respondents, so that 'serves' and 'gloves', sound more like /**sɛ:fs**/

and /**glɔfs**/ respectively. In the last two examples above, regressive assimilation takes place.

The voiced alveolar fricative, on the other hand, has a tendency to be devoiced not only in word final position, but also in word medial position by the two groups. The fact that in Twi all fricatives are voiceless (Dolphyne, 1988:29) might explain this tendency in the Twi speakers to devoice /**z**/ and /**v**/, though the same cannot be said for the Ga speakers. The Ga language has both the voiced and voiceless alveolar and the labiodental fricatives (Dakubu, 2002:61). According to Adjaye (2005:26) however, /**z**/ and /**v**/ are possible loans in Ga. This might explain their being replaced by their voiceless counterparts by the respondents in this study.

It must be noted, however, that respondents from the two groups had no problem (except in 'television') with the voiced palato-alveolar fricative /**ʒ**/ in English, though this sound is not present in their respective L1s.

## 4.6 OTHER FINDINGS

- INSERTION

In English, deletion of vowels is mainly restricted to the unstressed vowels /ɪ/ and /ə/, with the latter occurring more often. If the consonant following the unstressed vowel is a liquid or nasal, the vowel is deleted and the following consonant becomes syllabic. The data collected, however, shows that in such situations when there should be a syllabic consonant, the respondents inserted a vowel, and this vowel is not /ə/ (which is not realized by the respondents, any way):

Question /ˈkwɛstʃn/ → /ˈkwɛstʃin/, /ˈkwɛsʃin/

Digestion / daɪˈdʒɛstʃn/ → /ˈdaɪdʒɛstʃin/, /ˈdadʒɛstʃin/, /ˈdadʒɛsʃin/

Kettle /kɛtl/ → /kɛtɪl/, /kɛtil/

Vegetables /ˈvɛdʒətəbls/ → /ˈvɛdʒɪtabuls/, /ˈvɛdʒitabuls/

Thimble /ˈθɪmbl/ → /ˈθɪmbul/, /ˈtɪmbul/

Label /ˈleɪbl/ → /ˈleɪbul/, /ˈle.bul/

Sandal /ˈsændl/ → /ˈsandal/

Residential /rɛzɪdɛntʃl/ → /rɛzɪdɛntʃal/, /rɛzɪdɛnʃal/

Several /ˈsɛvrl/ → /ˈsɛvɪral/, /ˈsɛviral/

The data shows that in words that have the **-ʃn** cluster, respondents inserted **/i/**between the two consonants. Whenever a liquid comes between a consonant and a vowel, as in 'kettle', and 'thimble', respondents place /ɪ/ and /u/ respectively between the consonant and the liquid, so that they become /kɛtɪl/ and /ˈθɪmbul/ or /ˈtimbul/.

On the other hand, whenever a vowel comes between a consonant and a liquid, as in 'sandal', /**a**/ is inserted between the consonant and the liquid - /'**sandal**/.

- INFLECTIONAL SUFFIX FORMATION

According to Gimson (2000:245), "Inflectional suffixes (which do not normally affect accent) follow certain rules which affect segmental aspects of pronunciation". Two of such rules that were looked at in this research are the following:

1. Plural/third person singular present tense/possessive formation: The phonological rules of English dictates that to form the plural, third person singular present tense or show the possessive form of a word whose stem ends in a sibilant sound, /**ɪz**/ is added. With stems that end in voiced non-sibilant sounds and voiceless non-sibilant sounds, /**z**/ and /**s**/ are added respectively. Thus;

| /s/ | /z/ | /ɪz/ |
|---|---|---|
| Lips | Bags | Reaches |
| Goats | Beads | Judge's |
| Books | Serves | Squashes |
| chips | vegetables | dances |

Results from this research show that respondents had no problem forming plurals of words whose stems end in voiceless non-sibilant sounds. On the other hand, respondents used the /ɪs/ where they should use /**ɪz**/, and /**s**/ where they should use /**z**/, so that the voiceless alveolar fricative was used throughout.

2. Past tense formation of regular verbs: the rules state that to form the past tense of a regular verb whose stem ends in /t/ or /d/, add /ɪd/. If the stem ends in any voiceless sound (apart from /t/), add /t/, and if it ends in any voiced sound (apart from /d/), add /d/. Thus:

| /t/ | /d/ | /ɪd/ |
|---|---|---|
| Missed | Cheered | Parented |
| Photographed | Questioned | Started |
| Gaped | Cured | Forwarded |
| Marched | Coiled | Beaded |

Respondents had no problem with words whose stems ended in voiced sounds (apart from /d/) and those that ended in /d/, though they used /ɛ/ instead of the /ɪ/ in /ɪd/, no doubt because of spelling pronunciation. But with those words whose stems ended with voiceless sounds (apart from /t/), respondents used /d/ instead of /t/. This means that the respondents voiced the past tense allomorph /t/.It is most likely that this is an influence from spelling.

- CONSONANT CLUSTERS

In English it is possible to have up to three consonants in the onset and up to four consonants in the coda of syllables before the appearance of a vowel [CCCVCCCC]. These groups of consonants in the coda or onsets of syllables are known as consonant clusters. The problems respondents in this study had in relation to consonant clusters are as follows:

1. voiced bilabial plosive in final consonant clusters: in words like 'thumb', 'doubt' and 'climb', the voiced bilabial plosive is silent, but most of the respondents articulated this sound.
2. The palatal approximant in consonant clusters: In 'distribute', and 'contribute', most of the respondents dropped the yod. But this is not a problem, for as Gimson (2001:212) explains, "In many cases of RP /j/ + /u:/, an alternative pronunciation without /j/ exists."
3. Consonant cluster reduction: the consonant clusters in the following words were recorded as having been reduced by some of the respondents:

Correct /kəˈrɛkt/ → /kɔˈrɛt/

Child /tʃaɪld/ → /tʃaɪd/, /tʃaːd/

Fault /fɔːlt/ → /fɔːt/

Mixed /mɪskd/ → /mɪsd/

Although/ ɔːlˈðəʊ/ → /ɔːˈdoː/

Always /ˈɔːlweɪz/ → /ˈɔːweːz/

Question /ˈkwɛstʃn/ → /ˈkwɛsʃin/

Digestion / daɪˈdʒɛstʃn/ → /daɪˈdʒɛsʃin/, /daˈdʒɛsʃin/

# CHAPTER FIVE

# STRESS

## 5.1 WORD STRESS

The terms 'accent' and 'stress' have been used by some writers in ways that suggest that they might be synonymous.

According to Clark and Yallop (1990:295), who themselves use the term 'stress', Halliday (1970) uses 'accent' and defines word accent as "the potential salience of certain syllables with certain words".

Gimson (2001), like Halliday, also uses 'accent', saying that "the syllable or syllables of a word which stand out from the remainder are said to be accented, to receive ACCENT" (p.221).

Fudge (1984), according to Clark and Yallop (1990:295), on the other hand, uses the term 'stress' to refer to "the way in which one syllable in a given word is picked out or singled out".

Katamba (1989:221) also asserts that "an element that is stressed is highlighted so that it becomes auditorily more salient than the rest of the elements in the string of which it is a part".

Although all these writers describe the same phenomenon, they use different terms.

