PHONOLOGICAL CORRELATES OF SOCIO-ECONOMIC BACKGROUND OF ENGLISH SPEECH OF SECONDARY SCHOOL STUDENTS IN OYO AND OGUN STATES, NIGERIA

BY

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DEDICATION

Dedicated to the Glory of God.

Pastor Olubi Johnson, my husband and God's best gift to me.

ABSTRACT

Phonological correlates of the socio-economic background of the English speech of secondary school students describe the extent to which pronunciation skills have linear relationship with the economic status of their families. Existing literature on the Nigerian English (NE) pronunciation has concentrated on the varieties of adult speakers of NE, using educational attainment as a parameter. There is a dearth of studies on the speeches of Nigerian youths to validate the existence of correlation between socio-economic background and pronunciation skills. This study, therefore, examined the English speeches of 400 selected senior secondary school students in Oyo and Ogun states to investigate a relationship between their socio-economic background (school fees, parents' income and social status) and their articulation of salient English segmentals and suprasegmentals.

William Labov's Variability Concept and Prince and Liberman's Metrical Phonology were adopted to analyse socio-economic variables and determine syllable weight respectively. One each of high-fee-paying private school (HFPPS) and state-owned tuition-free public school (PS) were purposively selected from Oyo and Ogun states. One hundred senior secondary school students from each of the four schools were randomly selected. A Socio-Economic Background Scale was administered to determine socio-economic status of the selected students' families. Participants produced validated Phonological Correlate Test sentences and a passage into speech filing system. Quantitative data were analysed and subjected to descriptive and t-test statistics at 0.05 level of significance, while qualitative data were subjected to metrical analysis.

There was a significant difference between socio-economic background of HFPPS and PS based on school fees, parents' income and social status (t(398) = 4.254). The HFPPS ($\bar{x} = 22.0$) performed better than PS ($\bar{x} = 1.4$) in differentiating long and short vowels /ɪ, i:/, /æ, a:/, /ɒ, ɔ:/, /ʊ, u:/ (t(398) = 44.384). The PS ($\bar{x} = 0.7$) monophthongised closing diphthongs and substituted sounds from indigenous languages for centring diphthongs, while HFPPS ($\bar{x} = 10.9$) approximated to Received Pronunciation (RP) (t(398) = 42.965). The HFPPS ($\bar{x} = 30.6$) produced the dental fricatives /Θ, ð/ appropriately, while PS ($\bar{x} = 5.6$) did not (t(398) = 35.280). The HFPPS ($\bar{x} = 30.6$) produced the voiced palato-alveolar fricative /ʒ/, better than PS ($\bar{x} = 5.6$), (t(398) = 35.280). The HFPPS ($\bar{x} = 9.4$) did not manifest h-dropping, while PS ($\bar{x} = 0.4$) did (t(398) = 55.62). For suprasegmentals HFPPS ($\bar{x} = 5.8$) approximated to RP in the application of the phonetic cues to stress, while PS ($\bar{x} = 0.3$) did not (t(398) = 30.155). The HFPPS ($\bar{x} = 15.3$) performed better in the assignment of intonation tunes than PS ($\bar{x} = 2.8$), (t(398) = 35.280). The HFPPS alternated (S)trong and (W)eak syllables, approximating to RP; while the PS' production was characterised by (S)trong syllables and stress clashes.

Students' socio-economic background positively correlated with their articulation of salient English segmentals and suprasegmentals in high-fee-paying private and state-owned tuition-free public schools in Oyo and Ogun states, Nigeria. However, the high-fee-paying private school students approximated to Received Pronunciation, while the public school students deviated remarkably.

Keywords: Phonological correlates, English speech and socio-economic background, Oyo and Ogun states secondary school students, Segmentals and Suprasegmentals

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CERTIFICATION

I certify that this work was done by Mrs. S. O. Johnson in the Department of English, University of Ibadan.

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LIST OF ABBREVIATIONS

EES	Edo English Speakers
HFPPS	High Fee paying Private School
IE	Igbo English
IQ	Intelligent Quotient
LCR	Lexical Category Prominence Rule
NE	Nigerian English
PNE	Popular Nigerian English
PNE (H)	Popular Nigerian English in Hausa
PNE (I)	Popular Nigerian English in Igbo
PNE (Y)	Popular Nigerian English in Yoruba
PCT	Phonological Correlate Test
PS	State-Owned Tuition-Free Public Schools
PTA	Parents Teachers Association
RP	Received Pronunciation
RPPR	Relative Prominence Projection Rule
SBE	Standard British English
SEBS	Socio-Economic Background Scale
SPSS	Statistical Package for Social Statistics
WASP	Windows Tool For Speech Analysis
YE	Yoruba English

CHAPTER ONE

1.1 Background to the study

Correlation is a connection between two ideas and facts, especially when one may be the cause of the other. It refers to the extent to which two variables have a linear relationship or are dependent on each other. Correlation is positive when the direction of the variables is the same, such that as one increases the other also increases while it is negative when the variables move in the opposite directions (*http://www.simplypsychology.org/correlation.html*). On the other hand, phonology is a branch of linguistics which studies the sound systems of languages (Crystal, 2008; Awonusi et al., 2015). Crystal (2008: 391) claims that the aim of phonology is to demonstrate the patterns of distinctive sounds found in a language, and to make as many general statements as possible about the nature of sound systems in the languages of the world. This implies that phonology is concerned with the range and function of sounds in specific languages.

Phonological correlation, derived from correlation and phonology, deals with the linear relationship between the sound patterns and functions of a language and social stratification. Sociolinguists, over time, have empirically tested the hypothesis that the structure of language is related at many levels of abstraction to social structure and that this relationship is demonstrable by predictable correlations (Berk-Seligson and Seligson, 1978:1). Some quantitative studies on phonological and grammatical variables have confirmed this association (Labov 1972a; Hassan, 1973). Though there have been previous studies on correlates in Nigeria, their focuses have not been on the linear or dependent relationship between phonology and other variables, especially those related to socio-economic status. Previous correlate studies include Ianna (2007), who appraised the linguistic correlate in Nigeria's developmental strategies, and Oyekan (2015), who studied the teachers' perceptions of factors that hinder students' achievement in Biology.

Labov (1964:1) claims that the social significance of language variables will be indicated by correlations with objective indicators of social stratification. This implies that there can be variations in language that will be explainable based on the socio-economic backgrounds of the speakers. He explains that:

> -the speech of individuals show a great many oscillations and fluctuations, seemingly in defiance of the need for a coherent

> linguistic system for rational communication, but when this behaviour is placed in the context of the structure of stylistic and social variation characteristic of the community, it appears as part of a highly determined system.

This implies that irrespective of language issues such as idiolect and dialect, there are peculiar regular types of language-use that can be categorised according to the social variation of a society. It is good to note, at this juncture, that the distinctive feature of language that sets it apart from other communication systems is its inherent dynamism which engenders variation. Aspects of linguistic variation include: regional variation, social variation, stylistic variation, and individual variation. These diversely produce such varieties of language as dialect, sociolect, idiolect and register (Anttila 2002:243).

Variationist sociolinguists have investigated the correlation between linguistic structures (phonology, syntax, and lexicon) and social categories and statuses, such as gender, age, socio-economic background and others. This juxtaposition of language choices with social variables was pioneered by William Labov. Before embarking on numerous fieldworks, Labov (1964) had set down the tenets of variationist sociolinguistics. The thrust of this theory of sociolinguistics is the plausibility of establishing objective distribution of linguistic features, using the quantitative method of analysis, and delineating social classes in relation to them. The classical works in this direction include Labov (1966, 1972a, 1972b), Trudgill (1983), Milroy and Milroy (1991), Chambers (1995) and; Kerswill and Williams (2000). In finding the convergence between language variation, social class and social change, Labov and his colleagues placed a great premium on the fact that every society is stratified.

There have been previous studies on phonological correlates. McBride-Chang, Wagner and Chang's (1997) study focused on three correlates of phonological awareness: speech perception, short-term verbal memory, and general cognitive ability. It was reported that speech perception, short-term verbal memory, and general cognitive ability were positively associated with phonological awareness.

In the same vein, Coleman (2003) described a signal-processing method that demonstrated how phonological contrasts could be inferred from multiple, detailed phonetic exemplars. To carry this out, Coleman mined a database of English words, each spoken in five repetitions by a single speaker, for further data on the correlates of every phonemic contrast in English, in an attempt to

discover local and long-distance effects. Most of the correlates discovered in the study were local contrasts, which were consistent with prior studies.

Järvikivi, Vainio and Aalto (2010) investigated real-time correlates of phonological quantity which revealed unity of tonal and non-tonal languages. They postulated that some evidence suggested that duration and pitch are fundamentally interconnected and co-vary in signaling word meaning in non-tonal languages as well as the tonal languages. They also argued that pitch information affects real-time language processing in a (non-tonal) quantity language and suggested that there was no unidirectional causal link from a genetically-based perceptual sensitivity towards pitch information to the appearance of a tone language. Further, they opined that the contrastive categories, tone and quantity, may be based on simultaneously co-varying properties of the speech signal and the processing system.

Social stratification as a sociological concept involves the "classification of persons into groups, based on shared socio-economic conditions … a relational set of inequalities with economic, social, political and ideological dimensions" (Barker 2003:436). Stratification along the socio-economic dimension may be the most evident in most societies but it is not only along this line that social classes can be asserted. Other determinants include gender, age, ethnicity, occupation, speech communities and social groupings.

Among the studies on socio-economic background are Ogunsola and Adewale (2012) and Omonijo, Anyaegbunam, Oludayo, Nnedum, and Ugochukwu (2015). Ogunsola and Adewale (2012) investigated the relationship between home-based environment factors and the academic performance of students in selected secondary schools within a local government area in Kwara State. They discovered that parental socio-economic statuses and parental educational background did not have significant effect on the academic performance of the students but that parental educational qualification and health statuses of the students did. Omonijo et al. (2015) examined the socio-economic status of work-study students in Covenant University, Ota, Ogun State, Southwest Nigeria. They found that support of parental income and occupation played a significant role in students' individual choices of whether to enroll for the work-study programme or not. However, these studies are also not on the relationship between socio-economic background and pronunciation, which is the focus of present study.

Two classical studies have been carried out on phonological correlates and social stratification by Labov (1964) and Berk-Seligson and Seligson (1978). The two studies, which had participants drawn from New York and Costa Rica respectively, focused on the correlation between phonological characteristics and socio-economic backgrounds. Labov (1964) drew his data from New York, particularly the Lower East side. His focus was on the vowels and class levels of New Yorkers. He discovered that New Yorkers' socio-economic classes can be distinguished based on their production of the tested vowels. In the same vein, Berk-Seligson and Seligson (1978) studied the phonology of Costa Rica with the aim of drawing parallels between the speech formality levels of Costa Rican Spanish phonology and the socio-economic statuses of the speakers. They also concluded that the level of formal use of Costa Rican Spanish phonology increased alongside the socio-economic status of the participants.

From the foregoing, it is evident that there is a dearth of literature on correlation studies that focus on Nigerian English phonology and socio-economic backgrounds, especially of adolescents in the secondary schools. Nigerian English is a variety of the 'World Englishes' and the phenomenon of variation is evident, even in the contexts where English is a mother tongue. Considering the spread of the English language and its ascendancy as a world language, the phenomenon of regional variation in second language contexts are apparent.

The Nigerian sociolinguistic literature recognises the evolution of a form of English that is peculiarly Nigerian (Jibril, 1982a; Kujore, 1985; Jowitt, 1991b; Bobda, 1995; Udofot 2000; Akinjobi, 2004; Gut 2004, 2005, Jolayemi 2006, 2008, Akindele, 2011; Ilolo, 2013, Utulu, 2014). However, this evolving form of English is yet to be standardised. As noted by Ogu (1992:88), as far back as 1967, Walsh has claimed that:

> The varieties of English spoken by educated Nigerians, no matter what their local language is, have enough features in common to mark off a general type, which may be called Nigerian English".

Banjo (1983:2) refers to this variant as a "conglomeration of legitimate variants of English in Nigeria, which retains intelligibility, reflect a common Nigerian culture, or perception of the world, has another tongue interference and a common socio-political environment".

Though the exact date of Nigeria's first contact with the English language is not known, it is on record that as from 1553, English men visited the Nigerian coasts very briefly for trade purposes (Ogu, 1992). Since then, other historical factors such as colonialism and Christianity have been responsible for the retention of the English language at the earliest period. However, the broad functions of accommodation, participation and social mobility that the language performs now ensures its continuous supremacy, even in the present. It has now acquired a colouration that is typically Nigerian.

Several submissions have been made on Nigerian English variety differentiation. A general appraisal of these contributions indicates three categories. In the first group are most early works that tend to treat Nigerian English as a regionally homogenous linguistic entity which concentrates on discussing its social varieties. In this category will fall Brosnaham (1958), Tiffen (1964), Banjo (1969, 1971), Adesanoye (1973), Adeniran (1974), Ubahakwe (1974), Obiechina (1974), Jibril, (1976, 1979, 1982a), Ekong (1980), Bamgbose (1982) and Udofot (2003). These scholars examine written and spoken Nigerian English respectively to arrive at social varieties of Nigerian English, using mostly, educational attainment as a social variable.

Those in the second group share the conception of Nigerian English as being regionally homogenous with the first. However, they concentrate on identifying markers of the standard variety of Nigerian English at specific levels of language analysis. Studies such as that of Adekunle (1979), Jibril (1982), Eka (1993), Adegbite (2009), Oyatokun (2011), Akinjobi (2011), Akindele (2013), Fajobi (2013), Utulu and Akinjobi (2014), Awonusi, Ademola-Adeoye and Adedeji (2015), Akinjobi and Akindele (2016) and others fall into this category.

Those in the third group claim the existence of regional varieties within Nigerian English, identify the social sub-varieties of such and study them. In this category are Jibril (1982), Akinjobi (2004b, 2005, 2006), Sunday (2004), Akindele (2011, 2015), Ilolo (2011), Adeniyi (2012), Oladipupo (2014), Utulu (2014), Aina (2014) and Oladipupo and Akinjobi (2016).

A recognisable body of literature exists on the phonology of Nigerian English. Some of its aspects appear in works that broadly attempt to document the features of the Nigerian variety at almost all levels of language analysis. In this category are Bamgbose (1971), Bamgbose (1982) and Kujore (1985). Several others concentrate on only the segmental aspect of Nigerian English

phonology. Studies conducted by Dunstan (1969), Odumuh (1993), Akinjobi (2005, 2006) are in this group. Dustan (1969) studied the realisation of English RP vowels among Nigerian speakers of the English language. Odumuh (1993) contrasted selected Nigerian English vowels with their counterparts in Standard British English (henceforth SBE). Akinjobi (2005) investigated the use of weak and strong forms of English grammatical words by Educated Yoruba English (EYE) speakers while Akinjobi (2006) analysed how speakers of EYE articulated the vowels in typically unstressed syllables of English.

Some other scholars have worked on Nigerian English suprasegmental features. Most focused on examining specific suprasegmental units and their accompanying features in Nigerian English (NE). But Gut (2001) and Gut and Milde (2002) investigated the prosodic aspects of Standard Nigerian English (henceforth SNE). Gut (2001) compared the prosody of SNE with that of SBE. Gut and Milde (2002) compared SNE prosody to that of SBE and three West African tone languages - Anyi, Ega and Ibibio. Others such as Akinjobi (2004a, 2004b), Sunday (2004, 2010) and Akindele (2011) have studied the realisation of syllables and syllabic consonants; vowel weakening and unstressed syllable obscuration, compound and phrasal stress and variable word stress in Educated Yoruba English. In terms of studying its tonal (or intonational) structure, there are contributions like Eka (1985), Jowitt (2000), Okon (2001), Atoye (2005), Akinjobi and Oladipupo (2005) Udofot (2000, 2007) and Akinjobi (2011). Still, some others like Tiffen (1974), Eka (1993) Ilolo (2013) and Akindele (2015) study SNE rhythm, in relation to related segmental and suprasegmental features.

The last cited works are all in phonology, covering the segmentals and the suprasegmentals of stress, intonation and rhythm. One major difference between these previous studies and the present one is that they focused more on Nigerian regional varieties of English and used adult participants while this study focuses on the correlation between English pronunciation and socio-economic background, using adolescents as participants. In addition, the correlation between linguistic variables and social variables, which has driven previous studies in variationist sociolinguistics, as discussed above, informs this research. However, there is a dearth of literature on phonological correlates and social stratification in Nigeria. To fill this gap, this study investigated the phonological correlates of social stratification in the speeches of the students of selected secondary schools in Oyo and Ogun States of South-West Nigeria. It is

hypothesised that these adolescents can be socially stratified based on their English pronunciation skills. The assumption is that a likely coincidence may be found between their socio-economic backgrounds and their pronunciation skills.

1.2 Statement of the problem

Most previous works on the phonology of Nigerian English have approached it from the geo-tribal and educational attainment perspectives. These scholars study the educated variety, sometimes from different geographical regions often termed "geo-tribal varieties" (Jibril, 1982; Jowitt, 1991; Akinjobi, 2004; Ilolo, 2013; Utulu, 2014; Akindele, 2015) and describe its phonological markers. Only a few such as Oladipupo (2014) has used other social variables to study intra-linguistic variation in Nigerian English. Oladipupo did a sociophonetic study of phonological processes in NE but used adults as participants. Consequently, there is dearth of literature on the speeches of adolescents to ascertain whether their socio-economic background exert some influence on their English pronunciation skills.

English pronunciation has been confirmed as a major challenge to non-native speakers' competence in the use of English. If this has been proved by studies on Nigerian adults from different language groups, it is equally important to find out if Nigerian adolescents' pronunciation also differs remarkably from the Received Pronunciation collectively or it could be socially stratified such that socio-economic backgrounds are considered as correlates of their pronunciation.

In addition, the generally held conception that the Nigerian society is polarised along the socio-economic dimension has been confirmed by sociological and economic studies (see Smythe, 1958; Tiffen, 1976). However, little attention has been paid to corroborating this with sociolinguistic studies. The importance of language as a unifying factor makes this study necessary.

Therefore, this research investigated the phonological correlates of social stratification in the speeches of secondary school students of Oyo and Ogun states of South-West Nigeria. The general focus is investigating any coincidence between their socio-economic backgrounds and their articulation of English segmentals and suprasegmentals.

1.3 Aim and objectives

The Aim of this study was to investigate the correlation between the pronunciation skills of selected secondary school students of Oyo and Ogun States of South-West Nigeria and their socio-economic backgrounds. The specific objectives of the study are:

1. To confirm whether Oyo and Ogun secondary school students can be stratified into social classes based on their socio-economic backgrounds or not;
2. To find out whether English long and short vowels (/ɪ - iː/, /æ – aː/, /ʊ- uː/, / ɒ-ɔː/) are under-differentiated or not in the speeches of the Oyo and Ogun secondary school students from the different socio-economic backgrounds;
3. To investigate the monophthongisation of English diphthongs (/eɪ/ /əu/ /aɪ/ /au/ /ɔɪ/ /ɪə/ /ɛə/ /uə/) and triphthongs (/aʊə̯/ /aɪə̯/ /ɔɪə̯/) or absence of this in the speeches of the Oyo and Ogun secondary school students from the different socio-economic backgrounds;
4. To verify the under-differentiation of the dental fricatives /ɵ, ð / and alveolar plosives /t, d/ in the speeches of the Oyo and Ogun secondary school students from the different socio-economic backgrounds;
5. To verify the production of English palatal fricative /ʒ/ in the speeches of Oyo and Ogun secondary school students from the different socio-economic backgrounds;
6. To verify whether Oyo and Ogun secondary school students 'drop' the glottal fricative /h/ in their speeches based on their socio-economic backgrounds or not;
7. To verify the presence or absence of the phonetic cues to stress (as in Received Pronunciation) in speeches of Oyo and Ogun secondary school students from the different socio-economic backgrounds;
8. To find out whether or not there is a difference in intonation tune assignment by the Oyo and Ogun secondary school students based on their socio-economic backgrounds;
9. To find out whether Oyo and Ogun secondary school students could be stratified into social classes based on their pronunciation skills.

1.4 Research questions

1. Can Oyo and Ogun secondary school students be socially stratified as belonging to different classes or not?
2. Do Oyo and Ogun secondary school students from different socio-economic backgrounds jointly under-differentiate the long and short vowels /ɪ i: æ a: ɒ ɔ: ʊ u:/?
3. Do Oyo and Ogun secondary school students, from different socio-economic backgrounds, monophthongise the SBE diphthongs (/eɪ/ /əu/ /aɪ/ /au/ /ɔɪ/ /ɪə/ /ɛə/ /uə/)?
4. Do Oyo and Ogun secondary school students, irrespective of their socio-economic backgrounds, under-differentiate the dental fricatives/ Θ ð / and alveolar plosives /t, d/?
5. Does Oyo and Ogun secondary school students' appropriate or inappropriate production of the voiced palatal alveola fricative /ʒ/ correlate with their socio-economic backgrounds?
6. Do Oyo and Ogun secondary school students drop the glottal fricative /h/ sound in their speeches based on their socio-economic backgrounds?
7. Do Oyo and Ogun secondary school students apply the phonetic cues to stress based on their socio-economic backgrounds?
8. Are there differences in the assignment of intonation tunes by Oyo and Ogun secondary school students based on their socio-economic backgrounds?
9. Can Oyo and Ogun secondary school students be stratified into different social classes based on their pronunciation skills?

1.5 Research Hypotheses

1. Oyo and Ogun secondary school students cannot be socially stratified as belonging to different classes.
2. Oyo and Ogun secondary school students do not significantly under-differentiate the long and short vowels /ɪ i: æ a: ɒ ɔ: ʊ u:/ on the basis of socio-economic background.
3. There is no significant difference in the monophthongisation of the SBE diphthongs among Oyo and Ogun secondary school students on the basis of socio-economic background.

4. There is no significant difference in the under-differentiation of the dental fricatives/ Θ ð / and alveolar plosives /t, d/ among Oyo and Ogun secondary school students on the basis of socio-economic background.
5. There is no significant difference in the appropriate or inappropriate production of the voiced palatal alveola fricative /ʒ/ among Oyo and Ogun secondary school students on the basis of socio-economic background.
6. There is no significant difference in the dropping of the glottal fricative /h/ sound among Oyo and Ogun secondary school students on the basis of socio-economic background.
7. There is no significant difference in the application of the phonetic cues to stress among Oyo and Ogun secondary school students on the basis of socio-economic background.
8. There is no significant difference in the assignment of intonation tunes among Oyo and Ogun secondary school students on the basis of socio-economic background.
9. Oyo and Ogun secondary school students cannot be stratified into different social classes based on their pronunciation skills.

1.6 Limitation of the study

The participants for the study were selected from four secondary schools in Oyo and Ogun States in the South-West geopolitical zone of Nigeria. The number of schools was restricted by a dearth of High-Fee-Paying Private Schools, (HFPPS), where students pay between three million and five million. Moreover some of the HFPPS also declined access to their information and students, thereby restricting the study to Oyo and Ogun States. However, this did not affect the study because two of the most prominent types of these schools (HFPPS) are located in Oyo and Ogun States. In addition, enough data were gathered from the schools that willingly participated.

The selected phonological variables for the study are sounds and features that have been confirmed as problematic for Nigerian users of English. These are the under-differentiation of long and short vowels, monophthongisation of diphthongs, under-differentiation of dental and alveola fricatives, substitution of other sounds for the voiced palatal fricative, dropping of the glottal fricative /h/, inadequate use of the phonetic cues to stress, inadequate use of intonation tunes, consonant dropping and the pronunciation of English silent letters. This excludes the sounds that are similar to those found in the Nigerian languages that may not be problematic for Nigerians.

The only social variable we shall be working with is socio-economic background. This covers the aspects of parents' income, school fees, types of food eaten, types houses they live in, types of transportation, travelling outside Nigeria, especially to countries where English is a first language, access to technology and so on.