It seems that the reason why some writers use one term and not the other is because these two terms have been used elsewhere to refer to different concepts in linguistics. Some writers may not want to use the term 'stress' because it has been used to classify certain languages (stress- timed languages)-languages in which pitch differences on the same word do not amount to phonemic contrasts. Again, some writers will hesitate to use 'accent' because like Laver (1994) and Tchume (1999), they might feel that the term should be restricted to pronunciation. To Laver (1994:55), "the technical meaning of the term 'accent' is simply manner of pronunciation". Thus we can talk of, for instance, the American accent of English, and define it as the way Americans speak English.

Linguists might not agree on what term to use, but at least they all agree that stress is associated with prominence. The factors that help to achieve prominence have been listed by Sommerstein (1977:36) as loudness, pitch and duration; by Katamba (1989:221) as loudness, pitch and length; and by Gimson (2001; 222-224) as loudness, pitch –change, and the quality and quantity of the vowel in the word.

But when it comes to what is more important in determining prominence, another controversy arises. While some, like Gimson (2001), believe that pitch is the most important determinant; others like Quirk, Greenbaum and Svartvik (1985) consider loudness to be more important. In fact, Clark and Yallop (1990: 340) caution that mention must not be made of pitch when discussing stress. To them, "the stress of a syllable is the perceived relative loudness reflecting force of articulation, whereas the tone of a syllable is the perceived pitch".

Tchume (1999: 22) mentions that Jones (1957) also proposes that stress must be treated distinctively from pitch because, "it often happens that strong stresses are found on low-pitch syllables and that weak stresses are found on high pitch syllables."

While the debate as to which of these determinants is the most important continues, the fact remains that when a word is stressed, it is given prominence.

In this study, therefore, the term 'stress' is used, and when a syllable is described as stressed, it means that in relation to the other syllables in the word, that syllable is the most prominent. Whether the prominence was achieved through high pitch, loudness or a stronger muscular force is not of interest in this study. After all, according to Sommerstein (1977:36) what happens is that when one person speaks, the one listening must use:

> All available information to determine the degree of muscular effort with which each syllable was uttered *and what we call stress corresponds not to the data he uses or any part of it, but to the conclusions he reaches.*

Dolphyne (1998) states that West African speakers of English associate High Tone with stress, so that *'import(* noun*)* is produced with a High-Low pattern, while *im'port (*verb) is produced with a Low-High pattern.

Again, Adjaye (2005:229) quoting Wells (1982) says that,

> "It is generally true that high tone is perceived by speakers of non-tonal languages ( such as English) as stress, and that English stress is equated by speakers of tonal –African languages with high tone. *In each case the syllable in question is rendered more prominent auditorily*".

## 5.2 WORD STRESS IN ENGLISH

Gimson (2001:221) points out that unlike in languages like Czech (where the first syllable of a word is usually stressed) and Polish (where it is the penultimate syllable that is stressed), in English, it is usually not easy to determine which syllable in a word is to be stressed. He further mentions that:

> The accentual pattern of English words is fixed, in the sense that the main accent always falls on a particular syllable of any given word, but free, in the sense that the main accent is not tied to any particular point in the chain of syllables constituting a word…

It is this 'fixed- free' nature of English stress that has rendered it so difficult for non-native speakers to pick up. This notwithstanding, it is generally believed that it is very important for non-native speakers of English to acquire the knowledge of stress placement. Daniels (1995:8) puts it this way,

> " The first and alas, often neglected priority should be to supply learners of English with 10 general and powerful stress rules,

because it is at the level of word stress that the errors most damaging to comprehensibility occur".

Though he does not himself give these 10 rules, most of the rules that have been formulated to help learners of English acquire the way to place stress have, according to Jenkins (2000:39). "multiple exceptions and/or are far too complex for mental storage by students and teachers alike". All the same, because stress in English is governed by rules, these rules must be learnt.

Roach (2000: 97), however, lists the following as guidelines to word stress placement:

i. Whether the word is morphologically simple, or whether it is complex as a result either of containing one or more affixes (that is, prefixes and suffixes) or of being a compound word.

ii. What the grammatical category of the word is (noun, verb, adjective, etc.).

iii. How many syllables the word has.

iv. What the phonological structure of those syllables is.

He goes on further to give some rules of stress placement on simple words in English. These are summarized below (Roach 2000: 98-100):

Two-syllable verbs, adjectives adverbs and prepositions

- If the second syllable is strong, that is, if it is has a diphthong, a long vowel or a short vowel with a coda, stress it.

Examples: **əˈplaɪ**, **əˈlaɪv**

- If it is weak, that is, if it has /ɪ/, /u/ or /ə/ stress the first syllable, unless it contains /əʊ /.

Examples: **ˈentə**, **ˈlʌvlɪ**

Two-syllable nouns

- If the second syllable has a long vowel (or a diphthong), stress it.

Examples: **ɪˈsteɪt**, **dɪˈzaɪn**

- If the second syllable contains a short vowel, the stress falls on the first syllable.

Examples: **ˈmʌnɪ**, **ˈprɒdʌkt**

Three-syllable verbs

- If the final syllable has a strong vowel, stress it

Example: **entəˈteɪn**

- If vowel in the final syllable is weak, stress the penultimate syllable, if that is strong

Example: **ɪŋˈkaʊntə**

- If both the final and penultimate syllables have weak vowels, stress the first

Example: **ˈpærədi**

Three syllable nouns

- If the vowel in the final syllable is weak or is /əʊ /, it is unstressed and the stress is placed on the penultimate if that is strong.

Example: **mɪˈməʊzə**

- If both the final and penultimate syllables have weak vowels, the stress falls on the first syllable

Example: **'sɪnəmə**

- However, even when the final syllable has a strong vowel, the stress is placed on the first syllable. The stress placed on the first syllable becomes the primary stress, and a less prominent stress (the secondary stress) is placed on the final syllable.

Example: **'ɪntəlekt**

Stress in English is important not only because it allows us to make distinctions between words, but also because it helps with pronunciation and meaning contrasts especially between words that have the same or similar forms (*re fuse*- verb, *'refuse*-noun).

## 5.3 WORD STRESS IN GA AND TWI

In her study of Ga phonology, Dakubu, 2002 suggests that,

> "If there is any phonetic relationship among pitch, length, loudness and speed in Ga, the relationship does not play a major role in the phonology. However, it is possible to give a syllable extra prominence in order to emphasize it and this is what we shall refer to as stress."(p. 28-29)

The same can be said of Akan.

Traditionally, it has been the belief of writers, such as Odamtten (1989), that Africans, especially those whose languages are syllable-timed, do not use stress when speaking English because the concept is unknown in their native languages, which are mostly syllable-timed. What they do is to transfer the syllable -time rule in their native languages to English, and this is why they realize every syllable in English with equal prominence. But Dakubu (2000) explains that in Ga, for instance, it is not entirely true that all syllables carry equal prominence, for "...preliminary measurements showed that a vowel that began a word tended to be slightly longer than a CV syllable in the same position (p.28)". As the results from this study will soon show, when speaking English, the respondents produced some syllables with more prominence than others. This means that the notion that syllable-timed languages place equal prominence on all syllables may not be true, and therefore, the belief then that people who have syllable –timed first languages produce every syllable in English with equal prominence ( Odamtten,1989) may equally not be true.

## 5.4 FINDINGS ON WORD STRESS

The words in the word list were categorized into two groups for analysis: disyllabic words and polysyllabic words.

The disyllabic and polysyllabic words were further divided depending on which syllable the stress is located.

### 5.4.1 GROUP ONE: DISYLLABIC WORDS

The two syllabic words in the word list, made up of nouns, verbs, adjectives and adverbs were:

*About, affair, although, always, aware, assist, brother, brutal, bury, cocoa, correct, complete, cooker, divine, envy, estate, exams, favour, forward, idea, lather, leather, leisure, figure, jacket, journal, lighted, lovely, loving, famous, machine, nothing, wonder, police, people, happy, lady, pretty, private, village, colour, million, lower, madam, marches, matter, measure, paper, pleasure, razor, reaches, really, reside, soldier, started, sugar, suitcase, sunrise, taller, teacher, teacup, vantage, waiter, dances, woman, yellow, total, treasure, thimble, sandal, question, label, kettle, zero, exchange, stadium*

1. DISYLLABIC WORDS WITH INITIAL STRESS

   *Brother, cocoa, cooker, leisure, jacket, people, lady, village, matter, paper, razor, soldier, sugar, suitcase, teacup, teacher, waiter, thimble, sandal, kettle, sunrise, woman, stadium, figure, marches, reaches, bury, started, dances, envy, taller, lovely yellow, happy, pretty, famous, really, brutal, always and really.*

**Respondents placed the stress rightly on all the words above except for *cocoa*, in which all but one respondent (G4) placed the stress on the second syllable.**

2. DISYLLABIC WORDS WITH STRESS ON THE SECOND SYLLABLE:

   *Affair, estate, exams, idea, machine assist, reside, aware* and *divine*

**All the respondents placed the stress on the second syllable in *affair*, *assist*, *aware*, *divine*, *reside* and *machine*. All of them placed it on the first syllable in exams and *estate*, while G4, G9, T3 T6 and T9 placed the stress on the first syllable in *idea*.**

### 5.4.2 GROUP TWO: POLYSYLLABIC WORDS

The words on the word list that have more than two syllables are

*Absolute, accommodate, accommodation, allocated, approximate, approximately, approximation, brutality, cauliflower, character, characteristics, cigarette, compensate, compensation, congratulate, congratulation, contribute, contribution, curious, determine, digestion, distribute, distribution, educate, entertain, eventually, exactly, favourite, infestation, initial, investigate, investigation, journalism, journalist, kerosene, magazine, necessary, opponent, parented, photograph, photographer, photography, primary, quality, resident, residential, resurrect, several, television, thoroughly, together, vegetables, possible, familiar, museum, resurrect*

1. POLYSYLLABIC WORDS WITH STRESS ON THE FIRST SYLLABLE

   *Cauliflower, character, kerosene,, quality, resident, vegetables, journalist, journalism, photograph, allocated, educate, parented, compensate, contribute, distribute, curious, favourite, necessary, several, possible, absolute, thoroughly*

**All the respondents placed the stress on the second syllable in *allocated* and *journalism.* All except G4 (who stressed the initial syllable), stressed the second syllable in *parented.***

**G1, G2, G7, T6 and T9 placed the stress on the last syllable in *kerosene.***

**G5 placed the stress on the penultimate syllable in *cauliflower.***

**All the respondents stressed the last syllable in *contribute* and *distribute.***

**Apart from G1, G4 and T6 who stressed the first syllable, all the rest stressed the last syllable in *educate* and *compensate.***

2. POLYSYLLABIC WORDS WITH STRESS ON THE SECOND SYLLABLE

*Digestion, opponent, brutality, photography, photographer, museum, accommodate, approximate, congratulate, determine, investigate, familiar, initial, eventually, exactly, together*

**Respondents placed the stress on the third syllable in *photographer.* They also stressed the last syllable in *accommodate, approximate, congratulate* and *investigate.***

3. POLYSYLLABIC WORDS WITH STRESS ON THE PENULATIMATE SYLLABLE

*Approximation, accommodation, television, compensation, congratulation, contribution, distribution, investigation, infestation characteristics*

**Respondents placed stress on the penultimate syllable, as in RP.**

4. POLYSYLLABIC WORDS WITH STRESS ON THE LAST SYLLABLE

*Cigarette, magazine, entertain and resurrect*

**G4, G6 and T10 stressed the initial syllable in *cigarette.(As in American English)***

**G1, G4, T4, T8 and T10 stressed the initial syllable in *magazine.***

## 5.5 STRESS IN CONNECTED SPEECH

There is a difference between studying stress in single, isolated words, and studying stress in words that have been stringed together, that is in connected speech. When dealing with words in isolation, the interest lies in distinguishing the most prominent syllables from the less prominent ones. In connected speech, however, the concern is which word in a string of words carries the most prominence. Another way of saying this is that with isolated words, we want to see which syllables are strong, that is, which has a diphthong, a long vowel or a short vowel with a coda, and therefore prominent; and which are weak, that is, which has /ɪ/, /u/ or /ə/, and therefore less prominent. On the other hand, when a word in a sentence is described as having been used in its strong or weak form, it is not the vowel quality we are interested in, but rather the part of speech, the position of that word or the additional meaning given to it.

In English there are certain words that have both strong and weak forms. The weak forms are produced with less prominence than the strong forms. Roach (2000: 112), points out that, "it is possible to use only strong forms in speaking, and some foreigners do". Though one can use only the strong forms of words in speech and be understood, it is necessary for learners of English to also acquire the use of weak forms of words because, "most native speakers of English find an 'all-strong-form' pronunciation unnatural and foreign-sounding" Roach (2000: 112).

A form of pronunciation labelled 'foreign- sounding' is not a bad thing if one is aiming at sounding different from a native speaker. But as Roach goes on to explain, it is more important to learn the use of the weak forms of words so as to better understand those who do use them.

In connected speech, lexical words (nouns, main verbs, adjectives, and adverbs) are stressed (strong), while function words (auxiliary verbs, prepositions, conjunctions, pronouns) are not stressed (weak), except in the following situations, as cited by Roach (2000:113-114) :

- When they occur at the end of sentences

Example: I'm fond of chips-

**aɪm ˈfɒnd əv ˈʧɪps**

But: Chips are what I'm fond of –

**ˈʧɪps ə ˈwɒt aɪm ˈfɒnd ɒf**

- When they are being contrasted with another

Example: The letter's *from* him, not *to* him –

**ðə 'letəz 'frɒm ɪm nɒt 'tuː ɪm**

- When they being cited or quoted

Example: You shouldn't put "and" at the end of a sentence-

**ju 'ʃʊdn̩t pʊt 'ænd ət ðɪ 'end əv ə 'sentəns**

- When they are being used to show emphasis

Example: You *must* give me more money-

**ju 'mʌst 'gɪv mi 'mɔː 'mʌni**

Gimson (2001:252) mentions that when function words are used in their weak forms, three things can happen:

- There is reduction of the length of the sounds

Example: been- /**biːn**/ (strong form)

/**bɪn**/ (weak form)

- There is obscuring of vowels towards /ə/, /ɪ/ or /ʊ /.

Example: from-/ **frɒm**/ (strong form)

-/**frəm**/ (weak form)

- There is an elision of vowels and consonants.