1.7 Significance of the study

This study contributes simultaneously to the literatures of Nigerian English phonology and variationist sociolinguistics. This study is also of immense contribution to the study of social varieties of Nigerian English by attempting a social variety differentiation in Nigerian English beyond educational attainment.

It will also be significant for language curriculum planners and language teachers. The presence or absence of commonalities in the speeches of the participants will inform subsequent curriculum planning and some other related decisions on language pedagogy for Nigerian secondary schools.

1.8 Operational definition of terms

English segmentals: These are the individual sounds of English, also referred to as phonemes.

English suprasegmental features: These are features that are established as covering domains that are above the segment. These are English syllable, foot, intonation group and rhythm unit. In this study, these are stress, intonation and rhythm.

English suprasegmental domain: These are the domains for the suprasegmentals features such as syllable, syllable, foot, intonation group and rhythm unit.

Correlation: This is the extent to which two variables have a linear relationship with each other. For this study it refers to the relationship between secondary school students' phonological performance and their socio-economic background.

Socio-economic background: As used in this study, this refers to the economic and social background of the participants, especially relating to parental income and occupation, and school fees.

Speech: The expression of ideas and thoughts in spoken words to produce sounds of speech, including articulation, stress and intonation.

CHAPTER TWO

REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK

2.0 Introduction

This chapter presents a review of Standard British English segmental and suprasegmental phonology, Nigerian English phonology as well as the theoretical frameworks for the study which are William Labov's variability concept and Prince and Libermann's metrical phonology. Before proceeding to discuss these concepts, it is imperative to discuss what the Standard British English is, especially with focus on Received Pronunciation (RP).

2.1 Standard British English and Received Pronunciation (RP)

Most discussions on the geographical dispersion and the varieties of English mostly concentrate on the extent of language variation on the international plane, not on the United Kingdom as the core. Within the United Kingdom itself, there are such varieties of English as Cockney, Standard Southern British English, Scottish English, Welsh English, Irish English, Hiberno English etc. (Crystal. 1994:111).

In order to preserve mutual intelligibility and create a yardstick for grammaticality judgement, there has been the need for an acceptable national standard variety. It is this national standard in the context of the United Kingdom that is called the Standard British English. Originally, this variety was strictly spoken in Southern Britain. But some scholars such as Wells (2008) have argued that it was equally spoken in Wales and across England. It is the variety of British English that is taught in prestigious public schools and spoken by highly placed individuals. It is the adopted standard for grammar, vocabulary, spelling, pronunciation and conventions of use. It also carries a recognisable degree of prestige. Historical indices such as the appearance of standardised literacy language in the last part of the 14th century in Southern England, the emergence of London as the political and commercial centre around the same period (London is also in Southern England), large migration to London area around the 14th century and the development of printing in London area also account for its eventual emergence as the standard variety.

The Received Pronunciation (RP) can be referred to as the customary pronunciation or accent of this standard variety. It is the speech form of the very educated and it is very characteristic of the English spoken in public schools and prestigious universities like Oxford and Cambridge. As the Standard British English is the target model for teaching and learning the lexis, the grammar and the spelling of the English language, Received Pronunciation is also the target accent in schools' English curriculum (Awonusi, 2014:20-22).

Received Pronunciation has been controversial in recent times. Many scholars claim it has become obsolete and ineffective even in England. However, most educated speakers of British English speak a modified RP or near RP. Likewise, it is the accent used in practically all British dictionaries and introductory textbooks (Skandera and Burleigh, 2005: 18). Akinjobi (2013:28) argues for its use in non-native contexts as Nigeria where there is no better alternative yet. Nevertheless, she recommends the use of the model with technological support which she termed non-enculturation sources of contact with native English.

2.2 Standard British English segmental phonology

Segmental phonology covers such grounds as airstream mechanism and description of speech sounds. The locus of description in segmental phonology is the phoneme. For this study, the review of literature on the phoneme covered the historical transition from classical phonemics to the recent theoretical perception of the phoneme. Therefore it will cover the historical period when the phoneme was claimed to be the minimal unit of sound and the present consideration of the phoneme as a bundle of distinctive features.

The term "phoneme" is usually ascribed to Bandoin de Courtenay (1845-1929), a polish linguist. His treatment of the phoneme as a mental image which has variants or alternate representations that are different actualisations of the underlying sound (Clark and Yallop, 1995) coincides with the latter treatment of the phoneme in generative phonology. Murray (1995) defines the phoneme as the central concept in phonology which is a distinctive category of sounds that all the native speakers of a language or dialect perceive as more or less the same. In the same vein, Kreidler (1989, 2004:24) claims:

> A phoneme is a unit of sound in a particular language which is capable of differentiating morphemes, the units of meaning of that language.

To Kreidler (2004: 24), a phoneme is not a letter. A language has phonemes whether it is written in an alphabetic system or not – indeed, whether it has ever been written or not. Besides, a phoneme may be represented by different letters or sequences of letters as in *tee and tea*; two letters may represent the same phoneme, as in *kit* and *cat*; or two different phonemes may be represented in spelling by the same letter or letters, like the *th* in *thy* and *thigh*.

Ladefoged (2006) and Utulu (2014) claim that every language has a repertoire of sounds and the rules that affect them when they occur in speech. These abstract sounds are referred to as phonemes. According to Trask (2004), the most important property of a phoneme is that it contrasts with the other phonemes in the system, and hence we can only speak of the phoneme of some particular speech variety, that is a particular accent of a particular language. To him, languages differ in the number of phonemes they distinguish but every valid word in every language necessarily consists of some permissible sequence of that language's phonemes.

There are three main views of a phoneme. The first is its conception as a phonetic reality. As discussed in Hyman (1975), classical phonemics hold this view and it is within this tradition that Jones (1931:74) defines the phoneme as "a family of sounds in a given language, consisting of an important sound of the language together with other related sounds, which takes its place in particular sound-sequences". According to Hyman (1975), Gleason (1955) views the phoneme essentially as a class of sounds with similar and physical phonetic properties. Crystal (2008:25) claims that American linguists in the 1940s also emphasized the phonetic reality of phonemes, in their concern to devise procedures of analysis, paying particular attention to the distribution of sounds in an utterance.

The second view of a phoneme as a phonological reality comes from the Prague School. It is described in purely phonological terms as the sum of the phonologically relevant properties of a sound. Thus, a phoneme is considered by this school as a sound that is significant enough to distinguish the meanings of the words in a language. Trubetzkoy (1939:41) claims that a phoneme:

> can be defined satisfactorily neither on the basis of its psychological nature nor on the basis of its phonetic variants

> but purely and solely on its function in the system of the language.

To Hyman (1975: 37), the Prague School views the phoneme as a minimal unit that can function to distinguish meaning. By this view, it can be deduced that this school views the phoneme as a phonological concept since function and patterning are concerns of phonology.

The third is a mentalist characterisation of the phoneme as a psychological reality. Randouin de Courtenay defines the "phoneme as a mental reality, as the intention of the speaker or the impression of the hearer, or both" (Twadell, 1935:56). The tenet of this school of thought is that each time a speaker pronounces a sound several times, it is never acoustically the same each time it is produced. This implies that the speaker must have internalised an image or idealised picture of the sound, a target which he tries to approximate (Hyman, 1975: 73). Likewise, Carr (2008:99) explains that Edward Sapir is known for his mentalism and that he argued for the psychological reality of phonemes in the mind of the speaker. To him, Noam Chomsky is a mentalist, of a specific sort; he postulated an innate module of mind devoted solely to language. The postulated module is often referred to as Universal Grammar, or the Language Faculty. However, this view was under severe criticism based on its mind-based principle. It is considered invalid to "guess about the linguistic working of an inaccessible mind" (Twadell, 1935:57).

Airstream mechanism constitutes another consequential point in segmental phonology. It describes the source of energy for generating speech sounds, which are made by making air move. Following the classical work of Pike (1943), three basic mechanisms - pulmonic, glottalic and velaric airstreams - are used in speech production. These airstreams are described in terms of their outward or inward movements. According to Roach (2009:3):

> usually the air is moved outwards from the body, creating an egressive airstream; more rarely, speech sounds are made by drawing air into the body – an ingressive airstream.

The main initiator of air movement is the lungs (the pulmonic airstream), which underlies the majority of human speech sounds. The 'glottalic' airstream mechanism, as its name suggests, uses the movement of the glottis (the aperture between the vocal folds) as the source of energy The 'velaric' airstream mechanism, also as its name suggests, involves an airflow produced by a

movement of the back of the tongue against the velum (Crystal, 2008:18). However, English sounds are mainly produced using the pulmonic egressive airstream mechanism (Carr, 2008).

2.2.1 English phonemes: vowels and consonants

In this sub-section, English vowels and consonants that are collectively referred to as phonemes are discussed with focus on the aspects that are related to the research objectives. Conventionally, the first division in speech sounds is made between vowels and consonants (Odden, 2005: 20). The phoneme is the minimal unit in the sound system of a language. It is the fundamental unit of phonology which has been defined and used in many different ways according to traditional phonological theories. However, most theories of phonology hold that spoken language can be broken down into a string of sound units and that each language has a small, relatively fixed set of these phonemes (Crystal, 2008; Roach, 2009).

The point of divergence between vowels and consonants is that consonants are produced with radical constrictions of the airstream from the lungs while there is no such radical obstruction in vowel production. According to Carr (2008), consonants are produced with three different degrees of stricture which are complete closure, close approximation and open approximation. They can also be described based on their position in syllable structure. Consonants can occupy the onset and coda positions, whereas vowels occupy the head of the nucleus position in a syllable (see syllabic consonants).

Vowels can be defined in phonetic and phonological terms. According to Crystal (2008: 543), phonetically, vowels are sounds articulated without a complete closure in the mouth or a degree of narrowing which would produce audible friction; the air escapes evenly over the centre of the tongue. If air escapes solely through the mouth, the vowels are said to be oral; if some air is simultaneously released through the nose, the vowels are nasal. In addition to this, in a phonetic classification of vowels, reference would generally be made to two variables which are the position of the lips – whether rounded, spread, or neutral and the part of the tongue raised, and the height to which it moves. Relatively slight movements of the tongue produce quite distinct auditory differences in vowel (or vocalic) quality. Because it is very difficult to see or feel these movements, classification of vowels is usually carried out using acoustic or auditory criteria, supplemented by details of lip position. There are several systems for representing vowel position visually. This is done in terms of a vowel triangle or a vowel quadrilateral such as the

cardinal vowel system. Vowels are usually voiced, though some languages have been analysed as having 'voiceless' vowels, e.g. Portuguese. From a phonological point of view, vowels are those units which function at the centre of syllables.

In the same vein, Roach's work (1997:67) identified vowel or a consonant on phonetic grounds (in relation to how much they obstructed the airflow) or on phonological grounds (vowels and consonants having different distributions). This means vowel articulations are marked by free airflow. In the same vein, all vowels are voiced. Since all vowels are articulated without any significant airstream obstruction, the configuration of the vocal tract in the production of a vowel sound determines its quality. Parameters such as the height of the body of the tongue, the front/back of the tongue, the degree of lip-rounding, the extent of muscular tension and the duration of articulation are used in describing vowels (Awonusi, Ademola-Adeoye and Adedeji, 2015:103-104). In addition, vowel phonemes are of two major types: monophthongs and diphthongs. Monophthongs are produced at particular points in the oral cavity while diphthongs involve movement from one point of articulation to the other (Roach, 1997).

Based on the stated parameters, Ladefoged and Johnson (2011:87) claim that:

> part of the problem in describing vowels is that there are no distinct boundaries between one type of vowel and another… It is perfectly possible to make a vowel that is halfway between a high vowel and a mid vowel. In theory… it is possible to make a vowel at any specified distance between any two other vowels.

The foregoing description of the vowel is probably derived from the fluid nature of the vowel.

The figure below illustrates the vowels of English with examples of words in which they occur.

	b__d	IPA		b__d	IPA
1	bead	iː	11	booed	uː
2	bid	ɪ	12	bud	ʌ
3	bayed	eɪ	13	bird	ɜː
4	bed	ɛ	14	bide	aɪ
5	bad	æ	15	bowed	aʊ
6	bard	ɑː	16	Boyd	ɔɪ
7	bod(y)	ɒ	17	beer	ɪə
8	bawd	ɔː	18	bare	ɛə
9	budd(hist)	ʊ	19	byre	aə
10	bode	əʊ	20	boor	ʊə

Fig. 2.1: The Vowels of English with examples
http://www.phonetics.ucla.edu/vowels/chapter3/bbcenglish.html

There are twelve stationary vowels of English and they are called monophthongs.

Roach (2009: 69) defines a monophthong as:

> a vowel in which there is no detectable change in quality from beginning to end…These are contrasted with vowels containing a movement, such as the glide in a diphthong.

They are identified on the vowel chart below:

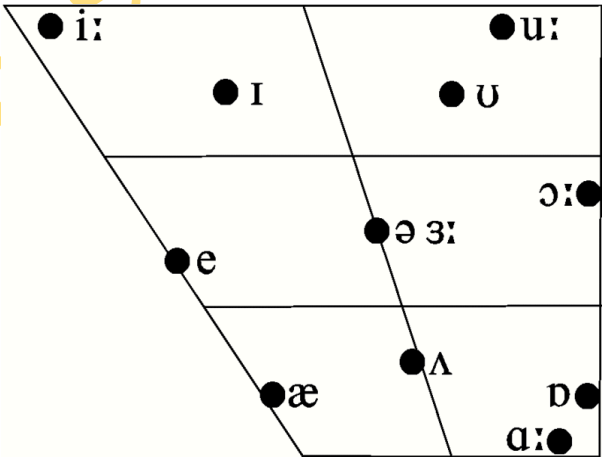


Fig. 2.2: The English vowel chart (Gimson, 1980).

Crystal (2008: 172) explains that the word 'diphthong' is:

> a term used in the phonetic classification of vowel sounds on the basis of their manner of articulation: it refers to a vowel where there is a single (perceptual) noticeable change in quality during a syllable, as in English *beer, time, loud*. Related terms are monophthong, where no qualitative change is heard, and triphthong, where two such changes can be heard.

The diphthongs are different in articulation because the tongue glides in their production. The tongue moves from the first point of articulation to another in a swift manner. This is why diphthongs are also called glides in English. The glide always start from a short vowel and moves towards another short vowel. Based on the initial point of the glide and the direction of movement, differentiation is often made between closing diphthongs and centering diphthongs. For closing diphthongs, the glide starts from a lower position and goes towards a close vowel (Roach, 1997:20-22, O'Connor, 2000:84-87). The diagrams below indicate the pattern of movement for the following closing diphthongs; /eɪ/, /aɪ/, /ɔɪ/, /uə/, /ɛə/ and /ɪə/:

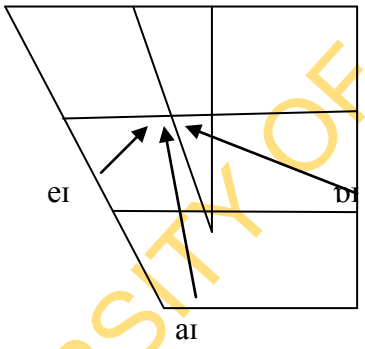


Fig. 2.3: Tongue movement patterns for closing diphthongs

For centering diphthongs, the glide is towards a central vowel. The diagram below shows this:

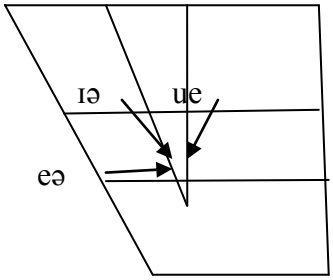


Fig. 2.4: Tongue movement patterns for centering diphthongs

The eight diphthongs and how they are spelled are presented below:

(i) /eɪ/ - hate, rain, café, ballet
(ii) /əu/ - home, close, goal, grow
(iii) /aɪ/ - write, ice, bye, island
(iv) /au/ - found, doubt, fowl, bureau
(v) / ɔɪ / - voice, joy, toy, choice
(vi) /ɪə/ - atmosphere, rearm beard, severe
(vii) /ɛə/ - fair, welfare, wear, where
(viii) /uə/ - during, lure, jewel, sure.

The focus of this study in relation to vowels is the under-differentiation of long and short vowels and the monophtongisation of diphthongs in Nigerian English such that distinctions are not made between the long and short vowels and diphthongs are produced as if they are monophthongs. It is a phonological norm in English to differentiate the long and short vowels by duration (Gimson, 1975; Wells, 1982; Roca and Johnson, 1999; Gregova, 2008; Crystal, 2008; Utulu and Akinjobi, 2014) because they distinguish meaning in words such as *bid* and *bead*, *full* and *fool*, *cod* and *cord* and others. Utulu and Akinjobi (2014) claim that duration is semantically significant in English.

Likewise, Jibril (1982) and Jowitt (1991) explain the process of monophthongisation of diphthongs in Nigerian English as being caused by the influence of L1 preference for non-complex nuclei. However, Utulu (2014) claims that the explanation might not be as simple as that because out of the eight English diphthongs, only a sub-set of diphthongs is monophtongised. He claims that if the entire diphthong system is not affected, other explanations may need to be sought for the process in Nigerian English. However, it is confirmed in the reviewed literature that Nigerians have a tendency to monophthongise English diphthongs (Odumuh, 1993, Jowitt, 1991; Utulu, 2014).

Consonants, the other segmentals apart from vowels, are produced by obstructing in some way the flow of air through the vocal tract (Katamba, 1989). It can be can be defined in phonetic and phonological terms. According to Crystal (2008:129), phonetically, they are sounds made by a closure or narrowing in the vocal tract so that the airflow is either completely blocked, or so

restricted that audible friction is produced. Consonant articulations are relatively easy to feel, and as a result are most conveniently described in terms of place and manner of articulation. In addition, a routine phonetic description of consonants would involve information about the mode of vibration of the vocal folds. It is often necessary to specify the duration of the sound, the airstream mechanism involved and the direction of airflow (egressive or ingressive). From a phonological point of view, consonants are those units which function at the margins of syllables, either singly or in clusters.

The general label that distinguishes consonantal sounds from vowels is the greater constriction of the vocal tract in their productions and their being less prominent (Roach, 1997:10). The reduced prominence is characterised by their position in syllabic structures. The typical structural organisation of syllables in English is such that vowels are central and consonants marginal. The greater constriction of the vocal cavity referred to, means the total or partial blockage of the airstream used in the production of sounds at some point in the vocal tract. Movable and tactile articulators interact to disturb the airflow and bring about the said tension in the vocal tract.

> Virtually all English sounds are made with air that is pushed up from the lungs. In the production of approximately two thirds of these sounds, the airstream is obstructed in the throat, technically called the pharyngeal cavity or pharynx ... or in the vocal tract before it leaves the body through the mouth or nose. These sounds are called consonants (Skandera and Burleigh, 2005:25).

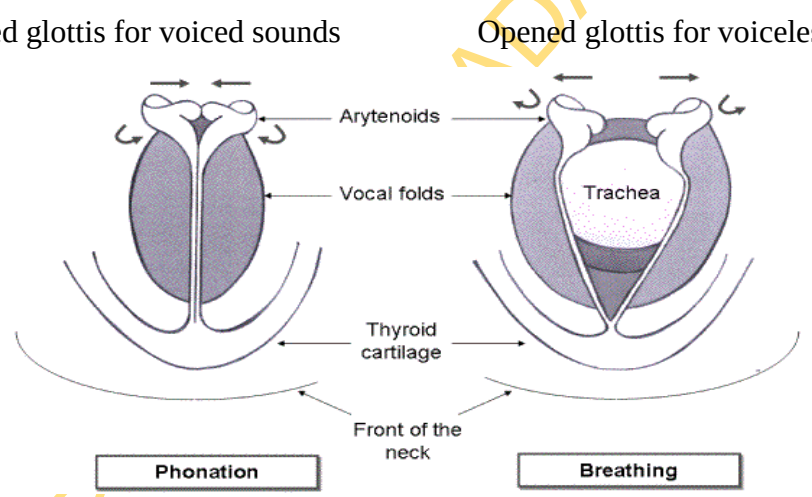
Below is the IPA chart for English consonants

Consonant Chart - English

	bilabial	labio-dental	dental	alveolar	retroflex	alveo-palatal	palatal	velar	labio-velar	glottal
stop	p b			t d				k g		
affricate						tʃ dʒ				
fricative		f v	θ ð	s z		ʃ ʒ				h
nasal	m			n				ŋ		
lateral				l						
glide					r		j		w	

Fig. 2.5: IPA chart for English consonants

The three traditional dimensions of state of the glottis, place of articulation and manner of articulation are employed in the description of consonant sounds (Laver, 2003; Carr, 2008; Awonusi, 2015). State of the glottis as a criterion relates to phonation. Phonation or voicing is a technical term for the vibration of the vocal folds in the production of a sound. All English sounds, pass through the glottis. If the glottis is narrow, that is, if the vocal folds are together, the airstream forces its way through and causes the vocal folds to vibrate. Sounds produced in this way are called voiced. However, if the glottis is open, that is, if the vocal folds are apart and the air passes through without causing the vocal folds to vibrate, such sounds are described as voiceless (Skandera and Burleigh, 2005:24). Below is a diagram of the state of the glottis in the production of voiced and voiceless sounds. The glottis is closed for voiced sounds and opened for voiceless sounds.



http://newt.phys.unsw.edu.au/jw/voice.html

Fig. 2.6: State of the glottis in the production of voiced and voiceless sounds

Vowels, nasals and approximants (i.e. sonorants) are usually voiced, though in particular contexts the voicing may be weak or absent. Sounds such as voiceless fricatives and voiceless plosives are the most frequently found sounds that do not have voicing (Laver, 2003; Crystal, 2008; Roach, 2009).

Place of articulation, which refers to where in the vocal apparatus a sound is produced, is one of the main parameters used in the phonetic classification of speech sounds. Consonants are made by producing an obstruction to the flow of air at some point in the vocal tract. In the classification of consonants, one of the most important things to establish is the place where this obstruction is made; this is known as the place of articulation. The conventionally recognised places or points of articulation for consonants correspond to main anatomical divisions, such as labial, labiodental, dental, alveolar, palatal, velar, uvular, pharyngeal, glottal, but other places relative to these are also recognised, such as post-alveolar and retroflex (Crystal, 2008:396). The IPA chart illustrates all the places of articulation (Roach 2009:66).

Manner of articulation, as a parameter, discusses how sounds in English RP are produced. It should be reiterated that the pulmonic egressive airstream that emanates from the lungs is either partially or totally obstructed in the oral cavity in the production of consonants. The obstruction is brought about by the interaction of two or more articulators in the oral cavity. The manner of articulation of a sound is defined in relation to the nature of the obstruction. Roach (2009: 53) affirms that the type of obstruction that takes place in the production of a sound is known as the manner of articulation. According to Crystal (2008:319) several articulatory types are recognized within consonants, based on the type of closure made by the vocal organs. If the closure is complete, the result is a plosive, affricate or nasal. If the closure is partial, the result is a lateral. If the closure is intermittent, the result is a roll (trill) or flap and if there is narrowing without complete closure the result is a fricative. These manners of articulation are described and illustrated below:

(i) Plosive: a complete closure is made at some point in the vocal tract, with air pressure building behind the closure, which is then released explosively, as in /p, b, t, d, k, and g/.

(ii) Nasal: a complete closure is made at some point in the mouth, so that air escapes through the nose - / m, n, ŋ /.

(iii) Affricate: a complete closure is made at some point in the oral cavity, air pressure builds behind the closure, which is then released relatively slowly - /ʧ, ʤ/.

(iv) Lateral: a partial closure is made by the blade of the tongue against the alveolar ridge, in such a way that the airstream is able to flow around the sides of the tongue - /l/.

(v) Fricative: two vocal organs come so closely that the movement of air between them can be heard - / f, v, Θ, s, z, ʃ, ʒ, h/.

(vi) Roll/Trill: the tongue tip taps rapidly against the teeth ridge, as in the trilled /r/, heard in some regional accents.

(vii) Flap: a single tap is made by the tongue tip against the alveolar ridge, as in some regional accents production of /r/ and /d/.

(viii) Semivowels/ Glides: These are vowel-like consonants - /w, j/.

2.2.2 Phonological processes and secondary articulations

According to Odden (2005:28) the place of articulation of consonants is divided into primary place of articulation – something that every consonant has – and secondary place of articulation – something that some consonants may add to a primary place of articulation. Secondary articulation has a close relationship with phonological processes. Odden (2005:45) explained further that consonants may have more than one point of constriction, one being generally a major (most radical) constriction and the other being less radical and more vowel-like in nature. He gave examples such as the palatalised [p^y] [t^y] and the labialised [p^w] [t^w] as forms of secondary articulation. Secondary articulations are notated by combining the appropriate symbol for the primary place with the symbol representing a kind of glide at the secondary place of articulation.

Oyebade (1998:57) defines phonological processes from a functional point of view by referring to them as "…sound modifications motivated by the need to maintain euphony in a language or to rectify violations of ideal constraints in the production of utterances".

Another scholar, Carr (2008:136), claims that:

> One way of talking about the relationship between related phonetic and phonological forms is to appeal to the idea of phonetic or phonological processes….The process idea tends to be associated with the notion of phonological *rule*.

From the foregoing, phonological processes entail the manipulation of sound realisations, based on the environment in which they occur. Discussions on secondary articulation contain instances of both simultaneous and transitional modifications to sounds in contexts (Ladefoged 1971).

There are two main types of secondary articulation: simultaneous and transitional complex articulations. Simultaneous secondary articulations entail separate but co-occurring activities which result in the production of a sound identifiable as a single segment, and the transitional ones involve separate and successive articulatory activities which together can be identified as a single segment (Clark and Yallop, 1995:99). Diagraphs or diacritics are used to represent secondary articulations. Both phonological processes and secondary articulations cater for modification of sounds in specific environments but the latter can be subsumed in the former.

There are different types of phonological processes. Assimilation is described by Smith and McCarthy (2003:320) as "a phonological process in which segments change to resemble its neighbours more closely. Two contiguous sounds become identical, either totally or partially, in terms of their features of production. Partial assimilation takes place when a segment takes only some, not all, of the characteristics of a neighbouring sound segment. In total assimilation, one segment becomes identical with another in all production features. Anticipatory or regressive assimilation is the instance where a sound is influenced by the sound which follows it. But in progressive assimilation, a sound is influenced by the preceding one. The following forms of secondary articulation involve one kind of assimilation or the other.

i. Nasalisation: a non-nasal sound may be pronounced like a nasal one when it is between two nasal sounds or very close to it. As an example, the /u:/ in "noon" /nu:n/ becomes nasalised. The diacritic known as tilde [˜]is used to indicate it.
ii. Labialisation: this takes place when a sound that is normally articulated with lips in neutral or spread positions acquire lip-rounding or lip protrusion as additional articulation features. The diacritic used for it is [ʷ]. This is the case for the initial [k] or [ʃ] in 'coo' [ku:] and 'shoe' [ʃu:]
iii. Palatalisation: a sound that is not usually produced towards the hard palate becomes so by the effect of either a proceeding on a succeeding segment. In vowels, it usually comes with the fronting of back vowels.
iv. Velarisation: A segment that is not normally articulated with the back of the tongue approaching the back part of the velum becomes so. The diacritic for this is [ɫ]. An example is /l/ in word-final position after /u/, as in 'full' [fuɫ], which becomes velarised.

v. Pharyngealisation: This is quite close to velarisation. This happens when a sound that in isolation would not be articulated with the roof of the tongue approaching the back wall of the throat becomes so in the context of another sound with this feature.

vi. Affrication: This happens when, instead of the air turbulence that comes with the release of a stop, what we get is an extended (in duration) frictional release. Gimson (1980:160) notes the tendency for [t] in London English to undergo this process in words like 'time' and 'ten'.

vii. Aspiration: This is the voiceless air turbulence that accompanies the pronunciation of voiceless stops, especially in stressed syllable initial positions, due to the opening of the glottis that accompanies the following voiced vowel. For example, [p,t,k] become aspirated in 'tan' [ˈtʰæn], 'pan' [ˈpʰæn] and 'can' [ˈkʰæn].

According to Carr (2008:44) dissimilation is the opposite of assimilation. It is a process whereby two adjacent sounds become less similar. For instance, in the history of Greek, a sequence of two fricatives in an onset was permitted in Ancient Greek, but these tended to become, over time, a sequence of a fricative followed by a stop. The word [fθinos] ('cheap') in Ancient Greek become [ftinos] in Modern Greek through the process of dissimilation.

Another phonological process is deletion. Awonusi, Ademola-Adeoye and Adedeji (2015) defined deletion as a process of removing or deleting a segment in a cluster. In connected speech, there is the tendency for a sound segment to be deleted. Deletion could affect vowels or consonants. Usually, vowel deletion takes place in weak syllables, particularly in informal discourse. It can be noticed that the first vowel segment in such words as 'police', 'tomato' and 'correct' are usually elided. Specifically, in the literature, vowel deletion is termed elision. Consonant deletion occurs in connected speech, where it is possible to get /a:ks/ instead of /ækts/ for "acts". Similarly, one usually encounters /gʌvmənt/ for 'government', with the [n] deleted. Another kind of deletion is degemination. This happens when a cluster of identical consonants is reduced to one (Crystal 1994:247).

Coalescence as a phonological process is evident when two near segments get replaced by a third segment that shares the articulation features of the two initial segments. Oyebade (1998:71) illustrates this process in English with the following examples:

rɪleɪt + ion – rɪleɪʃn	relate + ion	relation
ɪvied + ion – ɪveɪʒn	evade+ion	evasion
rɪgres + ion – rɪgreʃn	regress+ion	regression
kʌmfju:z + ion – kʌmfju:ʒn	confuse+ion	confusion

The underlined segments merge with the high front vowel to produce the palato-alveolar fricative /ʃ/.

Metathesis occurs when two contiguous segments change positions. Such types of metathesis as perceptual metathesis, compensatory metathesis, articulatory metathesis and auditory metathesis have been recognised in the literature (Blevins and Garett, 1998). There are equally other sub-types such as non-adjacent metathesis, long-distance metathesis and local metathesis (Trask, 2000). Insertion involves the incursion of an extraneous element not present originally into the utterance, usually to break up unwanted sequences (Oyebade, 1998:67). One form of insertion is epenthesis. It is vowel insertion. The past tense markers and the plural markers exemplify this in English segmental phonology with /ɪ/ being inserted between /t/ and /d/ in past tense forms of words that end with /t/ and /d/ such as *wanted* and *loaded* and the plural forms of words that end with /s/, /z/, /ʧ/, /ʤ/, /ʃ/, /ʒ/ such as *foxes* and *leeches*.

(a) /wɒntɪd/ wanted
(b) /ləudɪd/ loaded
(c) /fɒksɪz/ foxes
(d) /li:ʧɪz/ leeches

The insertion of /ɪ/ is to break any possible cluster of similar sounds which is against English phonotactics.

Prosthesis is another type of insertion. In this, an extraneous vowel is introduced at the beginning of a word. Liason as a phonological process takes place when a sound is introduced between words or syllables to help run them together more smoothly. As an example, English RP speakers usually pronounce the /r/ in words like ‘far’, ‘mother’ and ‘clear’ whenever there is a following vowel. It is called the linking /r/. There is also the intrusive /r/. This is employed in

joining adjacent vowels, even when there is no 'r' in the spelling (Skandera and Burleigh, 2005; Carr, 2008).

2.3 Standard British English suprasegmentals

Hyman (1975:187) gave an encompassing definition of the term, 'suprasegmental'. He stated that suprasegmental is "used to refer to both phonological and grammatical units larger than the segment". In the same vein, Crystal (2008:492) defined suprasegmentals as a term used in phonetics and phonology to refer to a vocal effect which extends over more than one sound segment in an utterance, such as a pitch, stress or juncture pattern. In its contrast with 'segmental', it is seen as one of two main classes into which phonological units can be divided. In the words of Roach (2009:83):

> the term suprasegmental was invented to refer to aspects of sound such as intonation that did not seem to be properties of individual segments (i.e. the vowels and consonants of which speech is composed). The term has tended to be used predominantly by American writers, and much British work has preferred to use the term prosodic instead.

Suprasegmentals are divisible into suprasegmental domains or units and suprasegmental features. However, Roach (2009:83) claimed that there has never been full agreement about how many suprasegmental features are to be found in speech, but that pitch, loudness, tempo, rhythm and stress are the most commonly mentioned ones. However, for the purpose of this study, stress, intonation and rhythm are the suprasegmental features to be examined. These shall be adopted as the suprasegmental features of English to be tested for possible variation or correlation between the speeches of adolescents and their different social classes - high and low.

2.3.1 Syllable and stress

The syllable is extensively treated in literature, most focusing on the definition, boundaries and the necessity of the concept in phonological explanations while others attest to its identity as the most widely discussed phonological suprasegmental. Skandera and Burleigh (2009:171) defined the syllable as a unit of phonological organisation whose central component is a nucleus, which is normally a vowel, and which may be preceded or followed by consonants. Though a uniform linguistic definition of the syllable does not exist, it has been defined and described from two

major perspectives: the phonological perspective and the phonetic perspective. The view of the syllable from the phonological perspective is well captured by Hyman (1975:189) thus:

> The basis assumption in phonological approaches to the syllable is that there is an intimate relationship between word structure and syllable structure. Thus, ideally, the same sequential constraints which operate at the beginning of a word should be operative at the beginning of a syllable, even if this syllable is word internal. Similarly, the same sequential constraints which operate at the end of a word should be operative at the end of a syllable.

Abercrombie (1967), Hyman (1975), Ladefoged (1982) and many others embrace this perspective. Two related concepts can be extracted from the citation above. They are sequential constraint and syllable structure. Sequential constraints, in the words of Kenstowicz (1994:250-251) refers to "… limitations on the distribution of sounds and sound sequences at various points (initial, medial, final) in the phonological word or phrase." They mean restrictions on the combination of phonemes in languages. In this instance, a syllable is defined on the basis of allowed segment combinations in a language. Every syllable is viewed as a combination of an obligatory vowel nucleus, an optional onset and an optional coda. Akinjobi (2004:41) states that, "phonetically, syllables are usually described as constituting a centre which has little or no obstruction to airflow and which sounds comparatively loud." This conception of a syllable phonetically represents an angle to the description of a syllable, using phonetic characteristics. The approach represented is the sonority or prominence approach. This approach holds that certain sounds are perceived as being more 'prominent' or 'sonorous' than others. Then, the number of peak of prominence in a word determines the number of syllables (Sunday 2004:65). This means the syllable begins with the least sonorous segment. Next to this is the most sonorous and this is followed by a less sonorous one. McMahon (2002:107) gave a list that makes evident the levels of sonority of English segments. The most sonorous sounds appear at the top and the least sonorous at the bottom:

Low vowels	[a, e]
High vowels	[ɪ, u]

Glides	[j, w]
Liquids	[l, j]
Nasals	[m, n, ŋ]
Voiced fricatives	[v, z]
Voiceless fricatives	[f, s]
Voiced plosives	[b, d, g]
Voiceless plosives	[p, t, k]

It is also known in the literature as the Sonority Sequencing Generalisation (Selkirk, 1984).

Another approach under the phonetic perspective is the Chest Pulse Theory. This term is used in phonetics to refer to a contraction of those muscles of the chest which are involved in the exhalation of air from the lungs. For the production of emphatic speech, these pulses are said to be 'reinforced' or 'stressed'. The chest pulse has been suggested as a central explanatory concept in one account of syllable production (chest pulse theory), but this view presents several problems (Crystal, 2008:100).

It is essential to note that every syllable is articulated with a chest pulse. Abercrombie (1967:35) captured the locus of this approach well in stating that "… when the pulmonic airstream is in action, the air is not (as one might think) expelled from the lungs by a constant, regular muscular pressure, producing an even and continuous flow of air. What happens, rather, is that the respiratory muscles alternately contract and relax, so that the air is expelled in a succession of small puffs. Each contraction, together with the resulting puff of air, constitutes the basis of a syllable".

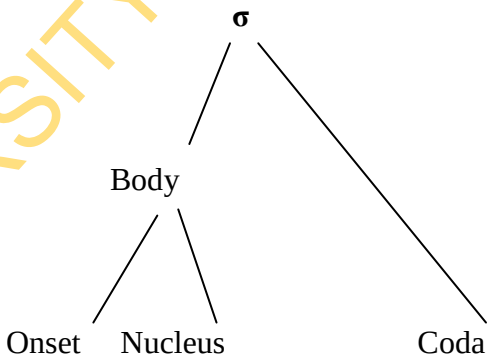
2.3.1.1 English syllable structure

Crystal (2008) claimed that the syllable structure can be defined in terms of strings of consonants and vowels. Different views on the internal structure of the English syllable exist. There seems to be no unifying point among these views. Blevins (1995) gave a summary of proposals on the syllable's internal structure. The earliest proposals like Anderson (1969), Kahn (1976) and, Clement and Keyser (1983) believed the syllable to have a flat structure. Syllable structure is

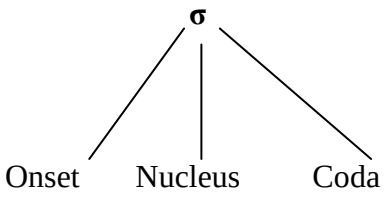
discussed in terms of the segments that are its constituents. As an example, 'trump' would be seen as being made up of /t/, /r/, /ʌ/, /m/ and /p/. Emphasis is not laid on any segment being the peak.

In the moraic approach, the syllable is viewed differently (Hyman, 1985; McCarthy and Prince, 1986; Hayes, 1989). First proposed by Hyman (1984, 1985), this theory holds the view that a syllable quantity (on weight) is a function of its number of weight bearing units referred to as moras (Utulu 2014:8). The formulaic representation for the moraic approach is σ → c μ (μ). A syllable is made up of consonants or non-consonants and one obligatory mora. The mora may be more than one in a bimoraic syllable. C represents consonants while μ stands for mora. Short vowels are represented by a mora. A syllable with a mora is a light syllable when placed on the syllable weight scale. Long vowels, diphthongs and any vowel followed by a coda have two moras which are read off on the weight scale as heavy syllables. The theory has been variously used to represent contrastive vowel length, germinate consonant and weight of rhythm-internal structure (*see* Hayes, 1989 and Broselow, 1995).

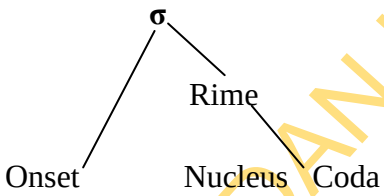
Another proposal is Binary Branching with Body. The schema, σ→ body coda; body → onset nucleus represents this view. The syllable is made up of the body and the coda. The body is further divided into the onset and the nucleus:



In the ternary branching approach, the syllable is conceived as being made up of the onset, the nucleus and the coda:



Binary Branching with Rime sees the syllable as being constituted by the onset and the rime. The rime as the focus is further divided into the nucleus and the coda.



Apart from the first proposal which is the flat structure, all the others acknowledge that there are three components in a syllable: the onset, the nucleus and the coda. The formula: (Co-3) v (Co-4), captures these three parts. (Co-3) is the onset. The onset is made up of the optional initial consonants. (Co-3) represents the allowed number of consonants in the initial position of a syllable. It cannot exceed three but may be one or two. (Co-4) is the coda. It indicates that the vowel nucleus can be followed by no consonant, one consonant, two consonants, three consonants or four consonants. It cannot exceed four. The 'V' represents the vowel nucleus. It is the peak of the syllable. This position is occupied by either a vowel or any of the syllabic consonants like /m, n, ŋ, l, r/. A syllable that has a coda is a checked or closed syllable and one without a coda is called an open syllable.

Also, stress exerts some influence on the description of English syllables. A stressed syllable is a strong syllable with additional phonetic qualities - pitch prominence and other phonetic cues to stress such as duration, segmental quality and loudness. An unstressed syllable is a weak syllable characterised by reduction, elision and the use of the schwa and other weak vowels (Roach, 1997; Roca and Johnson, 1999; Roach, 2009; Awonusi, 2015).

2.3.1.2 Standard British English Stress

To achieve the peculiar rhythmic pattern of the English Language, not all the syllables are produced with the same level of prominence. Some are given much prominence in quantity and quality than the others. Then, stress refers to the prominence given to a syllable above its adjacent. In the words of Bussman (1996:1127), stress is "a suprasegmental feature, which, together with pitch, duration, and sonority, makes up the prominence of sounds, syllables, words and sentences". In terms of articulation, a stressed syllable is marked by increased muscular activity. But in terms of acoustic characteristics, increase in fundamental frequency (loudness) characterises it.

Contributions to the literature on stress such as Tiffens (1974), Bansal (1976), Cutler (1984) and Odlin (1989) have deliberated on the importance of stress in achieving mutual intelligibility among world speakers of the English language. Ekundare (1993:26) conflated both the articulatory and acoustic features of stress in his explanation. "This force is obtained mainly as pressure from the chest muscles affecting the airstream involved in speech production. The degree of force is perceived by hearers as degree of loudness which carries from syllable to syllable. Hence, stress is usually defined as relative loudness of volume from the listener point of view and relative energy from the speaker's".

Kager (1995:144-146) discussed four cross-linguistic features of stress. The first of them is its being culminative. This means that every prosodic word has just one stressed syllable. Typical examples of prosodic words would be content words and grammatical words that occur in isolation. Every content word has, at least, a stressed syllable, and every function word in isolation, even if monosyllabic, is stressed. This feature suggests rightly that there can be no word without a stressed syllable neither can we have one in which all words are stressed.

Another characteristic of stress is that it is demarcative. In some languages, stress signals word boundaries since there is the tendency for it to be at the edges of words; it could be assigned to syllables that occur word-initially or word-finally. Another prominent position is the penultimate syllable. Even in some languages (e.g. French), stress is predictable such that a speaker knows the position of the syllable to bear the stress (Akinjobi, 2004). The English language does not

accommodate such a stationary or stable stress placement pattern. However, one must admit that there is a tendency for the initial syllable to be stressed in bisyllabic or polysyllabic words.

The rhythmic feature of stress means the tendency towards rhythmic patterning of strong and weak syllables, occurring at regular intervals. The occurrence of accented and unaccented syllables at regular intervals creates the inherent rhythm of the English language. There is also the quantity-sensitivity feature. Mostly, stress falls on only syllables with some inherent prominence. This prominence may result from the quality of the vowel nucleus in the syllable. A closed syllable has the tendency to bear the stress. So also is one that ends with either a long vowel or a diphthong. This feature necessitates the suspension of the demarcative feature of stress.

Kager (1995) goes further to describe stress as hierarchical. If a word is polysyllabic, one out of all the syllables is made more prominent than the others. Apart from that which is assigned the primary stress, another stressed syllable comes next in hierarchy to it. This one bears the secondary stress and all other syllables are unstressed. Additionally, stressed contrasts are enhanced segmentally. Such phonological processes as vowel lengthening, vowel reduction or vowel germination may strengthen or weaken a syllable. In the same vein, it is necessary to note that even in connected speeches, the strong forms of grammatical words may be used when one is expressing emphasis or contrast. As examples, the capitalized grammatical words below are stressed to express emphasis:

i. I live IN Lagos (not outside)
ii. I gave HER the books (not him)
iii. Dr. Olawole built a ROOM (not a house).

In English, stress clash is avoided by reassigning stress when words are in a group. Stress does not assimilate to adjacent syllables because such assimilation has the tendency to lead to clashes. Instead, there occurs a stress shift from one syllable to another to avoid any possible clash (Roach, 1997).

We often differentiate between free stress languages and fixed stress languages. In the words of Hyman (1975:204), “languages which restrict the placement of stress to one particular syllable within each word are said to have fixed or non-phonemic stress”. Stress placement and pattern in

such languages is relatively predictable. Languages like Russian, French, Hungarian, Turkish, and Polish are in this category. Free stress languages, on the other, have prominence associated with stress on different syllables of different words. English is a language with the free stress pattern, though it must be admitted that stress patterns are predictable to an extent in the language. But this predictability is not significant enough for extensive generalisation.

Based on grammatical categories, word and sentence stress are differentiated. Akinjobi (2004:54), citing Kager (1995), puts the focus of the discussion on word stress thus: "The study of word stress has been found to address the location of prominent syllables within words as well as the rhythmic, positional, quantitative and morphological factors that govern patterns of syllable prominence". Since one cannot arbitrarily determine the syllable to be assigned stress in English, some scholars (Crutenden, 1986; Roach, 1991; Kager, 1995) have generally acknowledged the complexity in English stress assignment. However, based on such factors stated in Roach (1991:38) as whether the word is morphologically simple, complex or compound, the grammatical category to which the word belongs and the phonological structures of those syllables. Based on these guides, with some noticed exceptions, the following rules of stress placement in English are given:

i. **Verbs and Adjectives**
   a. Stress on the penultimate syllable when the final syllable has a short vowel in an open syllable or is followed by not more than one consonant e.g. *sur'render, 'polish, as'tonish.*
   b. Otherwise stress on the final syllable (subject to rule (iii) below) e.g. *main'tain, se'vere, de'fend.*

ii. **Nouns**
   a. If the final syllable has a short vowel, disregard it and apply rules under (i) above e.g. *'elephant, 'moment, com'plexion.*
   b. If the final syllable has a long vowel, it is stressed (subject to (iii) below) e.g. *po'lice, ma'chine, ca'tarrh.*

iii. Words of more than two syllables with long final vowels should be stressed on the antepenultimate syllable e.g. *'anecdote, 'fahrenheit, 'pedigree.*

However, there are some apparent exceptions to these rules. They include words such as *poˈsition, ˈwindow, and kangaˈroo*.

Suffixation also determines stress placement. Three types of suffixes are identified:

- suffixes that leave the stress on the stem (e.g. *ful'ful/ful'fillment, 'usual/ˈusually);*
- suffixes that take the stress themselves (e.g. *'limit/limi'tation, 'china/chi'nese);*
- and suffixes that shift the stress on the stem (e.g. eˈconomy/ecoˈnomic, ˈapply, appliˈcation).

Roach (1991) also sets down some rules of word stress assignment in English. With two syllable words, either the first or second syllable is stressed (not both). If the word is a verb, and the second syllable contains a long vowel, or diphthong, or it ends in more than a consonant, that second syllable is stressed e.g. aˈpply /əˈplai/, arrive /əˈraɪv/, attract / əˈtrækt/. If the final syllable contains a short vowel and one or no final consonant, the first syllable is stressed e.g. *enter/ /ˈentə/, envy/* ˈenvɪ/, *equal* /ˈɪkwəl/. The final syllable is also unstressed if it contains /əu/ e.g. 'follow/ ˈfɒləu/, *borrow* /ˈbɒrəu/, *window* /ˈwɪndəu/. Roach listed all other verbs as exceptions.

Roach further claimed that the rules above can also be applied to adjectives e.g. *lovely* /ˈlʌvlɪ/ *di'vine*/ dɪˈvain/, *even* /ˈɪvn/, *correct* /ˈkʌrekt/. As with the other rules, there are also exceptions e.g. 'honest /hɒnɪst/ *and perfect* /ˈpɜːfɪkt/, both ending with two consonants and yet having the first syllables assigned the stress.

Nouns, according to Roach, also have their stress assigned to the first syllable when the second syllable contains a short vowel; otherwise the second syllable is assigned the stress e.g. *money* /ˈmʌnɪ/, *estate* /ɪˈsteIt/ and *balloon* /bəˈluːn/. Other two-syllable adjectives are also believed to behave in like manner.