Example: and -/ **ænd**/ (strong form)

-/ **n̩d,ən, n̩**/ (weak form)

Pike (1945) explains that one of the reasons why in English there are instances where vowels are reduced or some syllables are skipped entirely in sentences is because English is a stress-timed language. This means the rhythm of English dictates that "units follow

each other in such a way that the lapse of time between the beginnings of their prominent syllables is somewhat uniform" (p.38). And when it happens that "the rhythm units have different number of syllables, but a similar time value, the syllables of the longer ones are crushed together, and pronounced very rapidly in order to get them pronounced at all within that time limitation" (p.38).

Data from this study revealed that the respondents did not use the reduced or weak forms of words. It is generally believed that this is because Ga and Akan are, unlike English, syllable-timed. Syllable-timed languages are those that "it is the syllables, instead of the stresses, which tend to come at more-or-less evenly recurrent intervals-so that as a result, phrases with extra syllables take proportionally more time, and syllables or vowels are less likely to be shortened and modified" (Pike,1945:39) . This researcher believes that another reason is that these students have not been taught that in English, some words have weak and strong forms. Again, Ghanaians have been known to study English from books, so without the guidance of native speakers or teachers with native speaker competence, it should be expected that the English we speak will be text-book English, and that there is a tendency for every syllable to be realized as if in isolation.

Because this feature of not using the weak form is common to all the respondents in this study, only one of the respondents' transcribed data on connected speech is presented here:

### 5.5.1 SAMPLE CONNECTED SPEECH

(The underlined are the grammatical words that have been stressed.)

1. You are coming with us to the hospital, aren't you?

   **ˈju aː ˈkamin wiθ as tu dɛ ˈhɔspitil / ˈant juː**

2. There are three more items on the list: a towel, sponge and soap

   **ˈdɛˑ aː θriː ˌmɔː ˈaitems ɔn dɛ list / ɛ ˈtawul / spɔntʃ end soˑp**

3. This small thing for a hundred cedis? You must be joking.

   **ˈdis suˈmɔˑl tin fɔ ɛ ˈhandred ˈsidis / ju ˈmast bi ˈdʒoːkin**

4. The Ghanaian Times sells more than P and P.

   **dɛ ˈganien taɪms sɛls mɔː dan p ɛn p**

5. She certainly doesn't look as old as her age.

   **ʃiː ˈsɛtinli daznt luk as oːld as hɛˑ ˈeˑdʒ**

6. Have you done all your assignments this time?

   Yes, I have even typed them.

   **hav ˈjuː dan ɔːl jiɔ aˈsainments dis taim**

   **jɛs aɪv ˈiːvn taipd dɛm**

## 5.6 SUMMARY ON STRESS

The respondents did not have many problems with disyllabic words. They seem to have acquired how to place the stress on these words, especially when the word has initial stress.

With polysyllabic verbs, the respondents showed a great tendency to stress the last syllable, especially when the word has the following endings - *ate* and *–ute,* as in words like *congratulate, contribute, investigate* and *compensate.*

Because of this tendency to stress the last syllable, when the noun suffix *–tion* is attached to these verbs, there is no shift in the stress, as happens in RP, where there is a shift of stress form either the first syllable ( as in ***'kɒmpənseɪt*** and ***'dɪstrɪbju:t***) or the second syllable ( as in ***kən'grætjuleɪt***), to the penultimate syllable as in ***kɒmpən'seɪʃn, kəngrætju'leɪʃn*** and ***dɪstrɪ'bju:ʃn***, respectively.

Adjaye (2005:236) explains that this might be happening because "the verbal accentual pattern could have been derived from the noun forms", some form of backformation, perhaps.

Results from this study on word stress show that these respondents are generally cognizant of English word stress patterns. Even in connected speech, it is obvious that the respondents showed which syllables are prominent and which are not. What they failed to do was to use the weak forms of words when they should. Even this is not always the

case, for as G1's transcribed data reveals, sometimes, the respondents do use the weak forms of the words. At one time, the same individual may use the weak form of a word while at another, the strong form. For instance, in Sentence 2, [ɛnd] is used, but in Sentence 4, [ɛn] is used. Again, in the answer to the question in Sentence 6, 'have' was reduced to [v].

It is apt to summarize and conclude these findings on stress by repeating these two quotes from Tchume (1999:33)

> "....the EL2 speaker may not achieve the right kind of stress-rhythm typical of native speakers, yet he is able to assign strong stress that makes a syllable more prominent".

And

> "Even though there is a perceived manifestation of a primary stress on one particular syllable within a word pronounced by the educated Ghanaian, he is not able to reflect in his pronunciation the rhythmic pattern that is associated with the obscuring of reduced vowels" (as happens in weak forms of words).

# CHAPTER SIX

# INTONATION

## 6.1 INTONATION

Stress deals with prominence, but with intonation, the focus is on pitch. "Pitch in speech is closely related to the frequency of vibration of the vocal folds" (Roach, 2000:94). Pitch is therefore a feature of voiced sounds. Since every language has voiced sounds, all languages have pitch. The rate of vibration of the vocal cords determines the height a pitch can attain. The greater the rate, the higher the pitch perceived and visa-versa.

Various languages have different ways of applying pitch. In some languages, pitch differences can be used to make meaning differences between words, and to mark the part of speech of words. Languages that use pitch this way are known as tone languages. Ga and Akan are of tone languages. Examples of how Ga and Akan use pitch to make meaning differences in words are:

| Ga | Akan |
|---|---|
| **gbé**- *pot* | **pám** -*sew* |
| **gbè**- *road* | **pàm** - *chase away* |

English, on the other hand, is not a tone language, but an intonation language. This means that in English changing the pitch on a word does not cause a lexical change in the meaning of the word. What is does is to show the attitude or emotions of the speaker.

Writers used to make a distinction between tone languages and intonation languages. But Katamba (1989: 239-240), points out that, "It would be wrong to classify languages as either tonal or intonational because all languages have intonation", and this includes tone languages. He goes on to say that the proof that tone languages also have intonation lies in the presence of what he calls 'tone terracing' in tone languages, which involves downdrift, downstep and upstep (Katamba, 1989:205).

In tone languages, when a low tone follows a high tone, there is an automatic lowering of the high tone. As Katamba puts it,

> " Because every high tone is lower than the preceding high each time there is an intervening low, a phonologically high tone can be phonetically lower in pitch than a low tone appearing before it in a phonological phrase" ( p. 206).

It is this phenomenon that is called 'downdrift'.

In tone languages, there are also occasions when a high tone gets lowered not because it is preceded by a low tone, as in downdrift, but rather when it is preceded by another high tone. This causes a downstep.

The third phenomenon is upstep, and this happens when a tone is raised in such a way that it is higher than a similar one that comes before it.

## 6.2 INTONATION IN ENGLISH

Intonation in English is very important. Unfortunately, this is one area which most non-native speakers of English find very difficult to acquire, especially when they are not in constant interaction with native speakers. Native speakers at times find it difficult to understand and interpret statements made by non-native speakers because they (the non-native speakers) seem not to know the functions of intonation as used in English. By not using intonation rightly when speaking English, the non-native speaker runs a high risk of unintentionally giving offence. Jenkins (2000: 44-45) retells a situation that was described by Gumperz (1982: 173),

> "Recently hired Indian and Pakistani cafeteria staff working at a British airport were perceived as 'surly and uncooperative' purely on the basis of their intonation patterns. For instance, when offering gravy, they would say the word 'gravy' with a falling tone instead of the rising tone normally adopted by L1 speakers of English when making offers of this sort. This was interpreted by the cargo handlers they served as a statement of fact, and so redundant in the context, and indicative of indifference rather than the engagement involved in an offer".