Three-syllable words have been observed to be more complicated. If the word is a verb and the last syllable contains a short vowel and ends with not more than one consonant, that syllable will be unstressed. The stress will be assigned to the penultimate syllable (that is, the preceding syllable) e.g. *encounter* /ɪˌˈkauntə/, *determine* /dɪˈtɜːmɪn/. However, if the final syllable contains a long vowel or diphthongs, or ends with more than one consonant, that final syllable will be stressed e.g. *entertain* /ˌentəˈteɪn/, *resurrect* /rezəˈrekt/. With three-syllable nouns, when the final

syllable contains a short vowel or /əu/, it is unstressed. But if the syllable preceding this final syllable ends with more than one consonant, the middle syllable will be stressed e.g. *potato* /pəˈteɪtə/, *disaster* /dɪˈzaːstə/. When the final syllable of a three-syllable word contains a short vowel and the middle syllable contains a short vowel, and ends with not more than one consonant, the final as well as the middle syllable is left unstressed and the first syllable is assigned the primary stress e.g. *quantity* /ˈkwɒntɪtɪ/, *cinema* /ˈsɪnəmə/. The same rule also applies to adjectives e.g. *opportune* /ˈɒpətjuːn/, *derelict* /ˈderəlikt/. It must be recognised that the rules are effective guides to understanding the complex stress system of the English language (*see* O'Connor, 2000:91-92).

Some words with more than three syllables have two types of stresses assigned to two of the syllables they are made of. The two stressed syllables carry two different degrees of stress. These are referred to as degrees of stress (Akinjobi, 2001). There is the primary stress which is assigned to the syllable with the higher degree of prominence. It is marked with a small stroke above and before the syllable it is assigned to. As an example, "demonstrate" /ˈdemənˌstreɪt/ has three syllables, the first syllable /ˈde- / takes the primary stress. Secondary stress is taken by the syllable that is next in prominence to the primary syllable. The diacritic for marking it is a stroke below and before the syllable that takes it. The third syllable of /ˈdemənˌstreɪt/, /-ˌstreɪt / bears the secondary stress. The last degree of stress is not marked like the primary and secondary stresses. It is for unstressed syllables such as the second syllable of / demənˌstreɪt/, / -mən- /.

In a discussion of stress, it is necessary to consider what factors make a syllable count as stressed. It seems likely that stressed syllables are produced with greater effort than unstressed ones, and that this effort is manifested in the air pressure generated in the lungs for producing the syllable and also in the articulatory movements in the vocal tract. These effects of stress produce in turn various audible results. One of such is pitch prominence, which makes the stressed syllable stand out from its context (for example, being higher if its unstressed neighbours are low in pitch, or lower if those neighbours are high; often a pitch glide such as a fall or rise is used to give greater pitch prominence). Another effect of stress is that stressed syllables tend to be longer – this is very noticeable in English, less so in some other languages. Also, stressed syllables tend to be louder than unstressed ones, though experiments have shown that differences in loudness alone are not very noticeable to most listeners. It has been suggested by many writers that the

term accent should be used to refer to some of the manifestations of stress (particularly pitch prominence), but the word, though widely used, never seems to have acquired a distinct meaning of its own (Roach, 2009: 81). The controversy generated by the use of accent accounts for the adherence to the strict use of stress for this feature in present study.

Another type of stress is sentence stress. Carr (2008:158) defines sentence stress as a term sometimes used to refer to the placement of the tonic in a sentence. One can rightly refer to this as stress in connected speech. A particular syllable of the sentence, usually the last stressed syllable, often referred to as the tonic or nuclear syllable, is assigned the nuclear stress. It is determined, to a large extent, by the intended utterance meaning. Usually, lexical items that belong to the open class system (nouns, adjectives, adverbs and lexical verbs) are stressed in sentences. However, lexical items of the closed class system like pronouns, conjunctions, determiners, prepositions and auxiliary verbs are not often stressed. As stated earlier, these grammatical words have both weak and strong forms. The strong forms are used when the words occur in isolation or they constitute the focus of the message but the weak forms are the ones used in connected speech for utterances with ordinary meanings. Sometimes, the weak forms have variants and their usage is dependent on context.

It is good to note that even in connected speech, the strong forms of grammatical words may be used when one is expressing emphasis or contrast. As examples, the capitalised grammatical words below are stressed to express emphasis:

(i) I live IN Lagos (not outside)
(ii) I gave HER the books (not him)
(iii) Dr. Olawole built a ROOM (not a house)

2.3.2 Standard British English intonation

Pitch is the perceptual correlate of the frequency of the vibration of the vocal folds. On the other hand, one can refer to it as the number of tonal oscillations per second (Bussman, 1996:907). Intonation and tone are the different realisations of pitch in languages of the world. They both mean variation in the pitch of a speaker's voice. When differing levels of pitch are used to mark distinctions among lexical items, it is referred to as tone. When the variation is on a tone group, it is intonation. Intonation is not known to be lexically significant.

According to Carr (2008:78) intonation is:

> the kinds of pitch modulation which are found in whole utterances. Intonation contours can be used to highlight certain elements in an utterance, to bundle words together into information chunks, and to convey the speaker's attitude to what he/she is saying.

The English language is intonation compliant (O'Connor 2000:108) and as a prosodic feature, operates on the suprasegmental unit called tone unit or tone group. Tone unit is a term used by some intonation analysts, particularly those working within the British tradition e.g x x x. It is used to refer to a distinctive sequence of pitches, or tones, in an utterance; also called a tone group. The essential feature of a tone unit is the nuclear tone, which is the most prominent tone in the sequence. This may be accompanied, depending on the length of the utterance, by other components, such as the head (i.e. the sequence of syllables between the first stressed syllable and the nuclear tone), pre-head (i.e. unstressed syllables at the very beginning of the tone unit) and tail (i.e. the syllables following the nuclear tone) (Crystal, 2008:513).

It may not be entirely appropriate to link a tone group with known grammatical categories since it can be a word, a phrase, a clause or a sentence. There are four components in the structure of a tone group. They include the pre-head, the head, the tonic syllable and the tail. A pre-head is made up of all the weak syllables that occur before the first stressed syllable in a tone group. This is illustrated in:

(i) Some of the boys are healthy

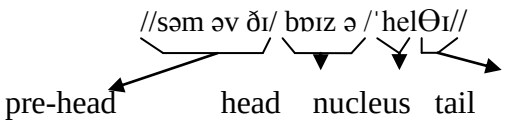
//səm əv ðɪ/ bɒɪz ə /ˈhelϴɪ//

If one takes this sentence as a tone group, the pre-head starts from 'some' /səm/ and ends before the first stressed syllable which is 'boys' /bɒɪ/. Next to the pre-head is the head. The head of a tone group is taken from the first stressed syllable to the last stressed syllable in the group. In the example given above, the first stressed syllable is 'boys' /bɒɪ/. The head starts from it and ends at 'are' /ə/, just before the next stressed syllable.

The last stressed syllable in a tone group is called the tonic syllable or the nucleus. While all the other elements are optional; the nucleus is a compulsory one. It is the syllable that takes what is referred to as the nuclear stress or intonation tune. This, in turn, indicates the pitch direction,

whether a rise or a fall. Any unstressed syllables that come after the nucleus are jointly referred to as the tail of the tone group. Having discussed all the components of a tone group, the example at the outset of the discussion of this study is buttressed further in:

Some of the boys are healthy.



The double slant lines show the tone group boundary while the slant lines indicate the foot junctures. (v) stands for the anacrusis or silent beat. It is there because the first syllable is not salient. It is also essential to differentiate between a simple tone group and a compound tone group. A simple tone group fits the description of a tone group that has been given so far. But a compound tone group has the head and the nucleus appearing contiguously. Additionally, it is essential to illustrate the compulsory and optional statuses of the elements. The examples below adequately do this:

(a) Tone Group without a pre-head: Sola kissed Feyi //Sola/ kɪst /Feyi//.
(b) Tone Group without a Head: He is bright //ʌ hɪ z/ brait//.
(c) Tone Group without a Tail: Tolani spoke English //Tolani/ spəuk/ˈɪŋglɪʃ//.

As given at the onset, intonation is the variation in the pitch of voice by speakers. There are two main intonation tunes in the English language: the falling tune and the rising tune. The falling tune is mostly used to show that there is no other information expected in an utterance.

It is found in simple statements, simple commands, questions and exclamations, for example:

(i) He is a nice man (simple statement)
(ii) Get out (simple command)
(iii) What is my name? (wh-questions)
(iv) Fantastic! (Exclamation).

The rising tune is used for polar questions, changing statements to questions, polite statements, listing and incomplete statements as seen in the examples below:

Will you come along? (Polar question)

Please sit down (polite request)

A: You are a banker (statement)

B: You are a banker? (question)

These two main tunes are combined in some utterances. One of the possibilities is the rise-fall tune. It is used to separate clauses and list items, for example:

Whenever the cloud gathers, it rains (to separate clauses).

He addressed the children, the women and the men (listing items).

The fall-rise tune is mostly used in tag questions. The part of the statement takes the falling tune while the tag takes the rising tune e.g.

(i) He smokes marijuana, doesn't he?

(↗) and (↘) stand for the rising tune and the falling tune respectively.

According to Oladipupo (2005), (2008) and Akinjobi (2010) intonation performs a number of functions. The attitudinal function of intonation refers to how it is used to display emotions. As an example, the articulation of "So be it" with a falling tune shows finality or definiteness. Another function of intonation is its accentual function. It is also called the contrastive function of intonation. Intonation is employed to mark out the most important information in a tone group. Roach (1997:173) gives the example below:

(i) I have plans to <u>leave</u> (meaning "I am planning to leave").

(ii) I have <u>plans</u> to leave (meaning, "I have some drawing that I have to leave).

The accented syllables are the underlined. Intonation can also perform grammatical functions. In such instances, intonation is used to indicate the syntactic structure of a sentence or an utterance. As an example, intonation can show phrasal, clausal and sentential boundaries, sentence type and grammatical subordination. For example:

Whenever I come, he sneaks out (Rising tune indicates clausal boundary).

Is she sleeping? (Rising tune indicates that the question is a polar one).

When intonation is used to mark new information, it performs the discourse function. The information is given. Roach (1997:177) exemplifies this thus:

(i) I've got to take the dog for a walk

(ii) I've got to take the dog to the vet.

It is on the underlined items that the intonation tune changes. This indicates that they are new while the others are given.

2.3.3 Standard British English foot and rhythm

Crystal (2008:219) opines that foot is:

> a term used by some phoneticians and phonologists to describe the unit of rhythm in languages displaying isochrony, i.e. where the stressed syllables fall at approximately regular intervals throughout an utterance. It is an extension of the term used in traditional studies of metrical verse structure, where the many regular patterns of stressed/unstressed syllable sequence were given a detailed classification…. In a more general phonological sense, the notion is applied to any utterance in a stress timed language, not just verse.

Rhythm is the prosodic feature of the foot. It is brought about by the regular occurrence of stressed and unstressed syllables in connected speech (Akinjobi, 2011; Ilolo, 2013; Akindele, 2015). Foot exists as a suprasegmental unit above the syllable. A foot is often structurally defined as starting with a stressed syllable (or a silent beat) and continuing up to, but not including the next stressed syllable (McMahon 2002:124; Roach, 2009; Akinjobi, 2012; Awonusi, 2015). In the sentence: 'This boy needs a big bag', there are four feet. The first has a

silent beat because it is without stress. 'Boy' /bɒɪ/, 'needs' /nɪdz/ a 'big'/bɪg/ and 'bag'/bæg/ constitute the second, third and fourth foot respectively.

One can differentiate between the strong and the weak foot. When a word carries one foot, such a foot is said to be weak. This means that such a foot has only a stressed syllable. As an example, 'raider' has stress on the first syllable and no stress on the second. However, the word 'radar' has a stronger foot. The first syllable has a primary stress and the second has secondary stress.

There are two major theoretical poles on the occurrence of rhythm in languages: the theory of stress-timed rhythm and that of syllable-timed rhythm. There is another description for Japanese which is mora timing. This can be found in the classification of Abercrombie (1967), Roach (2000), Gut (2001) and Gut and Milde (2002). In the words of Roach (2000:134), "…stress-timed rhythm implies that stressed syllables will tend to occur at relatively regular intervals whether they are separated by unstressed syllables or not…" In syllable-timed languages, "…all syllables, whether stressed or unstressed, tend to occur at regular time-intervals and the time between stressed syllables will be shorter or longer in proportion to the number of unstressed syllables" (Roach 2000:135).

The English language is considered a language with stressed-timed rhythm. In it, stressed syllables occur at regular intervals (Abercrombie 1967, Dunstan 1969, O'Connor 1984, Quirk and Greenbaum 1987, Wales 1989, Crystal 1992; Udofot, 1997; Ilolo, 2013; Akindele, 2015). The occurrence of stressed syllables at regular intervals gives the English language its isochronous rhythm that is based on stress. Cruttenden (1986:24) describes the principle of isochrony in stress-timed languages as the tendency of feet to be of appropriate equal duration. Through their contributions, Crystal (1969), Cruttenden (1986) and Roach (2000) have contested the division between syllable-timed rhythm and stress-timed rhythm on the basis of lack of experimental evidence. Even Knowles (1974), cited in Akinjobi (2004:68), argues that the principle of isochrony engenders a misinterpretation of rhythm because the intervals between accented syllables are "more equivalent than equal".

A different approach to the description of English rhythm is given by Bolinger (1981) as the full vowel-timing Theory. He explains English rhythm in terms of the relationship between full vowels and reduced vowels, and not the occurrence of stressed syllables. In this description, each

foot contains one full-vowelled syllable. Akindele (2011:47) cites Crutenden (1986:25) in putting forward the thrust of the full vowel-timing theory thus:

> a reduced-vowelled syllable following a full-vowelled syllable 'borrows time' from it, so that together they are roughly equal to a full-vowelled forming a rhythm unit on its own; however, any succeeding reduced-vowelled syllables do not 'borrow time' and hence add to the length of a rhythm unit.

According to her, Crutenden further illustrates with the following examples:

(i) Those porcupines aren't dangerous

F F F F F F R R

(ii) The wallabies are dangerous

R F R R R F R R

Where F = full vowelled syllable; and R = reduced vowelled syllable

If one considers the examples above in relation to stressed-time isochrony, the two sentences will be said to contain two rhythm units and an anacrusis each. But the full vowel-timing theory will consider them to have six and two rhythm units respectively. Crutenden (1986) endorses the full vowel-timing approach for accounting for the instrumentally measured facts of English syllable duration than the concept of stress-timed isochrony (see Akinjobi 2004:71).

2.4 Nigerian English phonology

Though the beginning of Nigerian English might have been marked by a clear-cut distinction between two schools of thought; the deviation school and the variation school, the sheer volume of works produced on its characterisation as a variety of the English language has defended the existence. It is in recognition of its status as an evolved variety that Soyinka (1988:16) makes the following remarks regarding the use of the language in Nigeria and other non-native contexts:

> And when we borrow an alien language to sculpt or paint in, we must begin by co-opting the entire properties in our matrix of thought and expression. We must stress such a language, stretch it, impact and compact it, fragment and reassemble it with no

> apology, as required to bear the burden of experiencing and of experiences, be such experiences formulated or not in the conceptual idioms of the language.

Ajani (2007) refers to the defining characteristics of the new Englishes as extended range of uses in the sociolinguistic context; ongoing process of nativisation of the registers and styles; and the existence of a body of nativised English language literature with formal and contextual characteristics marking it as localised (Platt et al., 1984; Kachru, 1992b). He reaffirms the emergence of Nigerian English based on the foregoing characteristics.

Other scholarly contributions to the Nigerian English literature have differentiated among its varieties. Brosnaham (1958) identified four varieties of Nigerian English, based on the use of the language in the southern part of the country. Banjo (1971 and 1996) uses educational attainment, international intelligibility and social acceptability as criteria for identifying four varieties of Nigerian English. Likewise, Adesanoye (1973), Adekunle (1979), Bamgbose (1982, 1995), Jibril (1982b, 1986a, 1986b) and Jowitt (1991) worked on varieties of Nigerian English.

Works in the area of variety differentiation are still ongoing. Many recent theses and dissertations have concentrated on describing selected educated geographical sub-varieties of Nigerian English (Jibril, 1982a; Akinjobi, 2004; Jowitt, 2009; Ilolo, 2013; Akindele, 2015). Another new perspective is exemplified in Surakat (2010) and Olaniyi (2011) who identified some socio-psycholinguistic variables for categorising Nigerian English varieties.

Another group of scholars have focused on pointing out the direction in which the English language in Nigeria might be expected to develop and how a standard variety might be identified. Works in this regard include Adekunle (1974), Adetugbo (1977), Adeniran (1979b), Akere (1982), Jibril (1982a), Obilade (1984), Odumuh (1984) and many others. This category of scholars of Nigerian English concentrates on extensive descriptions of Nigerian English at different levels of linguistic analysis. Some of these writings generally treat features of Nigerian English at some or all of the levels of language analysis. Some others focus on specific levels of language analysis. Banjo (1971), Adetugbo (1977), Bamgbose (1982), Jibril (1979, 1982), Eka (1985) and some others studied the features of Nigerian English at the phonological level. Banjo (1969), Adesanoye (1973), Kujore (1985), Odumuh, Awonusi (1990), Jowitt (1991) and some others treated aspects of its morphology, syntax and semantics. At the lexico-semantic level are

works like Akere (1982), Adegbija (1989), Igboanusi (2001), Fakoya and Osoba (2001) and Ogunsiji (2008). Some concentrated on its sociolinguistics and pragmatics. These include Tunde-Awe (2014), with focus on its sociolinguistics, and Bamgbose (1995) and Banjo (1996) on the pragmatic features of Nigerian English.

The foregoing is a general description of Nigerian English. It is important to state that the focus of this section is a detailed examination of the Nigerian English phonology. The previous section has looked into the phonology of Standard British English. It is the standard from which Nigerian English varies. Here, the features of Nigerian English, both at the segmental and at the suprasegmental levels will be examined.

2.4.1 Nigerian English segmentals

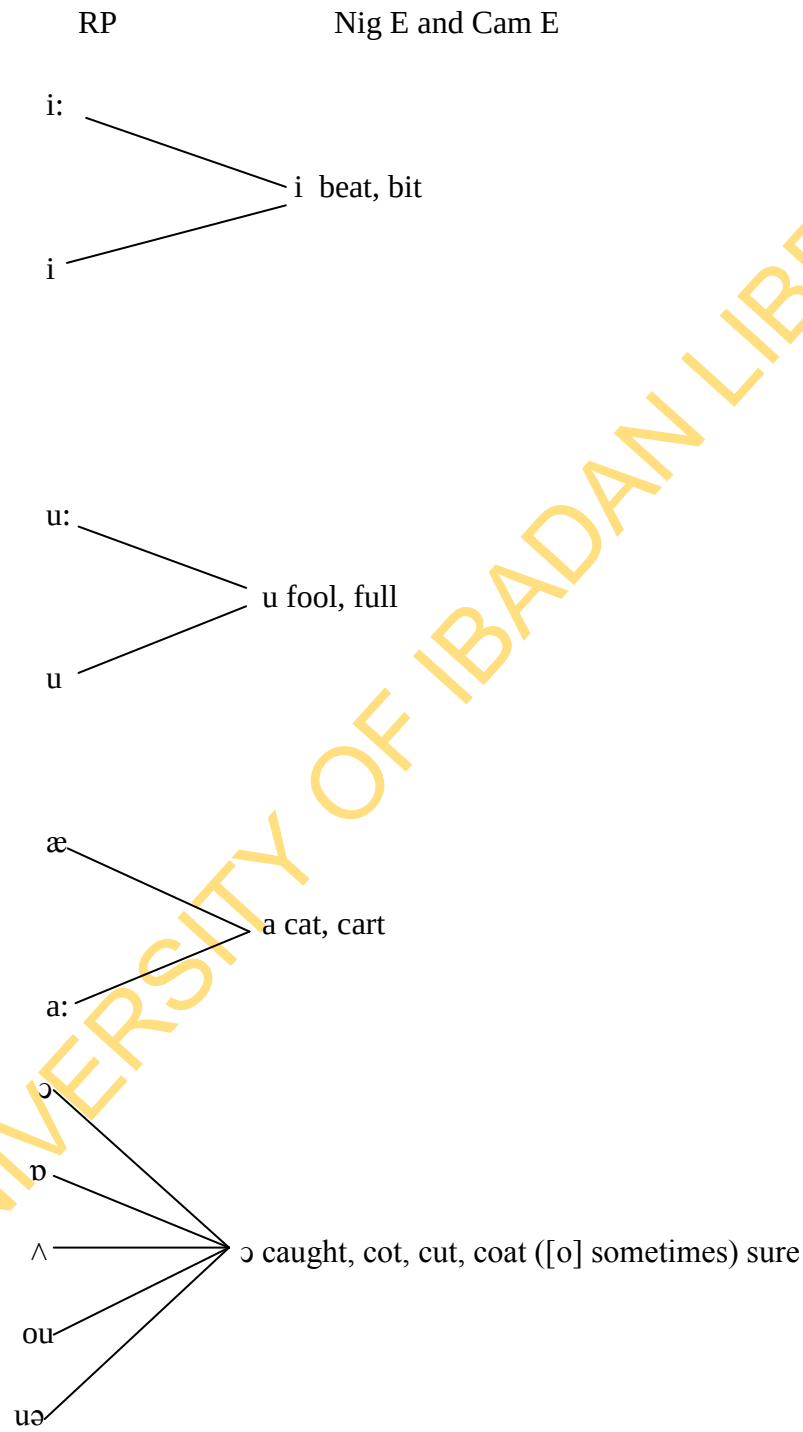
In this section, the features of Nigerian English at the segmental phonology level are examined. This description is based on the educated variety of Nigerian English, specifically on Banjo's (1971) classificatory model, Variety III.

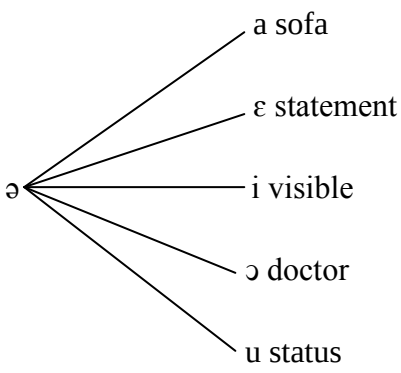
2.4.1.1 Nigerian English vowels

The deliberation on Nigerian English vowels is explored based on some outstanding previous researches such as Jibril (1986), Ufomata (1990), Jowitt (1991), Banjo (1996), Akindele and Adegbite (1999), and some more recent ones like Udofot (2004), Akinjobi (2004, 2006), Igboanusi (2006), Akande (2009), Ilolo (2013), Utulu (2014) and others. Generally, in relation to Standard British English vowel phonemes, Nigerian English vowel realisations are characterised by under-differentiation, substitution, monophthongisation, vowel epenthesis, absence of vowel reduction, lack of central vowels, vowel coalescence etc.

Ufomata (1990) reported under-differentiation of vowels as an identified characteristic of Nigerian English. This she inferred from the findings of Brosnaham (1958), Jowitt (1991) and Bobda (1995). Sunday (2004:27) cites Adeniran (1980:81) in defining under-differentiation in second language context as "a situation in which the learner does not show the distinction inherent in two different sounds in the L2; he collapses the two different sounds into a sound that he perceives as being nearest to them". It is this phenomenon that Bobda (1995) referred to as

merging. Bobda (1995:253-254) presents the following examples of vowel phonemes under-differentiation as found in both Nigerian English and Cameroonian English, compared to the Received Pronunciation:





However, Jowitt (1991:72-78) examines instances of such vowel under-differentiation in Nigerian English by drawing attention to certain differences in realisations across geographical boundaries. He identified Popular Nigerian English in Hausa (PNE (H)), Popular Nigerian English in Igbo (PNE (I)) and Popular Nigerian English in Yoruba (PNE (Y)) and makes the following observations:

(i) Only PNE(I) and PNE(Y) speakers under-differentiate /i:/ from /i/. PNE(H) approximately coincides with RP in this;

(ii) There is phonemic distinction between /u:/ and /u/ in PNE(H). The distinction is neutralized in PNE(Y). PNE(I) distinguishes between the two by pharyngealization;

(iii) PNE(H) usually realizes RP's /æ/ as Hausa's /a/ and RP's /a:/ with Hausa /a:/. PNE(I) and PNE(Y) neutralize /a/ and /a:/ to a fairly short [a];

(iv) PNE(I) and PNE(Y) speakers probably identify RP /o/, which is, more open and less rounded than cardinal /ɔ/. It approximates closely to cardinal [ɔ]. PNE(H) speakers tend to identify RP /ɔ/ as [o] and RP /ɔ:/ as [o];

(v) PNE(I) and PNE(Y) tend to realize /ʌ/ as /ɔ/ but /ɔ/ is also realized in words where /ʌ/ is represented by orthographic 'u'. PNE(H) appears to identify /ʌ/ with an allophone of Hausa /a/, producing a sound which may be more close than RP /ʌ/;

(vi) RP /əu/ in PNE(H) is often realized as /o:/ and as shorter [o] or [ɔ] in PNE(I) and PNE(Y); and

(vii) In word-final positions, PNE simplifies /ʊə/ to /u/.

The noticed categorisation of Igbo English (IE) and Yoruba English (YE) as being almost entirely the same in the realisation of sounds by Jowitt (1991) is slightly negated by Igboanusi (2006:496). He notes that "Differences between the IE and YE accents are more prominent at the basilectal and the mesolectal levels than at the acrolectal level…The gradual loss of most of the YE accents by the Yoruba speakers of English have one obvious obligation, which is that YE pronunciation features are likely to emerge as the Standard NE accent".

Another feature of vowel realisation in Nigerian English is the monopthongisation of some diphthongs. Lehmann (1992) refers to monophthongisation as a phonological process whereby an element of a diphthong is deleted, leaving the stranded element to function as a monophthong. This phonological process is not attested in RP. However, scholars such as Wells (1982), Roca and Johnson (1999), Trudgill (2005) and Bobda (2007) have reported monopthongisation of RP diphthongs in such accents of English as Cockney, Estuary English and Scottish English. Monopthongisation have equally been identified by Nigerian English scholars. Works like Jibril (1982), Jowitt (1991), Onose (2003), Udofot (2004), Ugorji (2007), Akande (2009), Ufomata (2010) and Utulu (2014) have discussed the process in different varieties of Nigerian English. Jowitt (1991:76-77) observes the following about the phenomenon:

(i) PNE(H) speakers tend to identify RP /eɪ/ with /e:/ and PNE(I) and PNE(Y) speakers with /ə/;
(ii) In PNE(H), /əʊ/ is usually realized as [o:] and as a shorter [o] or [ɔ] in PNE (I) and PNE(Y).

On the monophthongisation of diphthongs, there exists two divides in the literature: studies which record compensatory lengthening after the monophthongised diphthongs (e.g. Jibril (1982), Jowitt (1991) and Akande (2009) and those that ignore the lengthening affect of monophthongisation (e.g. Onose 2003, Udofot 2004, Ugorji 2007, Utulu, 2014 among others). Generally, there is also the absence of central vowels in Nigerian English. The central vowels are most substituted by other sounds. There is a tendency for PNE (H) speakers to realise RP /e/ as /ə/ or /a/. PNE (Y) users produce [e] and [ɛ] in free variation for RP /e/. PNE (I) speakers adopt the same realisations as PNE (Y) except that they (the Igbo Speakers) have /e/ and /ɛ/ as allophones. PNE(H) invariably realizes /ɜ:/ as /a:/ while PNE (I) and PNE(Y) realize it as [ɔ]

when represented in spelling as –ur, -or, -er. All speakers appear to realize it as [ua] when the spelling correlate is –eur.

Schwa, / ə /, occurs only in unstressed syllables in RP and can be regarded as the end product of the stress-timing that entails vowel reduction. Despite its being an allophone in PNE (H), the distribution of /ə/ in PNE (H) does not correspond to RP as it is often realized as [a] while / ə / can even feature in an unstressed syllable in place of RP /e/ or /ɒ/. In PNE (I) and PNE(Y), it is often realised as [a] (Jowitt, 1991:75). He also mentions that spelling pronunciation is often adopted when dealing with a word such as *actor* where / a / is realised by PHE (I) and PNE (Y) while PNE (H) would realise it as [o]. Likewise, Akinjobi (2004, 2006), Ilolo (2013) and Akindele (2015) have confirmed the scarce use of the schwa sound in Yoruba, Isoko and Edo sub-varieties of Nigerian English.

Vowel epenthesis stands as another common feature in Nigerian English. Epenthesis simply refers to the addition of one or more sounds to a word, especially to its inner part. Crystal (2008: 197) defines epenthesis as a term used in phonetics and phonology to refer to a type of intrusion, where an extra sound has been inserted in a word; often sub classified into prothesis and anaptyxis. As an example, a Nigerian speaker may realise 'film' /film/ as /fimu/. It is imperative to draw attention, as does Sunday (2004:31), to the fact that epenthesis is rare in the speeches of educated speakers of Nigerian English. But an exemption may be what Bamgbose (1971:42) noted in his own report that educated Hausa speakers of Nigerian English usually put a vowel between a syllable-final consonant and the initial consonant of an immediately following syllable as in "resignation" [reziginеiʃn] for /rezigneiʃn/.

RP recognises vowel reduction as a phonological process. Carr (2008:116) defines vowel reduction in RP as "reduction in the length of a vowel, usually accompanied by a change in its quality". The concept is synonymous with vowel weakening, duration, reduction or total deletion. As recorded in Jibril (1982), Ufomata (1990), Jowitt (1991) and Akinjobi (2004, 2006, 2012), vowel reduction is not attested in Nigerian English. Though /ə/ is present in Hausa, Hausa speakers of English do not use it in the same position where it is used in RP. So, it is not mostly reduced to achieve the kind of rhythm that is noticed in RP.

2.4.1.2 Nigerian English consonants

The discussion in this section will draw extensively from the richness of Jowitt's (1991) analysis, being a detailed practical description of Nigerian English. As against the Standard British English, there are certain peculiarities in the articulation of English consonants in Nigerian English. Adedimeji (2007) claims that these peculiar realisations can be grouped into five categories: sound re-interpretation, sound substitution, orthographic, pronunciation and consonantal processes. Consonantal processes here refer to phonological processes that are peculiar to consonants. In the words of Adedimeji (2007:7), "Reinterpretation happens when a sound in English is realised as its close counter-part in English." A good example of this is found in Hausa (Popular Nigerian) English, (PNE(H)) where /p/ is often reinterpreted as /f/. Jowitt (1991:78) notes that it is even realized as [ɸ] in some instances. This indeed is a case of mother tongue interference because [p], [f] and [ɸ] are allophones of /p/ in Hausa. Other speakers of Popular Nigerian English are not likely to experiences this. Though Yoruba has /kp/ instead of /p/, this does not usually interfere with the articulation of RP's /p/.

Sound substitution also takes place in Nigerian English. As stated earlier, substitution involves the replacement of sounds that are absent in Nigerian languages with those that are present in it. This portrays the point of distinction between sound re-interpretation and sound substitution. However, it is observed that there seems to be some overlapping of terms; sound re-interpretation and substitution though Adedeji argues they differ. The following are instances of sound substitution in Nigerian English.

(i) /Θ/ is substituted with /t/
(ii) /ð/ is substituted with /d/
(iii) /ʧ/ is substituted with /ʃ/ or /s/
(iv) /v/ is substituted with /f/
(v) /z/ is substituted with /s/
(vi) /ʒ/ is substituted with /ʃ/
(vii) /ŋ/ is substituted with /n/

Both /Θ/ and /ð/ do not occur in most Nigerian languages. There is the tendency in PNE (I) and PNE (Y) to realise them as [t] and [d] respectively, and in PNE (H) as [s] and [z]. Jowitt

(1991:79) notes that the realisation of / ð/ as /z/ among Hausa speakers is more common than the articulation of /Ɵ/ as [s].

Jowitt (1991:78) claims that PHE (Y) speakers have a tendency to produce /ʧ/ as /ʃ/ since / ʧ / does not occur in Yoruba while the voiced counterpart / ʤ/ seems to be produced appropriately as the RP form by the three major ethnic groups. Regarding the /v/ sound, while PNE(Y) speakers usually realise it as /f/, it is realised as [b] by PNE(H) speakers. However PNE (I) tend to encounter no such difficult in the pronunciation of /v/ though some dialects of Igbo do not have the sound. PNE(Y) speakers tend to realise /z/ as [s] such that pairs like *price-prize* and *cease-seize* may be confused in speech and writing. Regarding where the letter s is realised as /z/, Jowitt explained that Nigerian speakers apply spelling pronunciation which leads to the use of the /s/ sound where /z/ should have been used in words such as feels /fi:lz/ and farmer /fa:məz/**.** Jowitt also claimed that /ʒ/ is mostly substituted with /ʃ/ in Nigerian English where it is substituted with sounds such as [ʃ], [z], [d] or [s].

Jowitt noted further that PNE (I) and PNE(Y) mostly realise /ŋ/ as [n]. But when /ŋ/ occurs at the end of a syllable carrying primary accent, PNE(I) realises /ŋ/ but introduces a subsequent 'g'. So PNE (I) speakers will articulate 'ring' as [rɪŋg]. For PNE(Y) speakers, the phonological processes of [n]–dropping and regressive nasalisation is applied when /ŋ/ appears in an accented syllable so that 'sing' may be realised as [sɪn], PNE(H) speakers have fewer problems with RP /ŋ/ since Hausa [ŋ] features as an exponent of /n/ in a syllable-final position.

Regarding the differences between the sound system of Standard English and Nigerian English, Banjo (2014:4) avers that the "problem is that the sound system of English is different from those of the indigenous languages of Nigeria, with the inevitable result that Nigerian learners of English tend or are forced to interpret the English system in terms of the systems of their own indigenous languages.

Another characteristic of Nigerian English pronunciation is the under-differentiation of the voiced and voiceless English consonants. Ufomata (1995:15), cited in Sunday (2004:37), gave the concerned pairs in Nigerian English to be /v/ - /f/; /z/ - /s/; /ð/, /Ɵ/ and /v/ - /f/. These are equally cases of sound substitution but with focus on the failure of the speakers to differentiate between voiced sounds and their voiceless counterparts.

Bobda also noted the devoicing of word-final consonants, especially obstruents, in Nigerian English. In devoicing, a sound that is originally voiced becomes voiceless in a phonetic context. An obstruent is a sound segment that is not produced with a free flow of air accompanied by a vocal cord position that makes spontaneous voicing possible. According to Bobda (1995:255), in Nigerian English, robe /rəʊb/ is pronounced as [rəʊp] while leave /lɪv/ becomes [lif]. However, this seems exaggerated in the context of an educated Nigerian speaker.

2.5 Consonant Cluster Simplification in Nigerian English

Standard English is characterised by the presence of syllables with up to three consonants following in quick succession at their beginning and up to four consonants at the end, referred to as consonant clusters (C3VC4). On the other hand, many Nigerian languages have very simple syllable structures with the alternation of consonants and vowels (CV) (Akinjobi, 2013:1)**.** Studies earlier conducted on non-native English have revealed that the complex syllabic system of English is often simplified in the non-native varieties of English. This, according to them is often achieved by the processes of epenthesis and deletion. (Chang, 2004; Altenberg, 2005; Kebab and Idsardi, 2007; Jabbari and Samavarchi; 2011; Fatemi et al, 2013; Akinjobi, 2013).

Issues of consonant cluster simplification have been discussed by scholars of Nigerian English. According to Jowitt (1991), simplification of clusters in Nigerian English is also common to word-final consonant clusters like –nd,, -st, -ld etc. So 'stand', 'cold' and 'post' may be variously realised as [stæn]; [kəʊl] and [pəʊs]. Another form of simplification involves the deletion of /s/, or /z/ of the third person singular of the present tense, and of the /t/ or /d/ of the simple past tense. Additionally, /kw/ is simplified to [k] mostly by PNE(Y) speakers in the realizations of words like 'equality' and 'quality'.

Another case of deletion as found in the literature is the deletion of plosives before syllable-final /s/ as in 'directs' [daɪrets], 'six' [sɪs], 'relax' [rɪlæs], 'excuse' [esjʊi:s] and 'accept' [æsept]. In addition, there is often the deletion of post-vocalic /l/ in coda-position as in 'talk' [tɔk], 'help' [hep], 'field' [fɪd], build [biud], salt [sɔt] (Sunday 2004:35 and Igboanusi 2006:491).

Jowitt (1991) discussed another form of deletion that is peculiar to Yoruba (Nigerian) English - PNE(Y). This is /h/ -deletion. Due to the fact that /h/ rarely occurs in Yoruba, its realisation in Yoruba English results in deletion in word-final position or insertion in the instances of hyper-

correction. According to Igboanusi (2006:494), /h/ is dropped in the articulation of … 'house', 'headache' and others.

Akinjobi (2013) studied consonant cluster simplification in Nigerian English. The data, gathered from fifty educated Nigerian speakers of English who were made to read a passage containing some validated English words into WASP/SFS version 1.4 (a computerized speech laboratory), revealed that only 11% of the participants appropriately articulated the consonants in the clusters tested while a significant 89% did not. Akinjobi (2013:38) discovered that plosives were the segments constantly deleted. This seems to have a phonetic explanation since plosives involve total occlusion as opposed to other sounds which still allow free passage of air, though in varying degrees. She concludes that results from this study confirms the findings of earlier researches (Jabbari and Samavarchi; 2011; Chang, 2004; Altenberg, 2005; Kebab and Idsardi, 2007; Fatemi et al, 2013) on non-native production of consonant clusters that non-native speakers of English with mother tongues that do not permit clusters, have a tendency to simplify English consonant clusters by epenthesis and deletion.

She therefore recommends that speech practice drills through technology-based non-enculturation sources such as electronic media, internet English speech practice sites and links, social networking sites, web-based video chat, dictionaries with audio aids, computerised speech laboratories as well as British and American films should be engaged to improve Nigerians full production of English clusters. This, according to her, would improve Nigerians' communicative competence and enhance their international intelligibility (Akinjobi, 2013:41).

2.6 Spelling pronunciation in Nigerian English

Spelling pronunciation is attested in Nigerian English (Jowitt, 1991; Awonusi, 1997; Akinjobi, 2013). Jowitt (1991) claims this could be as a result of the mother tongues' orthographies being very close to their pronunciation. According to him, this ease may be carried over to the English language where the orthography and pronunciation are not often coterminous. The examples below are extracted from Jowitt (1991:83).

Word	RP form	PNE form	Remarks
1. architect	/a:kɪtekt/	[a:ʧɪtekt]	quite common in even in V3 speech
2. debt	/det/	[debt]	
3. dwarf	/dwɔ:f/	[dwa:f]	Likewise other words containing –ar- realized /ɔ:/ in RP, especially less common ones: 'thwart', 'wharf' etc.
4. plumber	/plʌmə	[plamba] [plɔmba]	Quite common even in V3 speech
5. receipt	/risi:t/	[risi:pt]	

It can be deduced from the foregoing that certain phonological processes are disregarded in Nigerian English. In Standard English, the /b/ deletion rule deletes /b/ when it occurs immediately after /m/ in word-final positions. This rule does not operate in Nigerian English and this accounts for some instances of spelling pronunciation in the variety (Awonusi, 2007; Akinjobi, 2013).

Bobda (1995) presents this from another perspective. He observes that the allomorphs: [d], [t] and [ɪd] of the past tense morpheme '-ed', have different realisations in Nigerian English. Nigerian English replaces [d] and [t] with [d] while [-ed] replaces [ɪd/ed]. The same applies to the allomorphs of the plural marker '-es' and the possessive marker 's': [s], [z] and [ɪz]/[əz]. The [z]/[s] distinction is not attested in Nigerian English where [s] is used instead of [z] in most instances.

Most of the previous studies on silent letters being theoretical, Akinjobi (2013) carried out an empirical research on the use of English silent letters by fifty educated Nigerian speakers of English, who were made to read a passage containing some validated English words into a

computerised speech laboratory. Thirty-two percent (32%) of the subjects appropriately silenced the English silent letters tested while a significant 68% did not. She also found out that more female speakers (41%) silenced the silent letters while only 23% of the males did. She concluded that Nigerian speakers of English have the tendency to (inappropriately) articulate English silent letters and that the females have a tendency to approximate to standard use better than males.

2.7 Nigerian English suprasegmentals

This section discusses the features of Nigerian English phonology at the suprasegmental level. A reasonable number of works exist on the comparison of Nigerian English segmental phonology and the Standard English segmental phonology. Banjo (1979) foregrounds the importance of the suprasegmentals features when he pointed out that they constitute the last hurdle which majority of speakers of English as a second language never manages to cross. This section contains three sub-sections which variously review the literature on Nigerian English stress assignment, rhythm and intonation.

2.7.1 Stress assignment in Nigerian English

Awonusi, Ademola-Adeoye and Adedeji (2015:129) opine that stress is "the degree of force (specifically breath force) expended on a sound. This view, based on the viewpoint of production, asserts that force implies the degree of muscular energy, in spite of its difficulty in measurement, unless in acoustic parameters, in the form of active egressive puffs of air…" Within this assumption, stress generally refers to the degree of prominence with which a syllable is articulated. This level of force can be discussed with respect to quality and quantity. Quality here refers to the amplitude of a speaker's voice when articulating a syllable. An accented syllable is usually produced with much loudness compared to one that is not stressed. In terms of quantity, a stressed syllable is articulated for a longer period than an unstressed one.

Several scholars have studied Nigerian English stress (as well as the sub-varieties). Kujore (1985:2) claimed that there is a marked tendency for forward stress, as opposed to the generally backward stress in RP. While RP would have stress assigned to the first syllable in words like 'salad', 'colleague', 'petrol' and 'barrier', NE would have stress assigned to every syllable. More

examples drawn from the source are ‘plan′tain’, ‘pro′tein’, ‘hurri′cane’, ‘hy′giene’, ‘jave′lin’, where stress is placed on the first syllable in RP. Also, words with [i] as the nucleus in the final syllable like ‘bap′tist’, ‘cate′chist’, ‘te′nnis’, ‘bis′cuit’ and ‘sure′ty’ and many others are stressed on the second syllable. These words would have stresses assigned to their first syllables in RP. In the same vein, prefixes ending in [i] are stressed on the following syllable and women’s forenames with a final syllable [i] or a final [n] have their stress on the final syllable e.g. ‘heli′copter’, ‘semi′final’, ‘Su′san’, ‘Vi′vian’. Likewise, in RP, stresses will be assigned to the first syllable of these words.

Kujore also attested to final stress in verbs with final obstruents, e.g. ‘boy′cott’, ‘in′terpret’, ‘soli′cit’, ‘hi′jack’ and many others. RP would realise primary stress on the first syllables of these words. In the same vein, there is forward stress in compounds with final obstruents, e.g. ‘fire′wood’, ‘proof′read’, ‘ward′robe’, ‘work′shop’. In RP, these compound words are stressed on the initial syllable.

In his analysis, Jowitt (1991:91-92) gave examples of hyphenated and open compounds of more than two syllables and notes that such are given special stress placements in Nigerian English. He presents the stress patterns on such words in RP and NE as follow:

	SBE	**PNE**
(i)	MOtor cycle	MOtorcycle or motorCYcle
(ii)	TAxi driver	TAxi driver or taxi DRIVER
(iii)	WAter Board	WAterboard or waterBOARD

Of note here is the Jowitt’s supposition that NE may coincide sometimes with RP. However, he claims convergences are absent in noun phrases with multiple pre-modification as indicated below:

RP	**NE**
post-GRAduate level	post-graduate LEvel
potent MEdicine vendors	potent medicine VENdors
state juDIciary system	state judiciary SYStem

More peculiarities are affirmed in the following examples. In NE, there is the self-stressing property of certain suffixes like –ate (v), -ise (v), -fy, -ative, -utory, -laid, -man, -pheme, -day, as found in words like 'indi'cate', 'recog'nize', 'diver'sity'. 'indica'tive' and 'candida'ture'. These words will be stressed thus in RP: ''indicate', ''recognize', 'di'versity', 'in'dicative', ''candidature'. There is also the tendency for suffixes like –able, -ible, -age, -al, -ary, -ean,(-grapher) er, -ism, -mony, -ous to carry stress forward to the syllable immediately preceding them as in 'e'ligible', 'pa'rentage', ''pastoral', 'pla'netary', 'triba'lism', 'ce'remony', 'pros'perous' and others. In RP, the first syllables would be stressed. It is also claimed that NE speakers have the tendency to assign stress to the syllables before strong clusters e.g. 'an′cestor', 'ca′lendar', 'or′chestra'. However, RP will stress these words on the first syllable (Kujore, 1985; Jowitt, 1991).

Bobda (1995:257) equally notes the tendency of Nigerian English speakers to revise the order of primary stress and secondary stress in words, thus producing ''education' for RP's 'edu'cation'. Sunday (2004:41) contests this claim, opining that "It seems that this case, especially with his examples, is limited to few NE speakers. What seems to generally apply is the avoidance of secondary stress; the primary stress remains intact, such that we have 'edu′cation' and 'fede′ration'.

To make for a more concise capturing of the observations above, Bobda (1993a:284) offers a comprehensive verbal stress rule in both Nigerian English and Cameroon English as presented below:

$$[+syl] \rightarrow [+stress] \left\{ \begin{array}{l} [\text{diphthong}]^{Co} \\ -([+cons])\,[-son] \\ \left\{ \begin{array}{c} \#\,\# \\ \text{Stress-neutral} \end{array} \right\} Co - (cv)\,(cv)\,\ldots\,([+son]) \\ \text{Prefix} + \end{array} \right\} \begin{array}{l} (a) \\ \\ \#\ (b) \\ \\ (c) \end{array}$$

The rule is interpreted thus:

(a) finally when it ends in a diphthong (e.g. 'bar′gain', 'recon′cile', 'multi′ply', 'diversi′fy');
(b) before a final obstruent or a final cluster ending in an obstruent (e.g. 'emba′rrass', 'soli′cit', 'com′ment', 'inte′rest'); and
(c) On the initial syllable or on the leftmost syllable after stress neutral prefix (e.g. '′answer', 'a′bandon', 'de′termine').

In addition, he proposes a rule to capture the conditions for final stressing in women's forenames (WFn) thus:

$$[+syl] \rightarrow [+nasal] \quad \left\{ \begin{array}{ll} \left[\begin{array}{l} +high \\ -back \end{array} \right] & (a) \\ \\ \_\_ [+nasal] & (b) \end{array} \right\} \# \# WFn$$

The rule reads thus:

Stress a woman's forename finally when:

(a) it has a final syllable high-front vowel ('Ju′dy', 'Lu′cy', 'Be′cky', 'A′lice');
(b) it ends in a nasal (e.g. 'Su′san', 'He′len', 'Mi′riam').

It must be said that these observations do not reflect consistency of usage among Nigerian speakers of English. The accenting of longer hyphenated and open compounds, as observed in Jowitt's (1991:91-92) discussion, clearly indicates this. There seems to be paucity of studies on the placement of nuclear accents in Nigerian English sentences but the few instances cited in Jowitt (1991:92) shows the tendency in NE to give nuclear accent to unsuitable words in sentences.

Empirical studies have been done on stress assignment in some sub-varieties of Nigerian English. Akindele (2008) and Adeniyi (2012) carried our research on Edo and Igbo English

stress assignment respectively. The results from their studies revealed consistent deviation from standard English stress assignment patterns, thereby confirming the claims by previous scholars of Nigerian English.