### THE FORM OF ENGLISH INTONATION

The structure of the English intonation is called the tonic unit, or the phonological phrase. It is made up of the following parts:

- The nucleus or tonic syllable is the most important element in a phonological phrase. This is the syllable in the phonological phrase that has the highest degree of prominence, and which carries a movement in pitch. It is the only obligatory element in the phrase.
- The head is that part of a tonic unit that extends from the first stressed syllable to the tonic syllable. If there are no stressed syllables before the tonic syllable, then there is no head.
- The pre-head is made up of all the unstressed syllables that come before the first stressed syllable.
- The tail is that part of a tone unit that comprises all the syllables that follow the tonic syllable.

## FUNCTIONS OF INTONATION IN ENGLISH

Katamba (1989: 242-246), explores some of the ways in which intonation is used in English as:

1. Grammatical use: Intonation is used in spoken language in the same way that punctuation is used in syntax- it helps in identifying which words in the utterance should be seen and treated as a group. This is done by placing tone-unit boundaries in utterances.
2. Accentuational use: In spoken language, intonation shows which words carry high prominence or stress, and which do not. Though normally stress is identified independent of intonation, the placement of tonal stress within the tone- unit is seen as part of intonation. Normally, lexical words carry such high prominence or

tonic stress, but in cases where grammatical words are being emphasized, they are also made to carry tonic stress.

3. Attitudinal use: one of the ways of adjudging the attitude or even the emotions of a speaker is by paying attention to the kind of intonation patterns he uses in speech. One can tell if a speaker is happy, sad, bored or angry by his use of intonation. The use of intonation to determine a speakers' attitude is commonly explained by the way tag questions are presented in English. If a falling intonation is used in a tag, the implication is that the speaker expects an affirmation on what he or she has said. On the other hand, the use of the rising intonation by the speaker is interpreted by the listener as a need to have something clarified.
4. Discourse use: Intonation is used in speech to call attention to some new information. In a conversation, one speaker introduces new information by making one of the syllables in that new information the tonic syllable, which receives the tonic stress. Also, intonation helps in turn- taking. When one speaker ends his turn with a falling intonation, it sends the message across to his listener that he (the first speaker) does not expect a reply. On the other hand, a rising intonation means that the speaker has not finished talking, or that he expects a response from his listener.
5. Illocutionary use: certain illocutionary acts in English are performed with the use of intonation. Three types of intonation patterns are identified with illocutionary acts in English. These are as follows:

- The falling intonation which is identified by a level head and a falling nucleus. This is commonly used with statements, imperatives and wh-questions in English.
- The low rise which is identified by a level head and a nucleus that is raised to some extent. This is commonly used in yes- no questions.
- The high rise which is identified by a level head and a nucleus that is raised high. This is commonly used in elliptical questions, general questions, listing and unfinished groups.

It must be noted however, the above is not always the case. According to Kreidler (1989: 182-3),

> "Contrary to popular belief, all analysts of English intonation have insisted that there is no melody which is exclusively associated with one type of sentence: statements do not necessarily have a falling tune, questions do not necessarily rise. The tunes do not necessarily correlate with any specific kinds of grammatical structure".

In fact, Katamba (1989: 243) himself cautions that "the deployment of intonation contours is not determined by rigid, exceptionless rules". He goes on to explain though that, "But nevertheless, certain intonation patterns are much more likely to be used to perform certain illocutionary acts than others"

## 6.3 TONE IN GA AND AKAN

Pitch movements in Ga and Akan can be either High [ á ] or Low [ à ]. This means that these two languages have two phonemic tones. Apart from these two, there are what Dakubu (2002: 8-9) calls 'compound High-Low tones [â]' and 'compound Low -High tones [ǎ]'. She describes High-Low tones as occurring as a result of having a High tone being followed by a Low tone in a single syllable, while a Low -High tone is a Low tone followed by a High tone in the same syllable.

A Low tone at the end of a phonological phrase in Ga receives a falling pitch, while a High tone receives a rising pitch. In polar questions on the other hand, a Low tone at the end of the phrase receives a level tone; a High tone receives a falling or level pitch, while a High-Low tone receives a rising pitch.

Examples:

**àmɛ̀ bà** They came (falling pitch) **àmɛ̀ bā** did they come? (level pitch)

**ètsɨ̀!né** He/ she sneezed (rising pitch) **ètsɨ̀!nè** did he/ she sneeze? (falling pitch)

**èhē** He/ she bought it (falling pitch) **èhé** did he / she buy it? (rising pitch)

( Dakubu: 2002:13)

The above rules also apply to Akan.

## 6.3 FINDINGS ON INTONATION

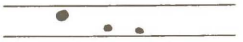
The respondents were made to read out thirty sentences which formed the material for the analysis of their intonational patterns. The following are how they read out these sentences:

1. [Whére àre yóu góíng tò'nĭght?]

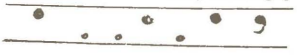
2. [Whó gòes thére?]

3. [Whát càn I dó?]

4. [Hów wàs ĭt?]

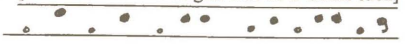


5. [Which òf thè cárs dĭd yóu brĭng?]

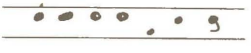


6. [Shè 'cértáinlý doès nót lóok às óld ás hèr âge]

7. [I thínk á house àt 'Légón wĭll bé à 'béttér ĭdeà]



8. ['Mótórcýclés àre nót sâfe]



9. [ Its júst nót póssíblè]

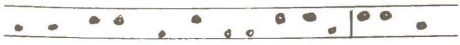
10. [ I shòuld hàve thóught só]

11. [A sécónd rŏund?]

12. [Hàve yóu dóne áll yóur a'ssĭgnménts thís tĭme?]

13. [Thís smăll thíng fòr à 'húndréd cédĭs?]

14. [Yòu àre 'cóming wĭth mé tò thè 'hóspítàl, árén't yóu?]



15. [Wé mùst búy hím à 'wédding 'présènt, músń't wé?]

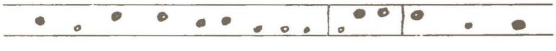
16. [Pléase gét mé sòme wátèr.]

17. [I néed hèlp.]

18. [Dráw thè 'cúrtáins fòr mè.]

20. [ Cóme ànd sée mé sòon.]

20. [Thère àre threé móre 'ítéms òn thè lĭst - à tówél, spónge ànd sòap.]



21. [ 'Ánswér 'ónlý 'quéstiòns óne, twó, threé …]

22. [I boúght sòme bóoks, two 'pénsĭls…]

23. [Páy à'tténtiòn!]

24. [Wátch òut!]

25. [Whát à dè'lícíous câke!]

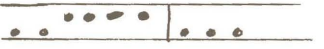
26. [Mỳ 'góodnèss!]

27. [Yòu mùst bè 'jóking.]

28. [Evén íf 'nóbódý saw him, I sàw hĭm.]

29 [I àm nót ĭ'mágíning ĭt, I sàw hĭm.]

30. [It wàs 'nóbódý élse I sàw hĭm.]



## 6.4 SUMMARY ON INTONATION

The analysis of the intonational patterns of the respondents showed that:

1. Every syllable in the sentences was given a tone. This is consistent with what Criper (1971) found with the English spoken by Ga people. The tone could be High, Low or High-Low.
2. Some syllables were realized as prominent and others were not. All the words which were not realized as prominent had Low tones. On the other hand, all the words that were prominent had High tones on the stressed syllables. When this happened, all the syllables before the stressed one had Low tone, while all those that follow the stressed syllable had High tones as well. The last word in a phonological phrase is realized differently, however. When the last word has more than one syllable, the last syllable is given a Low tone, even if normally that last syllable has a High tone. Thus:

   Low tones before stressed syllable

   [Hàve yóu dóne áll yóur à'ssígnménts thís tíme?]

   [I àm nót ĭ'mágíníng ĭt, I sàw hĭm.]

   [Whát à dè'lícíous cāke!]

   High tones after stressed syllable

   [Whére àre yóu góíng tò'nĭght?]

   [Shè 'cértáinlý doès nót lóok às óld ás hèr âge]

   ['Mótórcýclés àre nót sâfe.]

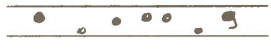
   ['Answér 'ónlý 'quéstiòns óne, twó, threé …]

3. Not only lexical words are given prominence. Some grammatical words are also given prominence in certain contexts, but not in others, and these contexts are not always the same as in English. For instance, in [whére àre yóu góíng tò'nîght?], the pronoun 'you' is given prominence and so has a High tone, but in [Yòu àre 'cómíng wĭth mé tò thè 'hóspítàl, árén't yóu?], the first 'you 'has a Low tone, as in English. Though the demonstrative pronoun in (13) [Thís] is given prominence, the one in (20) [Thère] is not. All the interrogative pronouns in phonological phrase initial positions have prominence.

4. At the end of a phonological phrase is a falling, rising or level tone. When the last syllable in the phrase has a Low tone, then there is a falling pitch or a level pitch. When the last syllable has a High tone, there is a rising pitch or level pitch. For instance:

Low tone with falling pitch

[Its júst nót póssíblè] [Whére àre yóu góíng tò'nîght?]



Low tone with level tone

[Hów wàs ĭt] [Whát càn I' dò?]

High tone with rising pitch

[A 'sécónd rŏund] [Háve yóu dóne áll yòur à'ssignménts thís tĭme?]

High tone with level pitch

[Yòu àre 'cómíng wĭth mé tò thè 'hóspítàl, árén'ˆt yóu?]

[Wé mùst búy hím à 'wéddíng 'présènt, músń'ˆt wé?]

5. There is a high tendency for phonological phrases to end with falling pitches. The data showed that statements, requests, commands and wh- questions all end with falling pitches, while polar questions tend to have rising or level pitches.
6. The respondents failed to use pitch to mark distinct words that have emphasis. With the last three sentences, (27-30), one word each ('I', 'saw' and 'him' respectively) must be emphasized by using High tone. None of the respondents did this. On the contrary, they read out these sentences as if no emphatic intonation was required. This notwithstanding, it must be stated that when they were engaged in conversation, like during the interview, they had no problem of placing emphasis on words by using pitch. For instance, G5, during the interview said, 'No, it is my father who comes from James Town, not my mother', placing the emphasis on the word 'father'. This means that when reading, the respondents do not make use of emphatic intonation, though they do so in conversations.

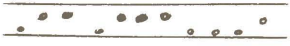
7. Every time a High tone follows a Low tone, the former is lowered. This runs through the sentences. Thus, downdrift is also present in the speech of the respondents.

The main difference between these respondents' intonation pattern and that of English is that here it is the last word in a phonological phrase that has the tonic stress; while in English the tonic stress can be on any syllable in the phonological phrase. The following characteristics detected in the respondents' English- the last word carries the tonic stress in a phonological phrase, all syllables have tones, and grammatical words can have prominence, even when they are not being emphasized, cited nor contrasted, suggest that they are carry-overs from the L1s of the respondents, which are syllable timed. When the respondents transfer these to English, therefore, it seems that they are 'speaking English in their native languages'. That is, speaking English words, but using Ga or Akan tone systems and rhythm. This is why the rhythm of the English they speak seems to be syllable-timed.

For instance, when the way the respondents read out the following sentences is compared to how they will be read in Ga and Akan, it becomes obvious that the rhythm is quite similar:

- English: [Whére àre yóu góíng tò nîght?]

Akan: [èhén fá nà wó ó kó ànàdwò yí?]



Ga: [nɛ̃́gbè òyàà gbékè néé?]

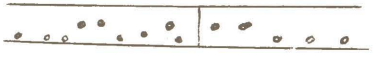
- English: [Pléase gét mé sòme wátèr]

Akan: [mì pà wò kyéw mà mè nsúò]

Ga: [ófaíné hà mì nù]

- English: [Evén íf 'nóbódý saw him, I sàw hĭm]

Akan: [sè òbí á énhù nò póà mé dèé mè hùù nò]



Ga : [**kéjì mókò mókò énáá lè póè mí lè mĩnà lè**]

# CHAPTER SEVEN

# SUMMARY AND CONCLUSION

This research set out to do two main things. First, it was to find out where similarities, approximations and differences occur between the English spoken by the respondents, whose L1s are Ga and Asante-Twi on one hand, and RP on the other. To do this, the accent phonology theory by Trubetzkoy (1931), explained further by Wells (1982) and Gimson (2001), was applied, so as to see which systemic realization, lexical and distributional differences exist between the three accents.

Secondly, this research was to find out what differences exist between the English spoken by the two groups of respondents (Ga and Asante-Twi), so as to determine if it is possible to tell any two of the respondents apart , as a Ga or an Asante-Twi, just by the way they speak English.

In the following subsections are the summaries of the findings of this work:

## 7.1.1 VOWELS

Some systemic differences were found. The number of phonemes in each language was different. While Ga has 12 vowels – seven oral vowels and five nasal vowels, Akan has fourteen- nine oral vowels and five nasal vowels. The two oral vowels present in Akan, but not in Ga are /ɪ/ and /ʊ/. The vowels that are present in Ga and Akan, but not in RP are /e/ and /a/.

RP, on the other hand, has twenty vowels- twelve pure vowel and eight diphthongs. Ga and Akan do not have diphthongs per se because when one vowel follows another directly, they are seen as a sequence of vowels, and not as a single phonemic unit, as in RP (Adjaye, 2005:20). The RP pure vowels that are absent in Akan are the central vowels (/ə/, /ʌ/, /ɜ:/), /æ/, /ɑ:/ and /ɒ/, while these same vowels, together with /ɪ/ and /ʊ/ are absent in Ga.

These systemic differences between Ga, Akan and RP vowels affect the way the respondents speak English.

Out of the 20 RP vowels looked at, the respondents made use of 12: seven pure vowels and five diphthongs. Five of the seven pure vowels realized by the respondents were used for RP pure vowels and three replaced three RP diphthongs. Thus,

| | | |
|---|---|---|
| /i:/ and /ɪ/ | → | /i/ |
| /ɔ:/ and /ɒ/ | → | /ɔ/ |
| /ʊ/ and /u:/ | → | /u/ |
| /æ/, /ɑ:/, /ʌ/ and /ə/ | → | /a/ |
| /ɜ:/, /ɛ/ and /ɛə/ | → | /ɛ/, /ɛ·/ |
| /eɪ/ | → | /e/ |
| /əʊ/ | → | /o/ |

It must be noted that though the respondents realized the diphthong /ɛə/ as /ɛ·/, it is not seen as a different vowel (though longer), but as the same vowel realized for the pure vowels /ɜ:/and /ɛ/. This is why the number of pure vowels as realized by the respondents adds up to seven.