Akindele (2008) assessed one hundred Edo English speakers (EES) with fifty test items of disyllabic, trisyllabic, polysyllabic, compound and variable words, words with suffixes and words containing the schwa sound as well as ten declarative sentences to test sentence stress placement. The findings revealed that there is a disparity in word stress placement of SBE and EES. She also confirmed backward or forward movement stress shift, depending on the word type, an observation which corroborates the findings of earlier scholars like Kujore (1985) and Atoye (1991). She concludes that the difference between English, with stress-timed rhythm and Edo with syllable-time rhythm, coupled with the complexity of English stress rules, account for the peculiar patterns identified.

Adeniyi (2012) studied whether or not Igbo stress assignment approximated to Standard British English (SBE) or not. The findings from this study revealed that loudness, which is the least cue to stress in SBE, is found to be the most important cue to stress and that the patterns found differ markedly from that of Standard British English.

Aina (2014) and Owoeye (2012) studied stress assignment in Nigerian English from the perspective of occupation. Aina discovered that teachers of English cannot serve as models for proper pronunciation to their students while Owoeye found that Nigerian newscasters, especially those in the private stations, are models for Standard English pronunciation because they all performed above average in their levels of compliance with SBE pronunciation, despite the fact that they are not native speakers of the English language. From the foregoing, it could be deduced that newscasters might be better models for English pronunciation than teachers.

2.7.2 Nigerian English rhythm

Akinjobi (2011:106) referred to rhythm as “a regular repeated pattern of sounds or movements”. While Awonusi, Ademola-Adeoye and Adedeji (2015:54-55) assert that “rhythm could be defined as the periodic repetition of stressed syllables. The rhythm of languages can be either based on stress timing or based on syllable timing. In syllable-time languages such as French and

Yoruba, the syllables are repeated periodically; that is all syllables take approximately the same amount of time to produce. In stress-timed languages, it is stresses that occur at approximately equal interval." The crux of the stress timing theory, as stated in Sunday (2011:118) is that "the most important factor in rhythm is neither the number of syllables nor the number of stresses but the pattern made in any section of continuous speech by the mixture of syllables containing full vowels with syllables containing reduced vowels… ". It can be deduced from the foregoing that rhythm is achieved in Standard British English through the occurrence of stressed syllables at regular intervals. The succession of stressed and unstressed syllables in English connected speeches produces a natural and fairly regular rhythm. Stressed syllables are stronger, longer, louder and with full segmental quality than the unstressed ones that mostly have their vowel nuclei undergo weakening or elision, and some of their consonants changed.

O'Connor (2000:100) says that "in many languages, the rhythm unit is the syllable: each syllable has the same length as every other syllable and there are not the constant changes of syllable length which occur in English word groups. Some [of] such languages are French, Spanish, Hindi [and] Yoruba. Speakers of these languages and others in which all the syllables have the same length will find English rhythm rather difficult, and they will need to work hard at it". It is therefore not surprising that Nigerian speakers of English often struggle when English rhythm is to be applied.

Scholars such as Dunstan (1969), Adetugbo (1977), Bamgbose (1982), O' Connor (1984), Jowitt (1991), Milde and Gut (2002), Ilolo (2013), Akindele (2015) and several others have studied the rhythm of Nigerian English from different perspectives. They describe Nigerian English rhythm as syllable-timed due to the interference of the phonology of Nigerian languages which are mostly tonal. Dunstan (1969) particularly notes that Nigerian English speakers adopt the qualities of consonants and vowels in their tonal mother tongues and any native speaker of English may not comprehend them. O'Connor (1984) equally points attention to Nigerian indigenous languages' possession of syllables rhythm as a hindrance to Nigerian English speaker's acquisition of the appropriate rhythm of English.

Jowitt (1991: 97) also shares this view but with some slight differences. He holds that Hausa may be said to lie between the polarities of stress timing represented by English and syllable timing represented by Igbo and Yoruba, and to lie closer to the former than the later. He

therefore concluded that Nigerian speakers tend to rely on MT models for rhythmic organization, to practice spelling pronunciation, and in the case of those with s Kwa group MT to treat English as a syllable-timed tonal language. Jowitt (1991) ends with the overall observation that in Nigerian English, there is "an unstable compromise between 'stress-timing' and 'syllable-timing', a compromise varying from one speaker to another with PNE (H) speakers probably approximating to the stress-timing polarity earlier and more closely than PNE (I) and PNE (Y) speakers".

Gut (2001) calculated the vocalic intervals across all speech and the standard deviation of the length of the consonantal intervals in the speech forms of some Nigerian English speakers. Her findings revealed that the production of English vowels by the Nigerian English speakers who served as participants tilted more towards syllable-timed description than stress-timed. Consequently, Gut (2001) classified Nigerian English rhythm as syllable-timed.

Gut and Milde (2002) acoustically analysed the rhythm of Nigerian English using Ibibio, Efik, Igbo, Edo and Yoruba speakers of English. Read and semi-spontaneous speeches were analysed acoustically, based on durational cues. The participants were chosen based on their educational background and linguistic history while the controls were two males and one female who spoke an approximation of Southern Standard British English. All the participants held university degrees. Gut and Milde (2002) found significant differences between the rhythm and the syllable structures of Nigerian English and British English speakers. They also concluded that Nigerian English is more tonal than intonational. Akinjobi (2012) claims that though the claims of Gut and Milde are validated with some acoustic data and charts (which are scarce in previous researches on Nigerian English), certain fundamental issues could be raised. She claims drawing the participants from different linguistic backgrounds was without consideration for geo-tribal peculiarities and that using just five speakers makes the data invalid as representative of Nigerian speakers. Therefore, in agreement with Akinjobi (2012), there is the need to use enough participants to adequately represent Nigerian speakers of English.

Eka (1993) examined rhythm in the recorded speeches of some penultimate year Education undergraduates and concluded that Nigerian English is 'inelastic-timed'. He found out that Nigerian English speakers usually 'squeeze in or stretch out' the syllable in a rhythm unit. This is unlike the Standard English rhythm that is 'elastic timed'. Akinjobi (2004, 2006) considers

Eka's finding as more of a terminological switch. The 'inelastic' versus 'elastic timing' seems to equate the long held distinction between stress-timing and syllable timing.

Udofot (2000) equally offers an alternative description of Nigerian English rhythm. She chose sixty participants from twenty Nigerian linguistic groups. These were of different linguistic, educational and socio-economic backgrounds. After comparing the rhythm of their speeches to that of native speakers, she observed that Nigerian spoken English rhythm was like the pulsation of an African drum, hardly varying in tempo. She claims that the syllable-timing characteristic of Nigerian English dwindles with movement from one Nigerian social stratum to another and hence proposes full-vowel timing as an alternative description for Nigerian English.

Akinjobi, with some other scholars, worked extensively on the rhythm of Nigerian English, especially the Yoruba English, Isoko English and Edo English sub-varieties (see Akinjobi, 2004a, 2004b, 2005, 2006 ; Akinjobi and Ilolo, 2012; Ilolo (2013); Akinjobi and Akindele, 2016) Akinjobi (2004a) looked into vowel weakening and unstressed syllable obscuration in educated Yoruba English. She reviews the earlier description of English rhythm as syllable-timed in comparison with Udofot's full-vowel timing suggestion. The study, which investigated the production of unstressed vowels and syllables in Yoruba English using three hundred participants discovered that Yoruba English is characterised by a preponderance of strong syllables and strong vowels.

Akinjobi (2005) studied the production of grammatical words in sentences in Yoruba English, using one hundred educated Yoruba participants. She also discovered that the Yoruba participants could not use the weak for of the grammatical words appropriately. In another study, Akinjobi (2006b) compares the descriptions of Nigerian English by Eka (1983) as inelastic-timed and Udofot (2000) as full vowelled-timed with the classical syllable timing description. She concluded that the description cyclically returns to syllable timing due to the preponderance of strong syllables in Nigerian English. Also, Akinjobi (2009) studied the performances of educated Yoruba English speakers in the production of syllabic consonants and discovered that strong vowels are inserted where weak syllabic consonant should constitute the peak of unstressed syllables.

Ilolo (2013) extends the study of rhythm in Nigerian English by investigating its realisation in another geo-tribal variety of Nigerian English, Educated Isoko English. She studied vowel reduction in Isoko English and its implication for rhythm description in Nigerian English. The perceptual and acoustic analysis confirmed that educated Isoko speakers of English do not reduce vowels in unstressed syllables, as against the extensive occurrence of this in Standard British English.

2.7.3 Nigerian English intonation

Some major works on the realisation of intonation in the speech forms of Nigerian English speakers exist. One of such is Eka (1985). In the study, he found out that Nigerian speakers of English used more simple tones than complex tones. But in Standard British English, complex tones appear more than simple tones. Jowitt (1991) also gives adequate attention to NE intonation. Jowitt (1991: 101-105) presents analyses of three dialogues among Nigerian English speakers and makes the following conclusion about the use of intonation in NE:

(i) the falling tone occurs much more frequently than in SBE. PNE uses it where SBE has a rising tone or a falling-rising tone, or uses it invariably where SBE permits alternatives according to the attitude expressed;

(ii) PNE more often assigns a rising tone to questions than SBE does and invariably assigns a rising tone to tag questions;

(iii) PNE shows a steady avoidance of the one-syllable falling-rising tone, and the multi-syllable falling-rising tone is rarely used. But more PNE speakers actually use the rising tone more frequently than SBE speakers do to mark the end of a dependent clause;

(iv) the rising falling tone, rare in SBE, seems not to feature at all in NE; and

(v) PNE seems to regard every utterance as having an inherent and fixed intonation pattern, which for statements has a final falling tone and for questions a final rising tone, and tends not to vary this pattern for contrastive purposes such as the context of utterance might require.

Jowitt (2000) examines the form and frequency of intonation patterns among educated Nigerian speakers of English and finds a radical difference between BE and NE. In comparison with the native English system, Jowitt claims that the NE intonation system is a simplified system. Further, Jowitt in Akinjobi and Akindele (2016:69) avers that "Standard British English is characterised with an isochronous rhythm. That is, strong stresses tend to occur at relatively equal intervals of time, irrespective of the number of unstressed syllables between them while syllable time languages are described based on the isochrony of both stressed and unstressed syllables occurring at relatively equal interval of time. (see also Crutenden, 1986, Skandera and Burleigh, 2005; Roach, 2010)

Okon (2001) is a thesis solely on the intonational structure of Nigerian English. She found out that NE often have a stressed syllable followed by weak syllables; a stressed syllable followed by another stressed syllable and a weak syllable; or two contiguous stressed syllables to form a foot. This is in opposition to the Standard British English pattern of succeeding a stressed syllable with one or more weak syllables. NE users fail to apply the alternation rule which does not allow the occurrence of two strong syllables adjacent to each other. In her words, this accounts for the "machine-gun effect of NE". Likewise, Udofot's (2000) study revealed that Nigerian English speakers, both in read and spontaneous speeches, use more falling tones. Rising tones and fall-rise tones are rarely used, and the rise fall tone is mainly used by Variety II speakers of Nigerian English. However, Akinjobi (2002) concurs with the findings stated above but specially notes that NE speakers under-differentiate intonation tunes and use loudness, instead of intonation tunes, to express attitude.

Atoye (2005) focuses on the perception and interpretation of intonation tunes by Nigerian English speakers. He discovered that many Nigerian English users can correctly note intonation changes in sentences but lack the ability to correctly give social meanings to such. Adetugbo (2004) further confirms Atoye's finding by noting that attitudinal nuances that arise from the native speaker's modification of English tone patterns are rarely recognised in Nigerian English.

Akinjobi and Oladipupo (2005) investigated the intonation patterns of some Nigerian English television reporters. Live reports of forty reporters from eight television stations in Lagos State constituted the data. The study found out that Nigerian television reporters do not have

challenges with the grammatical use of the simple intonation tones of Standard British English but with the complex combined tones.

Atoye and Adejuwon (2012) sets out to find the extent of conformity of the use of intonation in the speeches of some native and Nigerian speakers of English with either textbook intonation rules or natural speech intonation. The study concluded that native speakers' intonation patterns are guided by contexts of interaction while those of the selected Nigerian speakers are inconsistent with textbooks intonation and natural speech intonation.

In her research report, Fajobi (2013:75) making inferences from Jibril (1982), concluded that some Nigerian users of English at the level of intonational behaviour are opposed to the native English system where particular words are accented for intonational purposes. Most of the subjects used in Fajobi's study were mainly Yoruba speakers of English, who were described as "a model suitable for describing a preliminary acoustic investigation of NE intonation". Apart from the fact that new investigation of intonational behaviour of other ethnic groups in the twenty first century Nigeria may alter this assumption, there has not been a consensus as to which ethnic group's use of the English language is to be categorised solely as the model for the Nigerian English at any level.

2.8 Studies on phonological correlates

Studies on phonological correlates have been ongoing in linguistic studies and related fields among scholars without recourse to geographical boundaries. Internationally, McBride-Chang, Wagner and Chang (1997) investigated phonological awareness which is conceived as one of the best predictors of subsequent reading in children. They examined various aspects such as the cognitive ability, short-term verbal memory, and speech perception in relation to phonological awareness in above average to high IQ (Intelligent Quotient) and average IQ third and fourth graders and pre-reading kindergartners. In the study, it was affirmed that the target participants with higher cognitive reasoning skills, especially verbal ability, tended to score higher on tasks of phonological awareness. These researchers focused on three correlates of phonological awareness: speech perception, short-term verbal memory, and general cognitive ability. It was hypothesised that speech perception, short-term verbal memory, and general cognitive ability would all be positively associated with phonological awareness. They assumed that because

phonological awareness and reading are strongly linked, a demonstration that cognitive ability correlates with phonological awareness would support the idea that children with relatively high IQ scores may eventually become adequate or superior readers.

Specifically on phonological correlates and social stratification are the works of Labov (1964) and Berk-Seligson and Seligson (1978). These two classical works have exerted methodological influences on present study. Labov (1964:2) highlights the methodology for a variability study such as present research. To him, "the important word here is *quantitative*. As native speakers of a particular region and generation, we all receive a great deal of qualitative information from small differences in the speech of others. The linguist's task is to construct quantitative measures by which such information becomes a precise medium for comparison and further abstract manipulation". Labov drew his own data on the phonological correlates of social stratification from New York, specifically Lower East side. He discovered that the pronunciation of vowels in New York can be determinant of socio-economic classes.

Likewise, Berk-Seligson and Seligson studied the phonology of Costa Rica with the aim of drawing parallels between speech formality levels of Costa Rican Spanish phonology and the socio-economic status of the speakers. They discovered that the level of formal use of Costa Rican Spanish phonology increased according to the socio-economic status of the participants.

Within Nigeria, notable scholars who have carried out studies on correlates include but are not limited to Ianna (2007), Ogunshola and Adewale (2012), Oyekan (2015), Oladipupo and Akinjobi (2016). Ianna (2007) appraises the linguistic correlate in Nigeria's developmental strategies. It examines language issues in policy formulation in Nigeria. The paper argues against "the traditional argument" of whether endolects or exolects present better opportunities for societal development, postulating that both are useful, due to the distinct and sometimes complementary roles they perform. The study further revealed how linguistic factors are implicated in the realisation of the 7-point agenda, and the vision 2020 programme of the administration which were in place during the study.

In another study, Ogunshola and Adewale (2012) worked on the relationship between home-based environment factors and the academic performance of students in selected secondary schools within a local government area in Kwara State. In line with the study's objectives,

various variables - parental socio-economic background, parental educational background, parental educational qualification and students' health statuses - were considered. Among these, only the parental educational qualification and health statuses of the students were identified as having statistical significant effect on the academic performance of the students. These two variables that indicated significant influence reflected the nature of the students' home environment and played notable role in the academic achievement of the respondents. Furthermore, Oyekan (2015) examined teachers' perceptions of factors that hinder students' achievement in biology. The study focuses on correlates of language competence in biology. In the findings, the scholar avers that linguistic interference of mother tongue with English, visual illiteracy, wrong spellings, limited biological vocabulary and defective study habits are some of the factors that are capable of impeding students' performance and interest in the biology classrooms.

Oladipupo and Akinjobi's (2015) study, a social variation research, has some close resemblance to the current study. Their focus was on class as a social variable in the L2 setting. This was carried out through the examination of the use of r-liaison and boundary consonant deletion processes in the speech of young Nigerian speakers of English in order to establish possible correlations of these features with gender and social class in Nigerian English. The researchers concluded that neither gender nor class variation was found in the speech of the participants, who were young Nigerian English speakers, relative to r-liaison usage, and that only the speech of male speakers, especially that of the high social class, was found to correlate with boundary consonant deletion.

2.9 Theoretical frameworks

The theoretical frameworks for this study are the sociolinguistic theory, William Labov's (1964) variability concept, and the phonological theory, Liberman and Prince's (1977) metrical theory. This juxtaposition of language choices with social variables was pioneered by William Labov. Even before embarking on numerous fieldworks, as early as 1964, Labov, in a paper on "Phonological Correlates of Social Stratification", had set down the tenets of variationist sociolinguistics. The thrust of this theory of sociolinguistics is the plausibility of establishing objective distribution of linguistic features and delineating social classes in relation to them. The classical works in this direction include Labov (1966), Labov (1972a) and Labov (1972b).

Others include Trudgill (1983), Milroy and Milroy (1991), Chambers (1995), Kerswill and Williams (2000) and Jolayemi (2009). In finding the convergence between language variation, social class and social change, Labov and his colleagues took for granted the fact of every society's stratification.

Social stratification, as a sociological concept, involves the "classification of persons into groups, based on shared socio-economic conditions … a relational set of inequalities with economic, social, political and ideological dimensions" (Barker 2003:436). This study was motivated by the correlation between linguistic variables and social variables. It sought to investigate the phonological correlates of social stratification in the speeches of students of two selected Ibadan metropolis secondary schools with the assumption that their socio-economic classes would differentiate their pronunciation skills such that a correlation might be established between socio-economic classes and the secondary school students' pronunciation skills. Therefore, quantitative data obtained from the students through the use of questionnaire and pronunciation test were used to arrive at statistical proofs relating to the aim, objectives and research questions designed for the study.

Metrical Phonology is an offshoot of Generative Phonology. Liberman and Prince (1977) initiated metrical phonology as an alternative approach to stress description due to the dissatisfaction with the SPE system (Akinjobi, 2012). According to Fox (2002:197) "Metrical Phonology began as an interpretation of the stress rules of the SPE framework… in which it was shown that the various stress levels could be derived from a hierarchically ordered arrangement of strong and weak nodes." It abandons the generative phonology's description of stress as a feature and describes it as being culminative, hierarchical and enhanced segmentally. It is culminative because each syllable or word (even phrase) has only one weak syllable, it is hierarchical since its values are indeterminate and it is enhanced segmentally through vowel lengthening or by germination (Kager 1995: 367).

Metrical Phonology identifies two terms in any stress system: strong and weak stress(es). The hierarchy of prominence between strong syllables and weak syllables is determined by relations between nodes in a branching tree. A strong node is more prominent than its weak sister node. The most prominent syllable in a phrase becomes one that does not have any weak node above it. Such a syllable is called the Designated Terminal Element.

Metrical grid, an alternative analytical tool to metrical tree, is employed in this study. In a grid, all the words in a phrase are arranged along the bottom and the rows of the grid indicate different levels of prominence. One advantage of the metrical grid over the metrical tree is its being able to account for rhythmic alternation between strong and weak syllables and catering for stress clash (a situation where adjacent syllables are stressed). An example of a metrical grid is given below:

			X		
X			X		
X	X	X	X	X	X
Far	mers	use	har	ves	ters

Table 2.1: The strong and weak forms of Standard British English grammatical words

The strong syllables on the grid above are marked with more than one 'X'. The others are weak. The Lexical Category Prominence Rule (LCR) operates to assign stress in words while the Compound and Nuclear Stress Rules assign stress to constituents above words. Here, the Nuclear Stress Rule assigns the nuclear stress to /ha:/. And generally, the Relative Prominence Projection Rule (RPPR) is appealed to in creating the grid (see Liberman and Prince, 1977; Archangeli, 1996).

2.10 Summary

This chapter is a review of the literature of Nigerian English phonology. Some aspects of the review are quite germane to certain objectives of this study. Such objectives include the investigations of long and short vowel under-differentiation, monophthongisation of diphthongs, under-differentiation of dental fricatives /ɵ, ð/ and alveolar plosives /t, d/, production of English palatal fricative /ʒ/, /h/ dropping, phonetic cues to stress, in intonation tune assignment, presence or absence of stressed and unstressed syllable alternation to create rhythm, consonant cluster simplification and spelling pronunciation.

CHAPTER THREE

RESEARCH METHODOLOGY

In this chapter, the research design, samples and sampling techniques, description of instruments, validity of research instruments, method of data collection and method of data analysis are discussed.

3.1 Research design

This study is designed as a survey of mixed methods. This is because of its employment of both the quantitative and qualitative methods. This was done in order to provide the best understanding of the research problem and how to solve it. The rationale is to use the quantitative method to arrive at an adequate result for the tested phonological items, quantitative means being an established design for variability studies. It is more objective, being based on statistical facts, as explained by Labov (1964:2) who claims "as we turn from the linguistic constants to linguistic variables, we acquire more realistic methods of measuring differences between structures. Moreover, as we develop quantitative methods, correlations between linguistic and other cultural patterns begin to emerge". The qualitative method was used to describe the patterns established by quantitative means.

The quantitative method employed included the use of mean, standard deviation and independent sample t-test as statistical tools, while metric grid, comprising of a framework with columns for relative prominence and rows for the rhythmical structures, was used for the qualitative analysis. The emphasis of the grid framework is on the (S)trong and (W)eak alternation of the participants' syllables. For the qualitative analysis, only samples of regular patterns as determined by the statistical results were analysed.

3.2 Samples and sampling techniques

The sample for this study was consisted of four hundred Southwest Nigerian senior secondary students, who were selected from two major towns, Ibadan and Abeokuta, in Southwest Nigeria, using the purposive random sampling method. The four schools were selected to represent the population of Southwest Nigerian senior secondary school (SS I, II and III) students that are supposedly divisible based on their high and low socio-economic backgrounds. The schools were

selected from Oyo and Ogun States where there are schools paying three (3) to five (5) million naira per annum referred to as High-Fee-Paying Private Schools (HFPPS) because such schools are not available in all Southwest towns and where they are available, some declined participation in the study.

The students were all adolescents in two categories: a set attended high fee paying secondary schools while the other category attended public schools where fees were not paid. One hundred senior secondary school students were randomly selected from each school to participate in filling the questionnaire and production of the validated text that was used to test their ability to produce some English segments (that had been identified as difficult for most Nigerian speakers to produce), complete production of consonant clusters, appropriate production of words that have sounds that differ from the letters, as well as their skills in the use of English stress and intonation and rhythm.

The assumption of this study is that the High Fee paying Private School (HFPPS) students (with fees of three to five million) will approximate better to Standard British English in the production of the English sounds and assignment of stress and intonation tunes than the students in the State-Owned Tuition-Free Public Schools (PS). The purpose is to confirm that adolescents in Southwest Nigeria could be classified as belonging to the different socio-economic classes – low and high- based on their pronunciation skills.

3.3 Description of instruments

Two instruments were employed in the course of gathering relevant information/data for this study. They are:

i. Socio-Economic Background Scale (SEBS) and
ii. Phonological Correlate Test (PCT)

3.3.1 Socio-Economic Background Scale (SEBS)

The socio-economic background scale is a self-developed instrument which was validated by some experts and the supervisor before approval was given for its administration. The scale is made up of thirty-six (36) items designed to elicit socio-economic background information from the respondents with items like: name of school, school fees per annum,

fathers' income level etc. The scale responses were either to fill in, tick or circle the option that is applicable.

3.3.2 Phonological Correlate Test (PCT)

The phonological correlate test was developed by the researcher and validated by some pronunciation experts and the supervisor before approval was given for its administration. It was designed to be completed within an average period of fifteen (15) minutes. The research assistants assisted the students in the process of recording the participants' production. With this instrument, some English segments (vowels and consonants), and suprasegmental features such as stress and intonation, were tested. In addition, features of English phonotactics such as consonant clustering and silent letters were also investigated. This was to cover the relevant aspects of English pronunciation.