The diphthongs realized were /**iɔ**/, /**iɛ**/, /**au**/, /**ɔi**/ and /**ai**/.

A critical look at the pure vowels realized by the respondents reveals that these vowels are the exact vowels which exist in the L1s of the respondents. The pure vowels that the respondents use in English are the same vowels as in Ga and Akan, the only exception being that in Akan /**ɪ**/ and /**ʊ**/ are also vowels.

What the respondents seem to be doing, at first glance, is that they replace the RP vowels that are not in their L1 with vowels in their L1s that are close to those in RP. But more than this is actually happening for if that were all, then the Asante-Twi speakers in this study should have had no problems with /**ɪ**/ and /**ʊ**/ which are present in Akan, but they realized these sounds no different from the way the Ga speakers realized them.

Another look at the selection of phonemes by the respondents shows that in most of the instances, selection of phonemes was influenced by the spelling or pronunciation of the word. It is because of spelling-pronunciation that there were realizations such as /ˈ**blous**/ for /ˈ**blaus**/, /ˈ**hom**/ for /ˈ**heʊm**/, /ˈ**pɒsibl**/ for /ˈ**pɒsəbl**/ and /aˈ**baʊt**/ for /əˈ**baʊt**/.

Sometimes too, the environment in which a vowel appears determines which phoneme would be selected to represent it. For instance, in initial position (/ə'baʊt/) and final position (/'weɪtə/, /'fɪgə/, / 'kʌlə/) /ə/ is replaced by /a/. In medial position (/'fɔ:wəd/, /entə'teɪn), vowel number 3 /ɛ/ is used instead.

The results in this study show that there is no significant difference between the ways the two groups of respondents realized the RP vowels. This means that contrary to Dolphyne (1999:97), listening to the way a respondent realized the RP vowels is not an adequate method to use to tell which L1 he or she speaks.

### 7.1.2 CONSONANTS

In all, Ga has 31 consonant phonemes, while Akan has 35. The consonants that Ga has but Akan does not are voiced labiodental and alveolar fricatives (/v/, /z/), and the voiced and voiceless labio-velar stops (/gb/, /kp/). This not withstanding, Akan has more consonants than Ga because it has more palatal, velar and glottal consonants that also have labialized counterparts.

RP has 24 consonant phonemes. Of these, the dental fricatives (/ð, /θ/) and the voiced palato- alveolar fricative (/ʒ/) are not present in either Ga or Akan. The reason why Ga and Akan have more consonants is that the presence of labialized forms of already existing consonants. For instance, while both Ga and Akan have /k/, /kw/, /g/ and /gw/, RP has only /k/ and /g/ as distinct phonemes.

Another difference is that while in Akan and Ga /l/ and /r/ are free variants, in English, these are distinct phonemes.

Although both Ga and Akan have the velar nasal, /ŋ/, this phoneme is realized differently when the respondents are speaking English. The respondents realized this as /ŋg/ or /ŋg/.

On the contrary, though the voiced palato-alveolar fricative (/ʒ/) is not present in either Ga or Akan, the respondents realized all words with this sound as in RP, the only exception being in 'television' in which the respondents used /ʃ/ instead. Again, the respondents showed knowledge of the voiceless dental fricative, thought they do not have this sound in their L1. Out of the 80 instances in the word list, /θ/ was used 38 times, representing 47.5%, and /t/ was used 33 times, representing 41.25%. But with the voiced dental fricative /ð/, respondents recorded an 80% rate of replacing this sound with the voiced alveolar stop /d/. When this is compared with the occurrences of these sounds in the connected speech, the findings are not too different-the respondents had a higher tendency of replacing the voiced dental fricative /ð/ with the voiced alveolar stop /d/, than they had of replacing the dental fricative /θ/ with the voiceless alveolar stop /t/.

The respondents showed a strong tendency to devoice in word final position. The fact that in Asante-Twi all fricatives are voiceless (Dolphyne, 1987:29) might explain the tendency in the Asante-Twi speakers to devoice /z/ and /v/, though the same cannot be said for the Ga speakers. The Ga language has both the voiced and voiceless alveolar and the labiodental fricatives (Dakubu, 2002:61). According to Adjaye (2005:26) however,

/z/ and /v/ are possible loans in Ga. This might explain their being replaced by their voiceless counterparts by the respondents in this study.

When it comes to using the past tense morpheme, the respondents had no problem with words whose stems ended in voiced sounds (apart from /d/) and those that ended in /d/, though they used /ɛ/ instead of the /ɪ/ in /ɪd/, no doubt because of spelling pronunciation. But with those words whose stems ended with voiceless sounds (apart from /t/), respondents used /d/ instead of /t/ .This means that the respondents voiced the past tense allomorph /t/.

Results from this research show that respondents had no problem forming plurals of words whose stems end in voiceless non-sibilant sounds. On the other hand, respondents used the /ɪs/ where they should use /ɪz/, and /s/ where they should use /z/, so that the voiceless alveolar fricative was used through out.

The data shows that the respondents do not use syllabic consonants: they always insert a vowel between two consonants. In words that have the -ʃn cluster, respondents inserted /i/ between the two consonants. Whenever a liquid comes between a consonant and a vowel, as in 'kettle', and 'thimble', respondents place /ɪ/ and /u/ respectively between the consonant and the liquid, so that they become /kɛtɪl/ and /ˈθɪmbul/ or /ˈtimbul when transcribed.

On the other hand, whenever a vowel comes between a consonant and a liquid, as in 'sandal', /**a**/ is inserted between the consonant and the liquid when the word is transcribed /'**sandal**/.

The research also shows that the respondents articulate the voiced bilabial plosive in final consonant clusters, as in words like 'thumb' and 'comb'. They also reduce consonants in clusters. For instance, respondents realized 'child'/**tʃaɪld**/ as /**tʃaɪd**/ or /**tʃa·d**/.

The main consonantal differences between the two groups of respondents in respect to their L1s have to do with the glottal fricative, the post-alveolar and the alveolar approximants.

For long, the assertion has been that Ga speakers make realization differences of /**h**/: that they either fail to articulate this sound when they should, or insert this sound in environments where they should not. The way Ga speakers realized / **h**/ has been said to be one identifying feature of Ga speakers. This research shows that in fact, with the Ga respondents, / **h**/ has a 71% rate of being used as in RP. This is a high rate of occurrence, but still, because the Akan speakers recorded a 100% rate, then it can be said that if a student omits or inserts the / **h**/ when he should not, there is a 29% chance that he or she is Ga.

Akan speakers of English have also been known to extend the idea that /**l**/ and /**r**/ are free variants in Akan into English. With Akan speakers however, this assertion is not as

strong as one might think. The research shows that an Asante-Twi respondent is 11% more likely to use /l/ for /r/ and 13.1% more likely to use /r/ for /l/ than a Ga.

What this means is that the assertion held by most people, including Dolphyne (1999: 97), that it is possible to identify the linguistic background of Ghanaian just by listening to him or her speak English might be said to be too strong now, for as this research has demonstrated, listening to the way a respondent realized the RP vowels was not an adequate method to use to tell which L1 he or she speaks. What is more, with the consonants, the only ones that might be used to identify one group from the other are the glottal fricative / h/, the post-alveolar /r/ and the alveolar approximants /l/, and even with the last two, the differences between the two groups are not significant.

### 7.1.3 STRESS

Generally, it can be said that the respondents know how to use word stress as in RP. The respondents did not have many problems with disyllabic words. With polysyllabic verbs, the respondents showed a great tendency to stress the last syllable, especially when the word has the following endings - *ate* and *–ute*, as in words like *congratulate, contribute, investigate* and *compensate*.

Respondents used stress in connected speech: they showed which syllables are prominent and which are not. What they failed to do was to use the weak forms of words in certain environments when they should.

### 7.1.4 INTONATION

The research shows that the greatest difference between the way these respondents speak English and the RP lies with the use of intonation.

The most significant thing about the respondents' use of intonation in English is that they transfer the tonal rules in their L1s into English. Some of these rules are that it is the last word in the phonological phrase that carries the tonic stress, and that any kind of word can be stressed. Also, every time a High tone follows a Low tone, the former is lowered. Thus, downdrift is present in the speech of the respondents.

The implication of using these rules in English is that it makes the rhythm of the English of the respondents syllable-timed.

Another significant thing about the respondent's use of intonation in English is that when reading, they failed to stress words that must carry emphasis, though they do this when speaking.

## 7.2 THE WAY FORWARD

One of the greatest problems in this country is that it is assumed that anyone who has gone through at least secondary school education should be able to teach English. Because of this, not much attention is given to training teachers. Until teachers are made to go through training that will better equip them to teach. the standard of English will

continue to fall. There is no reason why students, if taught well, cannot acquire the right way of realizing the consonants, vowels and stress patterns of English.

The acquisition of the intonational patterns of English will not be easy, but they are surmountable. Of course, nobody is saying that Ghanaians must speak as native speakers, but if our aim is to understand and be understood, then measures such as insisting that teachers of English spend some time in environments where they can be in constant interaction with native speakers should be considered. It is high time we realized that this form of 'text-book' teaching of English is not helping us. We must not be complacent and quick to accept any form as Ghanaian English.

There is also a need to encourage the habit of reading as early as possible. This will make students familiar with words and how they are used. Results from this research showed that the respondents cannot read very well. For instance, when reading, the respondents did not make use of emphatic intonation, though they do so in conversation.

## 7.3 SUGGESTIONS FOR FURTHER RESEARCH

One of the limitations of this research is that the number of respondents was not large. The researcher suggests that further research is done with a larger number of not only Ga and Akan respondents, but also with speakers of other Ghanaian languages, especially, the languages that do not belong to the Kwa group. It is only when such a wide selection of respondents is used that we can get a wider picture of the way English is spoken in Ghana.

Also, though the researcher had some access to gender distinction in the data, time did not allow for a closer look into possible gender variations in the phonological realisation of vowels, consonants, stress and intonation. The researcher therefore proposes that further research needs to be done in the area of gender variations of these variables.

# APPENDICES

## I.INTERVIEW

1. What is your name?
2. When were you born?
3. Where were you born?
4. Where does your mother come from?
5. Where does your father come from?
6. What language did you first learn how to speak?
7. Is that the language used at home?
8. What language do your neighbours speak?
9. Which language do you use with your best friend?
10. What other languages do you speak?
11. Which of these languages do you think you speak best?
12. Which language do you use most in school?
13. Have you lived here all your life?
14. If no, where else have you lived?
15. Where did you attend Junior High School?

**II.WORD LIST**

About, absolute, absolutely, accommodate, accommodation, affair, allocated, although, always, anthem, approximate, approximately, approximation, aspectual, assist, aware

Bad, bags, beads, beaded, bed, behave, blouse, book, books, both, boy, brand, brothers, brown, brutal, brutality, bury

Cab, cart, cauliflower, cave, character, characteristics, cheap, cheered, child, chip, chips, cigarette, climb, cloth, cocoa, coiled, compensate, compensation, complete, congratulate, congratulation, contribute, contribution, cooker, correct, cough, court, cub, cup, cultural, cure, curious, cut

Dances, day, dead, dear, deep, determine, die, digestion, distribute, distribution, divine, doubt, dung

Educate, education, eight, enjoy, entertain, envy, estate, eventually, exactly, exams, exchange,

Face, famous, fault, favour, favourite, feels, fills, figure, forward, full

Gang, gape, gem, George, get, glove, goat, great, grave

Hair, hand, harm, her, house, how, hum

Iced, idea, infestation, initial, investigate, investigation,

Jacket, joke, journal, journalism, journalist, judge, judges, Judith

Kerosene, kettle, know

Label, lark, lather, lawn, leather, leg, leisure, length, lighted, lip, lips, loaf, locked, looked, lose, lovely, loving, lower, luck

Machine, madam, magazine, manhood, marches, matter, measure, method, missed, mixed, mob, mop, mouse, much

Necessary, noise, nothing, nurse

Opponent, oath

Paper, parented, pause, perhaps photograph, photographer, photography, pleasure, poor, primary, pure, put

Quality, question, questioned

Rain, razor, reaches, really, reside, resident, residential, resurrect, riches, robe, rope

Safe, sandal, save, seen, serve, serves, set, several, sheep, ship, shout, sin, sing, soldier, squash, squashes, stadium, started, stash, sugar, suitcase, sunrise

Talk, taller, teacher, teacup, television, their, then, there, thimble, thin, this, thoroughly, though, thrash, thumb, thus, time, together, total, town, treasure, turn

Vantage, vegetables, void

Waist, waiter, war, wash, week, what, wick, wife, will, with, woman, wooed, wood, worthless

Yam, yellow, yet, you

Zero

## III. CONNECTED SPEECH

1. You're coming with me to the hospital, aren't you?
2. There are three more items on the list- a towel, sponge and soap.
3. This small thing for a hundred cedis? You must be joking!
4. The Ghanaian Times sells more than P and P.
5. She certainly doesn't look as old as her age.
6. A. Have you done all your assignments this time?

   B. Yes, I have even typed them.
7. You needn't eat the rice. You can have banku, kenkey, waakye or go hungry.
8. What a delicious cake! I must have another.
9. His father was one of those who built the *Adomi Bridge*.
10. I think a house at Legon would be a better idea.
11. Where are you going tonight?
12. Who goes there?
13. What can I do?
14. How was it?
15. Which of the cars did you bring?
16. Motor cycles are not safe.
17. It's just not possible.
18. I should have thought so
19. Come and see me soon.
20. We must buy him a wedding present, mustn't we?

21. Please get me some water.

22. I need help.

23. Draw the curtains for me.

24. Come and see me soon, get up.

25. Answer questions one, two, three, four…

26. I bought some books, two pencils ...

27. Ghana, Togo, Mali and Nigeria qualified for the semi-finals.

28. Shut that door.

29. Pay attention

30. Watch out.

31. My goodness!

32. You must be joking!

33. Even if nobody else did, **I saw him**.

34. I am not imagining it. **I saw him.**

35. It was nobody else I saw. **I saw him.**

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