The test of the segmentals included under-differentiation of English vowels (/ɪ - iː/, /æ - a/, /ʊ- uː/, / ɒ-ɔː/) in the words *picked, wreath, Vivian, Phoebe, vat, clerk, bar, pan, put, oozes, took, group, cot, court, sorting, got* and monophthongisation of English diphthongs (/eɪ, aɪ, aɪə, ɪə, əʊ /) in the words *Asian, training, Zionist, theorist*. Consonant cluster simplification by dropping (/kstʃ, str, ksts, ksθ, gz/) was also tested *in the words mixture, instructed, texts, sixth, examination* and the inappropriate production of silent letters (*b, t, s* and *ch)* in *plumber, listen, chassis, yacht, ballet.* The production of some difficult phonemes / ʒ, ʌ, θ, ð, ɜ / and the dropping of /h/ sounds in positions where they should be pronounced were also included.

The test of stress assignment skill covers the ability to assign stress to the appropriate syllables and the use of phonetic cues such as pitch prominence, duration and vowel reduction. In the test of intonation, the use of the fall, rise and the rise/fall intonation tunes was the focus. On English phonotactics, the consonant clusters, /kstʃ, str, ksts, ksθ, gz/, were tested while the silence of the letters *b, t, s* and *ch* were investigated to determine the ability of the adolescents to avoid pronouncing silent letters. Most of the variables have been tested on adult speakers of Nigerian English and confirmed by some previous studies as difficult for most Nigerians.

These variables were inserted into prepared sentences and a passage that were made available to the students to read into a computerised speech laboratory Speech Filing System (WASP). To

control the unnaturalness of this process, the text was designed in a manner that the students were not aware of the aspects of the English phonology being tested.

3.3.3 Validity and Reliability of the research instrument

To be sure we had the right items in the tests, the sentences and passage to be produced by the students were given to experts in the fields of English pronunciation, phonetics and phonology, for adequate assessment. They were also subjected to the supervisor's confirmation and validation. To further authenticate the instruments, a pilot study was done. The experience led to the modification of the instrument where necessary for the best utility value. The amended instrument was subjected to the validation process again before the final fieldwork.

3.4 Method of data collection

The process of data collection started with the visit to the four schools that were selected by purposive random sampling technique. Permission was sought from the school principals and classroom teachers for the conduct of the study in these schools. The data gathering process took relatively three to four days in each school due to the need to carefully blend into their study system and programmes after permission had been granted by the authorities.

The data were collected through the use of two questionnaires, a set of validated sentences and a passage which were read by the participants. Eight research assistants were trained and engaged in the data collection exercise. Questionnaire A was filled by the school principals or vice-principals of the four schools to confirm issues such as whether or not they were private/public schools and whether or not they paid school fees. Questionnaire B was filled by the students to establish the socio-economic and linguistic backgrounds of the participants. The questionnaire contained thirty-six (36) items designed to elicited socio-economic background information from the respondents on items such as: name of school, school fees per annum, parents' income, first language, travelling to places where English is a first language, types of residences, types of meals and many others. The principals and students were guided to fill the questionnaires.

The students were made to complete the third instrument which is a validated text meant to test some difficult English phonemes, stress, intonation, consonant clusters and silent letters fed into the computerized speech laboratory Speech Filing System (WASP), produced by Mark Huckvale

(2007) at the Department of Phonetics and Linguistics, University College London. The research assistants guided the students through the process. Each student was made to produce his or her identification number which tallied with the number on the questionnaire. This was with the purpose to check each participant's performance against his or her socio-economic information in the data collected from the questionnaire. After this, each participant was made to produce the sentences and the passage containing the variables.

3.5 Method of data analysis

The data from the questionnaire Socio-Economic Background Scale (SEBS) and the scores of participants in the Phonological Correlate Test (PCT) were analysed using statistical tools and metrical grid, a tool adopted from metrical theory. Before the statistical analysis could be carried out on the participants' performances in relation to their socio-economic backgrounds, the perceptual analysis was carried out. This involves the analysis of spoken texts, based on their reception by hearing.

In order to determine the extent of the participants' correctness in the production of the tested segmentals, suprasegmentals and phonotactic features, the voice recording was scored and awarded marks. The marks were collated for each participant and attached to Questionnaire B with his or her identification number, in which he or she had filled in his or her socio-economic information. These were done in readiness for the statistical analysis of individual participant's pronunciation skill against his or her socio-economic background.

3.5.1 Statistical analysis

The data collected were analysed using descriptive statistics (frequency counts and percentage, mean and standard deviation) and inferential statistics (Independent sample t-test) to test for significant difference between the adolescents' socio-economic backgrounds to confirm they were classifiable into the high and low socio-economic backgrounds. Their scores in the PCT were also subjected to analysis to determine whether or not their pronunciation correlates with their socio-economic backgrounds. The significance was at $p < .05$.

3.5.2 Metrical analysis

For the metrical analysis of the regular output of the two categories of participants, metrical grid, a formalism used in metrical phonology, is used. This is because it displays hierarchic patterns of syllabic prominence graphically in columns to show the relative prominence of syllables. It also employs rows to show the rhythmical structure of the utterances. In this framework, each syllable is assigned a position on the metrical grid. However, the strong syllables are continually assigned higher layers in the grid, till the last level where the most prominent syllable is recognised.
This tool is adequate for the analysis of stress prominence as well as weak and strong syllable alternation of English utterances. The method made it easy to see the difference between the rhythmic and relative prominence patterns of stress in the utterances of the two categories of adolescents (belonging to the high and low socio-economic backgrounds) that constituted the participants in this study.

Five words were tested for strong and weak syllable alternation of the following English expressions:

Geography /dʒiˈɒg.rə.fi/, especially /ɪˈspeʃ. ə l.i/, suggest /səˈdʒest, Montreal / ˌmɒntriˈɔːl /, Technology /tekˈnɒl.ə.dʒi/.

HFPPS	**PS**
X	**x* x* x* x***
X X X X	**X X X X**

Geography /dʒiˈɒg.rə.fi/

HFPPS **PS**

X **x* x* x* x ***

X X X X **X X X X**

Especially /ɪˈspeʃ. ə l.i/

HFPPS **PS**

X **x* x***

X X **X X**

Suggest /səˈdʒest/

HFPPS **PS**

X **x* x* x***

X X X **X X X**

Montreal / ˌmɒntriˈɔːl /

HFPPS **PS**

X **x* x* x* x***

X X X X **X X X X**

Technology /tekˈnɒl.ə.dʒi/

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter presents the analysis of the data that are relevant to the research questions. The first part relates to the demographic information supplied by the participants to establish their socio-economic backgrounds while the second part analyses their performances in the production of some English phonemes, mastering of the consonant clustering and silent letter phonotactic features of spoken English, assignment of stress to appropriate syllables as well as the application of the appropriate intonation tunes to the correct nuclear syllable.

Nine research questions were formulated in order to establish the phonological correlates of Oyo and Ogun secondary school students' socio-economic backgrounds. The aim is to find out any coincidence between their socio-economic backgrounds and their competence in English pronunciation. To provide answers to these questions, the quantitative data collected through the parents' socio-economic background questionnaire, socio-economic background scale (SEBS), and Phonological Correlate Test (PCT) used for the study were analysed using Statistical Package for Social Statistics (SPSS) version 21, while the qualitative data were analysed with the metrical grid tool in metrical phonology.

4.1 **Research question one:** Can Oyo and Ogun Secondary School students be socially stratified as belonging to different socio-economic backgrounds or not?
The following section will provide answers to the question above.

4.1.1 Demographic characteristics of the participants

This section deals with the categorisation of the selected schools, respondents' gender, nursery schools attended, language spoken at home, parents' income, acculturation by travelling to countries where English is a mother tongue and others. This profile is presented to facilitate the understanding of the respondents, to classify respondents into the high and low socio-economic backgrounds and to enhance the interpretation of the results.

Table 4.1: Categorisation of participants according to types of school

Types of school	Ibadan n (%)	Abeokuta n (%)	Total n (%)
HFPPS	116 (58.0)	84 (42.0)	200 (100.0)
PS	101 (50.5)	99 (49.5)	200 (100.0)
Total	**217 (54.2)**	**183 (45.8)**	**400 (100.0)**

Data were obtained from 400 students of secondary schools in Ibadan and Abeokuta in Southwest Nigeria. They comprised 200 participants who were sampled from High-Fee-Paying Private Schools (HFPPS). 116 (58.0%) were sampled from Ibadan while 84 (42.0%) were sampled from Abeokuta. Similarly, 200 respondents were sampled from State-Owned Tuition-Free Public Schools (PS) with 101 (50.5%) were sampled from Ibadan while 99 (49.5%) were sampled from Abeokuta. The graphical illustration is presented in Figure 4.1 below.

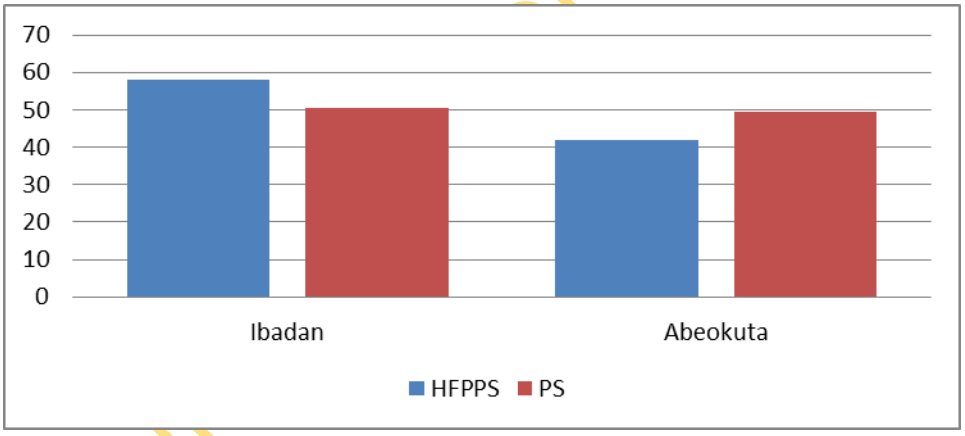


Figure 4.1: Categorisation of participants based on types of school

Table 4.2: Categorisation of participants based on gender

Types of school	Male n (%)	Female n (%)	Total n (%)
HFPPS	88 (44.0)	112 (56.0)	200 (100.0)
PS	83 (41.5)	117 (58.5)	200 (100.0)
Total	**171 (42.8)**	**229 (57.2)**	**400 (100.0)**

From the 400 students used in this study, 88 (44.0%) were males from high fee paying schools while there were 112 (56.0%) females. Similarly, from the low fee paying schools, 83 (41.5%) were male while there were 117 (58.5%) females. The graphical illustration is presented in Figure 4.2.

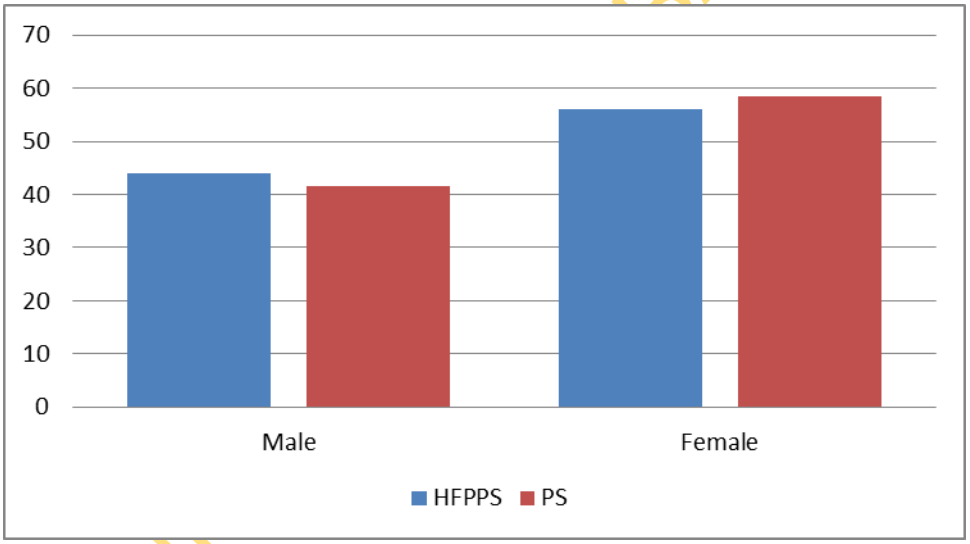


Figure 4.2: Categorisation of participants based on gender

Table 4.3: Distribution of participants based on languages

Languages spoken	HFPPS n (%)	PS n (%)	Total n (%)
English only	70 (35.0)	22 (11.0)	92 (23.0)
Yoruba only	0 (0.0)	36 (18.0)	36 (9.0)
English and Yoruba	30 (15.0)	137 (68.5)	167 (41.8)
English, Yoruba and Ibibio	0 (0.0)	3 (1.5)	3 (0.8)
English and Igbo	9 (4.5)	2 (1.0)	11 (2.8)
English, Yoruba and Igbo	1 (0.5)	0 (0.0)	1 (0.2)
English and French	24 (12.0)	0 (0.0)	24 (6.0)
English and Spanish	6 (3.0)	0 (0.0)	6 (1.5)
English, Spanish and French	11 (5.5)	0 (0.0)	11 (2.8)
English, Yoruba and French	29 (14.5)	0 (0.0)	29 (7.2)
English and Hausa	7 (3.5)	0 (0.0)	7 (1.8)
English, Yoruba and Hausa	2 (1.0)	0 (0.0)	2 (0.5)
English, Spanish and Yoruba	5 (2.5)	0 (0.0)	5 (1.2)
English, Igbo and French	3 (1.5)	0 (0.0)	3 (0.8)
English, Hausa and French	1 (0.5)	0 (0.0)	1 (0.2)
English, Efik and Russian	1 (0.5)	0 (0.0)	1 (0.2)
English and Efik	1 (0.5)	0 (0.0)	1 (0.2)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.3, 70 of the participants from High-Fee-Paying Private Schools (35.0%) speak only English, next in the list was 30 (15.0%) participants who speak English and Yoruba languages, followed by 29 (14.5%) participants who speak English, Yoruba and French languages, while 24 (12.0%) participants speak English and French. A few, 5.5%; 4.5%; 3.5%; 2.5%;1.5%; 1.0% and 0.5% each speak English and Spanish; English and Igbo; English and Hausa; English, Spanish and Yoruba; English, Igbo and French languages, respectively. Others speak English, Yoruba and Hausa; English, Yoruba and Igbo; English, Efik and Russian and English and Efik languages. The trend is different among students from public schools where majority of the students 137 (68.5%), speak English and Yoruba languages while 18.0% speak only Yoruba language, 11.0% speak English only, while only a small proportion, 3 (1.5%) and 2 (1.0%) respectively, speak a combination of other Nigerian languages (English and Igbo; English, Yoruba and Igbo). The graphical illustration is presented in Figure 4.3.

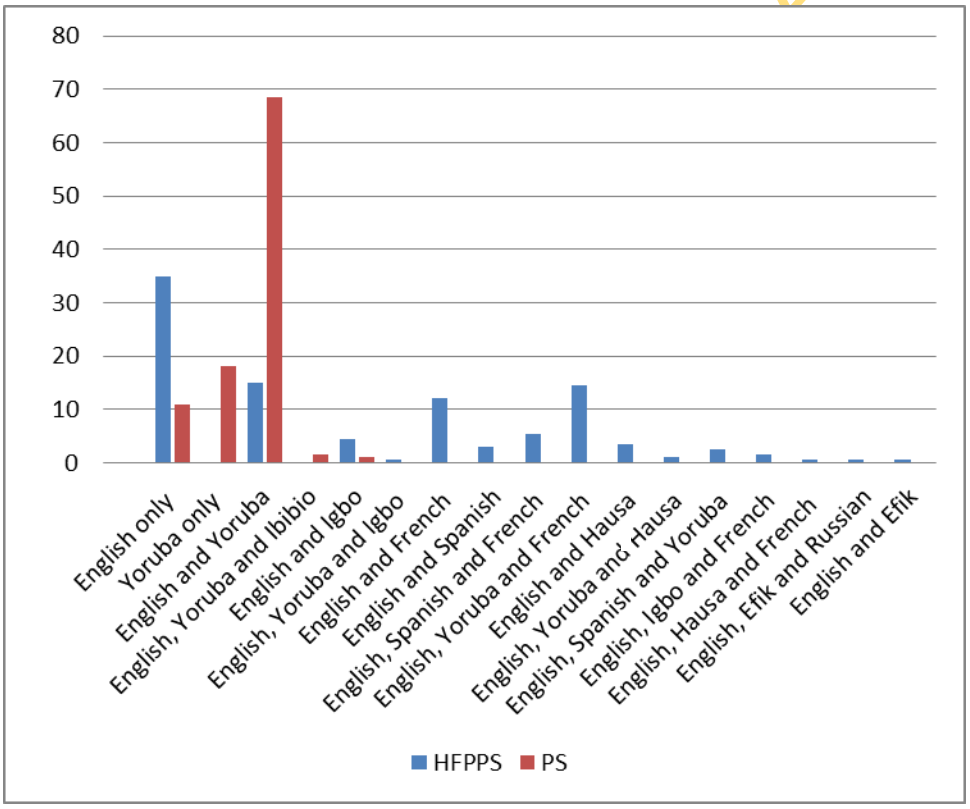


Figure 4.3: Participants' types of school and languages spoken

Table 4.4: Participants' first languages

First language spoken	HFPPS n (%)	PS n (%)	Total n (%)
English only	186 (93.0)	18 (9.0)	204 (51.0)
Yoruba only	8 (4.0)	167 (83.5)	175 (43.8)
English and Yoruba	0 (0.0)	7 (3.5)	7 (1.8)
Yoruba and Kogi	0 (0.0)	1 (0.5)	1 (0.2)
Igbo only	0 (0.0)	3 (1.5)	3 (0.8)
English and Ibibio	0 (0.0)	3 (1.5)	3 (0.8)
English and Igbo	2 (1.0)	0 (0.0)	2 (0.5)
Hausa	2 (1.0)	1 (0.5)	3 (0.8)
English and Hausa	1 (0.5)	0 (0.0)	1 (0.2)
English and Efik	1 (0.5)	0 (0.0)	1 (0.2)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.4, majority of the participants from the high socio-economic background, 186 (93.0%), spoke only English as their first language; next on the list was 8 (4.0%) percent who spoke English and Yoruba as first language. This is followed by 2 (1.0%) participants each who spoke English and Igbo; Hausa as first languages while only 1(0.5%) of the participants each spoke English and Hausa and English and Efik as first language. The trend is different among students of public schools where majority of the participants 167 (83.5%) spoke Yoruba as first language. Eighteen (9.0%) spoke only English language as first language, 7 (3.5%) spoke English and Yoruba as first language, while only a small proportion 3 (1.5%) spoke Igbo only; and 1 (0.5%) spoke Hausa only. No respondent from PS spoke English and

Igbo; English and Hausa; English and Efik as first languages. It could be deduced from the data that majority of the HFPPS students spoke English as their first language while majority of the PS students spoke Yoruba, the language of the Southwest Nigerian people, as their first language. The graphical illustration is presented in Figure 4.4.

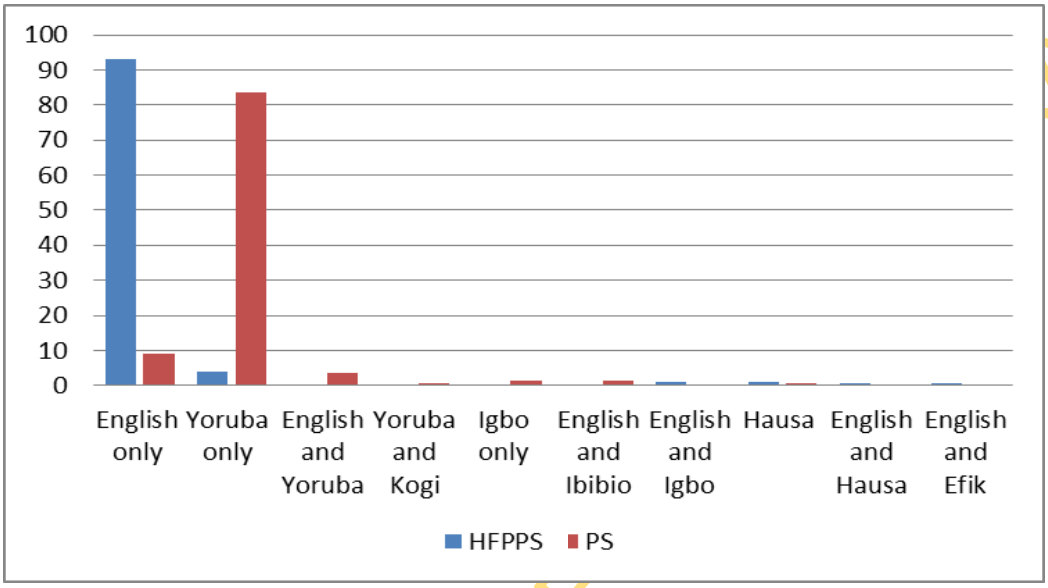


Figure 4.4: Participants' first languages

Table 4.5: Participants' parents languages spoken at home

Language spoken by parents	HFPPS n (%)	PS n (%)	Total n (%)
English only	74 (37.0)	3 (1.5)	77 (19.2)
Yoruba only	3 (1.5)	109 (54.5)	112 (28.0)
English and Yoruba	72 (36.0)	80 (40.0)	152 (38.0)
Yoruba and Kogi	0 (0.0)	1 (0.5)	1 (0.2)
Ibibio	0 (0.0)	1 (0.5)	1 (0.2)
English and Ibibio	3 (1.5)	2 (1.0)	5 (1.2)
Igbo only	0 (0.0)	1 (0.5)	1 (0.2)
English and Igbo	22 (11.0)	2 (1.0)	24 (6.0)
Hausa	1 (0.5)	1 (0.5)	2 (0.5)
English, Yoruba and Igbo	5 (2.5)	0 (0.0)	5 (1.2)
English and French	3 (1.5)	0 (0.0)	3 (0.8)
English and Spanish only	2 (1.0)	0 (0.0)	2 (0.5)
English, Yoruba and French	5 (2.5)	0 (0.0)	5 (1.2)
English and Hausa	7 (3.5)	0 (0.0)	7 (1.8)
English, Hausa and Yoruba	2 (1.0)	0 (0.0)	2 (0.5)
English and Efik	1 (0.5)	0 (0.0)	1 (0.2)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.5, 74 participants from HFPPS, accounting for (37.0%), have parents/guardians who spoke only English language with them at home, next in the list was 72 (36.0%) whose parents spoke English and Yoruba language to them at home. Eleven percent (11%) has parents who spoke English and Igbo at home while 7 participants, accounting for (3.5%) communicate with their parents using English and Hausa languages. Five participants (2.5%) each communicate with their parents using English, Yoruba or French; English or Yoruba or Igbo languages. Similarly, the following small proportion of participants in the distribution communicates using either English or one local or foreign language with their parents at home - 3 participants (1.5%) and 2 participants (1.0%) have parents/guardians who speak either English or Ibibio; English and French; English and Spanish and English, Hausa and Yoruba respectively with them at home. The trend is different among PS students. Out of 200 respondents, more than half, 109 students (54.5%) communicate with their parents with only Yoruba at home. Next are 80 respondents (40.0%) who communicate with their parents using English and Yoruba languages, while a very small proportion of participants in the distribution communicates with their parents using either only English 3 (1.5%); Yoruba and Kogi 1 (0.5%); 2 (1.0%) and only Hausa 1 (0.5%) respectively. Below is the graphical illustration of the discussion above.

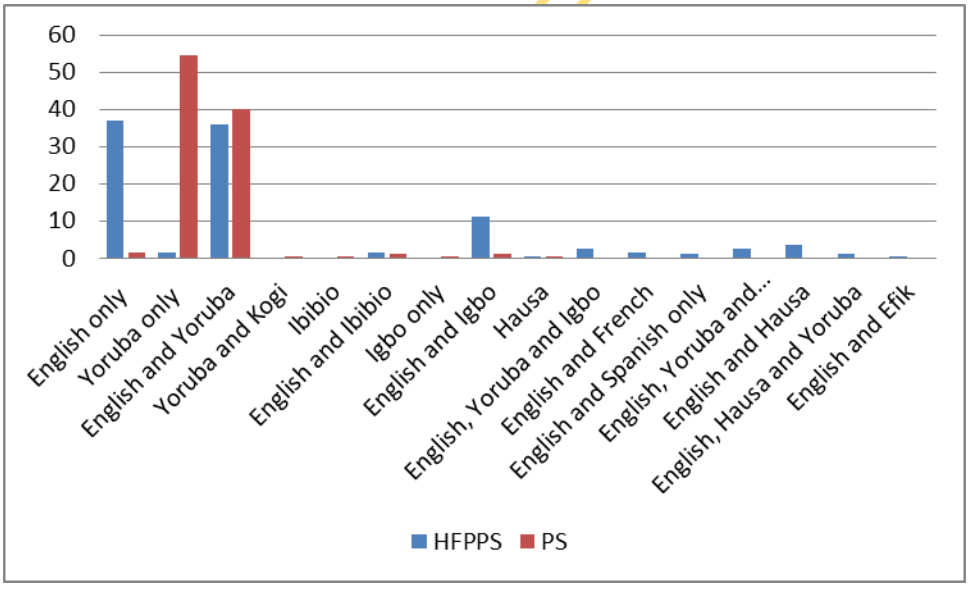


Figure 4.5: Participants' parents languages spoken at home

Table 4.6: Participants' fees paid per annum

School fees per annum	HFPPS n (%)	PS n (%)	Total n (%)
#3million per annum and above	200 (100)	0 (0.0)	200 (50.0)
We do not pay	0 (0.0)	31 (15.5)	31 (7.8)
PTA fees	0 (0.0)	169 (84.5)	169 (42.2)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.6, 200 participants (100%) in high fees paying private schools pay between 3 and 5 million naira per annum, while 31 (15.5%) participants who are in PS claim that they do not pay fees. One hundred and sixty-nine (84.5%) respondents claim they pay PTA fees only. A graphical illustration is presented in Figure 4.6.

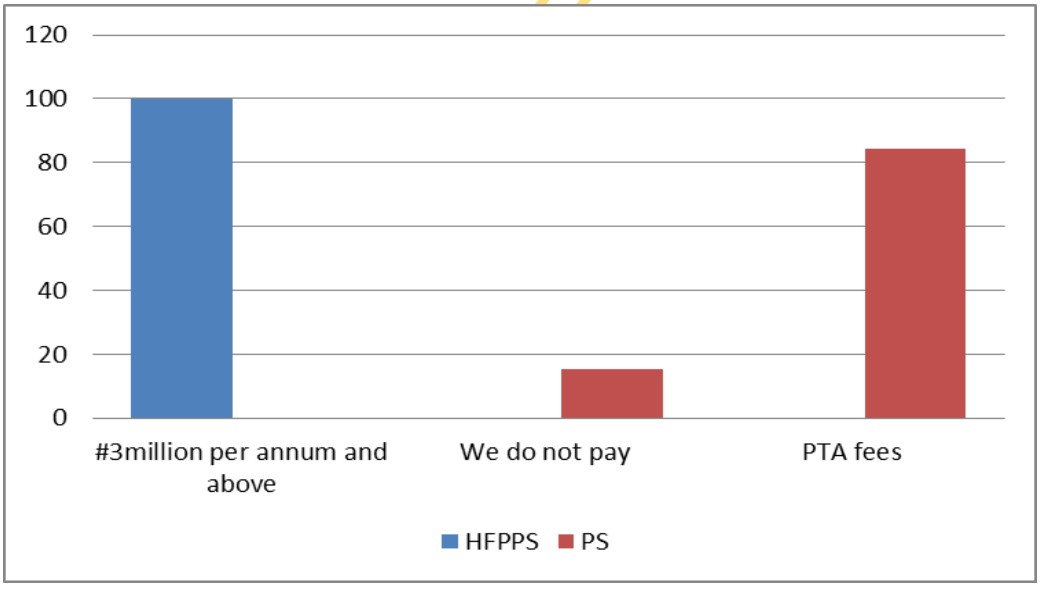


Figure 4.6: Participants' fees paid per annum

Table 4.7: Participants' sponsors

Who pays school fees	HFPPS n (%)	PS n (%)	Total n (%)
One or both parents	193 (96.5)	175 (87.5)	367 (92.0)
A relation	6 (3.0)	7 (3.5)	13 (3.2)
Government	1 (0.5)	18 (9.0)	19 (4.8)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.7, out of the 200 HFPPS participants, 193 (96.5%) claimed that their school fees are paid by either one or both parents, 6 (3.0%) claim that their fees are paid by relations while only 1 (0.5) percent claimed their fees are paid by government. However, out of the 200 PS participants, 175 (87.5%) agreed that their fees are paid by one or both parents, a small number 18 (9.0) percent claim their fees are paid by the government and only 7 (3.5%) get assistance from their relations for fee payment. The chart is presented below as Figure 4.7.

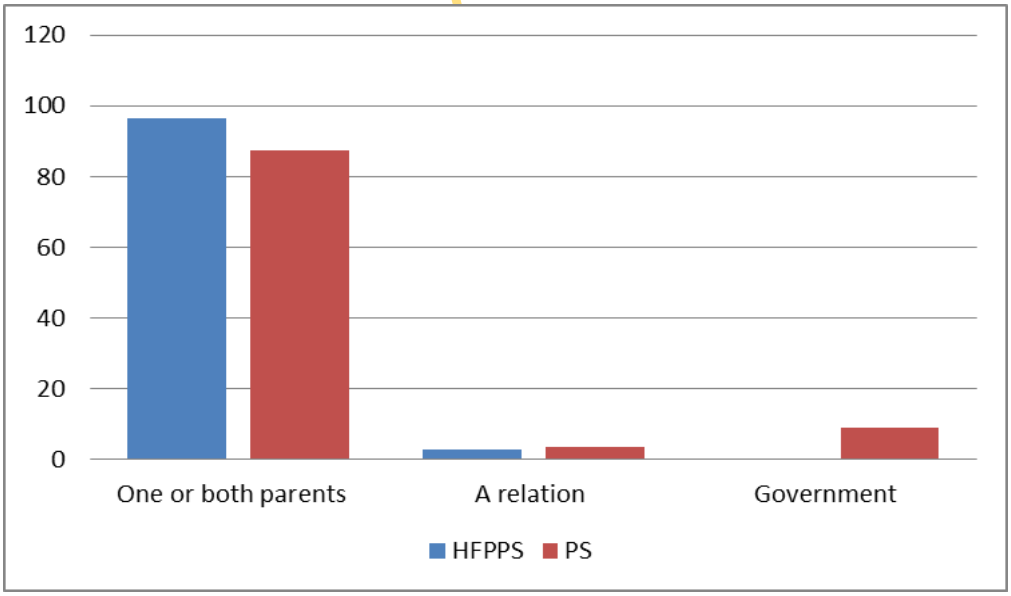


Figure 4.7: Participants' sponsors

Table 4.8: Participants' fathers' educational qualifications

Fathers educational qualification	HFPPS n (%)	PS n (%)	Total n (%)
University degrees	190 (95.0)	36 (18.0)	226 (56.5)
Polytechnic/monotechnics/college of education certificates	10 (3.0)	33 (16.5)	43 (10.8)
Secondary school/technical college certificates	0 (0.0)	98 (49.0)	98 (24.5)
Primary school certificate	0 (0.0)	26 (13.0)	26 (6.5)
No formal education	0 (0.0)	7 (3.5)	7 (1.8)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.8, out of the 200 HFPPS participants, 190 (95.0%) claimed that their fathers had a university degree while only 10 (3.0) percent claimed their fathers possess either polytechnic/monotechnics/college of education certificates as their highest educational qualification. The trend is different for PS participants among whom a significant 98 (49.0%) reported that their fathers possessed secondary school/technical college certificates as their highest educational qualification, while the fathers of 18.0% had university degrees, 16.5% possessed polytechnic/monotechnics/colleges of education certificates. Thirteen percent (13.0%) claimed their fathers only possessed primary school leaving certificate as their highest education qualification, while only 3.5% of the participants' father do not have formal education. The bar chart is presented below.

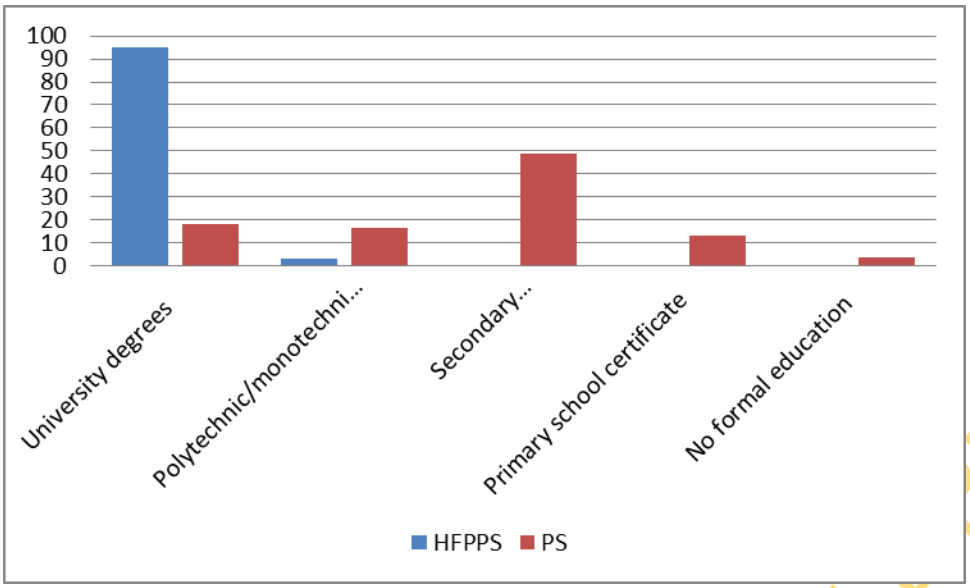


Figure 4.8: Participants' fathers' educational qualifications

Table 4.9: Participants' mothers' educational qualification

Mothers' educational qualification	**HFPPS** **n (%)**	**PS** **n (%)**	**Total** **n (%)**
University degree	185 (92.5)	30 (15.0)	215 (53.8)
Polytechnic/monotechnics/college of education certificates	11 (5.5)	35 (16.5)	46 (11.5)
Secondary school/technical colleges certificates	4 (2.0)	88 (44.0)	92 (23.0)
Primary school	0 (0.0)	37 (18.5)	37 (9.2)
No formal education	0 (0.0)	10 (2.5)	10 (2.5)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.9, out of the 200 HFPPS participants, 185 (92.5%) claim that their mothers had a university degree while only 11 (5.5%) claimed their mothers possessed either polytechnic/monotechnics/college of education certificates as their highest educational qualification, while 2.0% claimed that their mothers have secondary school/technical college certificates. The trend is different for the PS students because 88 (44.0%) of them reported that their mothers possessed secondary school/technical college certificates as their highest educational qualification, while 18.5% confirmed that their mothers possessed only primary school leaving certificates as their highest educational qualification. While only 15.0% claimed their mothers own university degrees as their highest educational qualification, 17.5% possessed polytechnic/monotechnics/college of education certificates as their highest education qualification whereas only 5.0% of the PS participants' mothers do not have formal education. The chart is presented in Figure 4.9. below.

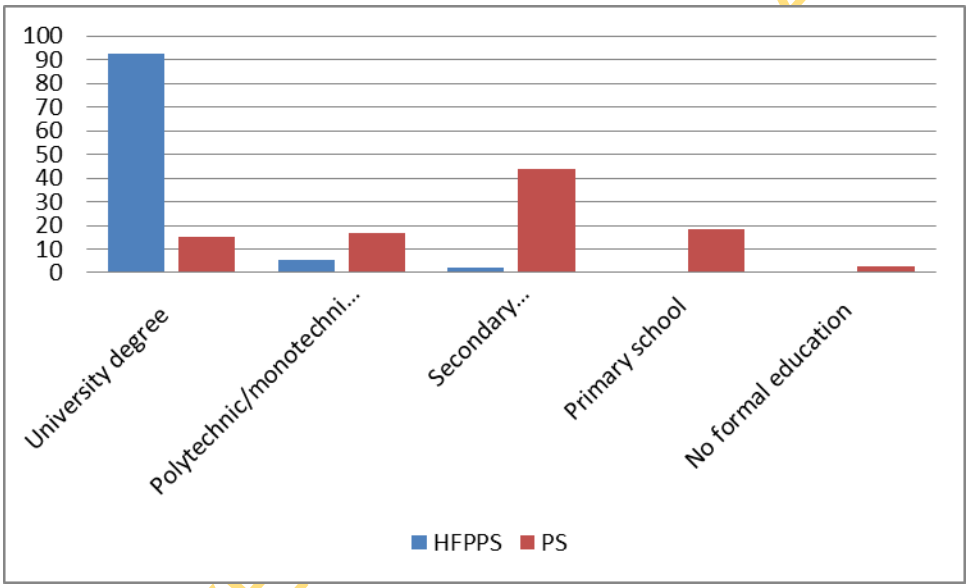


Figure 4.9: Participants' mothers' educational qualifications

Table 4.10: Participants types of school and their fathers' income

Fathers' income sources	HFPPS n (%)	PS n (%)	Total n (%)
Salaries from paid employment	99(49.5)	60 (30.2)	158 (40.3)
Income from self-employment	99 (49.5)	134 (67.3)	227 (57.9)
Pension	2 (1.0)	3 (1.5)	4 (1.0)
Support from relatives	0 (0.0)	2 (1.0)	2 (0.5)
Support from community/church	0 (0.0)	1 (0.5)	1 (0.3)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.10, out of the 200 HFPPS participants, 99 (50.8%) claimed that their fathers' income was from salaries from paid employment and income from self-employment respectively. Only 2 (1.0%) claimed that their fathers' income were from pension. For PS participants the trend is different. A high percentage 134 (67.0%) reported that their fathers source of income was from salaries from paid employment, while only a few, 3, 2 and 1 respectively, claimed that their father's income was either from pension, support from relatives and support from community/church. The bar chart is presented Figure 4.10 below.

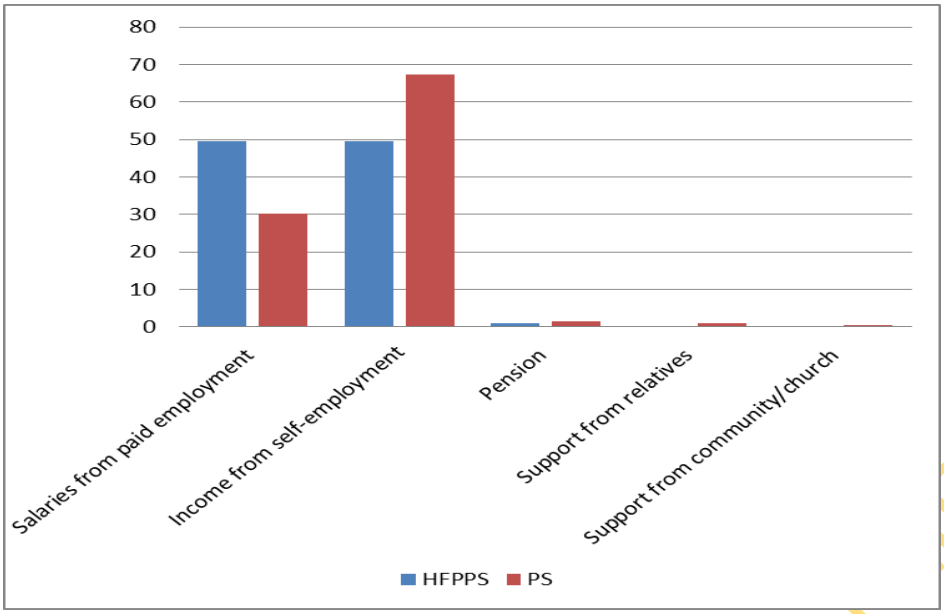


Figure 4.10: Participants' type of school and fathers' income

Table 4.11: Participants types of school and mothers' income

Income sources	**HFPPS** **n (%)**	**PS** **n (%)**	**Total** **n (%)**
Salaries from paid employment	105 (52.5)	30 (15.0)	132 (33.0)
Income from self-employment	95 (47.5)	162 (81.0)	257 (64.2)
Pension	0 (0.0)	1 (0.5)	1 (0.2)
Support from relatives	0 (0.0)	5 (2.5)	5 (1.2)
Support from community/church	0 (0.0)	2 (1.0)	2 (0.5)
Total	**200 (100)**	**200 (100)**	**400 (100)**

As presented in Table 4.11, out of the 200 HFPPS students, 105 (52.2%) claimed that their mothers' source of income was salary from paid employment, while 95 (47.5%) reported that their mothers' source of income was self-employment. For PS participants the trend was different with a greater percentage 162 (81.0%) reporting that their mothers were self-employed.

Thirty (15.0%) participants claimed that the source of their mothers' income was salary from paid employment while only a small number 3, 2 and 1 participants claimed their mothers' sources of income was either from pension, support from relatives and support from community/church. A graphical illustration is presented in Figure 4.11.

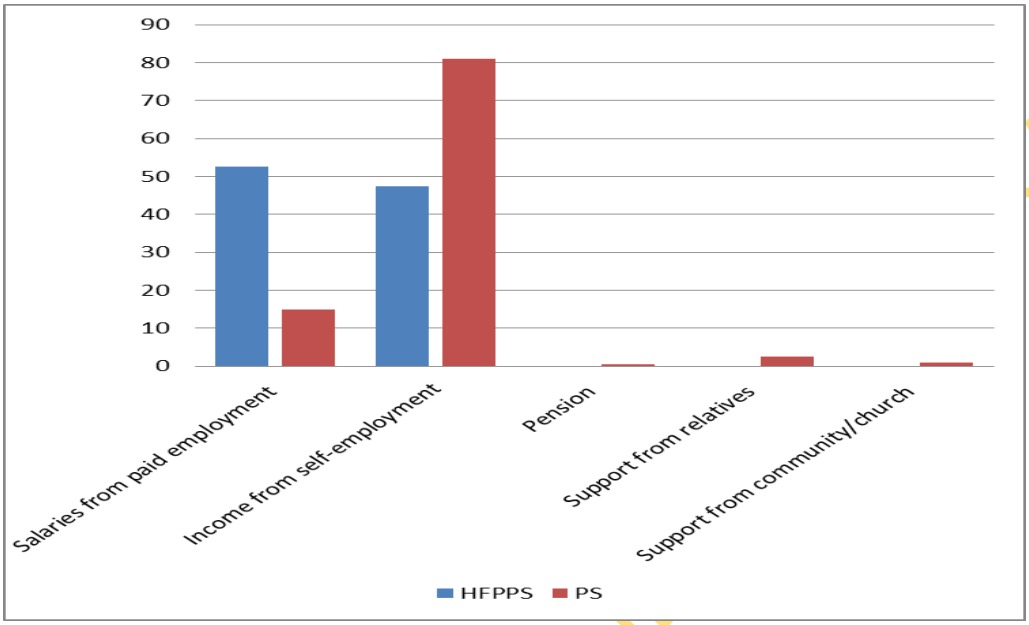


Figure 4.11: Distribution of participants based on types of school and mothers' income

Table 4.12: Participants' types of school and fathers' occupations

Fathers' occupations	HFPPS n (%)	PS n (%)	Total n (%)
Trader	0 (0.0)	76 (38.0)	76 (19.0)
Artisan	0 (0.0)	62 (31.0)	62 (15.5)
Civil servant	4 (2.1)	48 (24.0)	63 (15.8)
Businessmen	42 (22.2)	0 (0.0)	42 (10.5)
Clergy	0 (0.0)	2 (1.0)	2 (0.5)
Farmer	0 (0.0)	12 (6.0)	12 (3.0)
Professional	141 (74.6)	0 (0.0)	141 (35.2)
Retiree	2 (1.1)	0 (0.0)	2 (0.5)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.12, out of the 200 HFPPS participants, 141 (74.6%) claimed that their fathers' occupations were in the occupation category of professional, 22.2% claimed their fathers' occupations were in the category of business, while only 4 (2.1%) and 2 (1.1%) were in the occupation category of civil servants and retirees respectively. For PS participants, the trend was different. A greater percentage 76 (38.0%) reported their fathers' occupation category was trading, 62 (31.0%) participants claimed that their fathers' occupation could be classified as artisans, 24% claimed that their fathers' occupations were in the category of civil servants while only a small number, 12 (6.0%) and 2 (1.0%), claimed their fathers' occupation was in the categories of farmer and clergy respectively. A graphical illustration is presented in Figure 4.12.

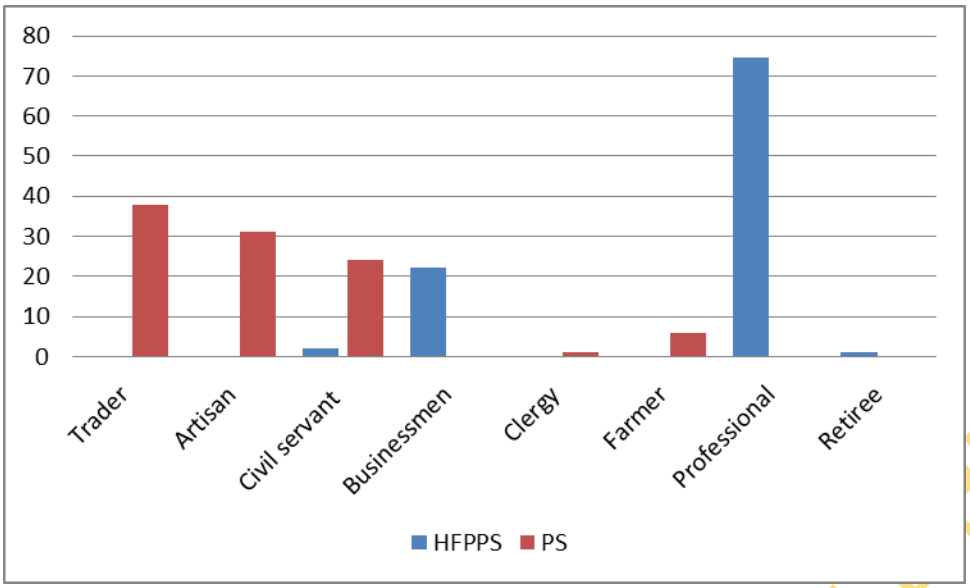


Figure 4.12: Participants' types of school and fathers' occupations

Table 4.13: Participants' types of school and mothers' occupations

Mothers' occupation	**HFPPS** **n (%)**	**PS** **n (%)**	**Total** **n (%)**
Trader	0 (0.0)	155 (77.0)	115 (38.8)
Artisan	0 (0.0)	23 (11.5)	23 (5.8)
Civil servant	18 (9.0)	19 (9.5)	37 (9.2)
Businesswomen	73 (36.5)	0 (0.0)	73 (18.2)
Farmer	0 (0.0)	3 (1.5)	3 (0.8)
Professional	108 (54.0)	0 (0.0)	108 (27.0)
Retiree	1 (0.5)	0 (0.0)	1 (0.2)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.13, of the 200 HFPPS participants, 108 (54.0%) claimed that their mothers were in the occupation category of professional, 36.5% claimed their mothers' occupations were in the category of businesswomen, while only 18 (9.0%) and 1 (0.5%) were in the occupation category of civil servant and retiree respectively. For PS participants, the trend was different. A greater percentage, 155 (77.0%), reported their mothers' occupation category was trading, 23 (11.5%) claimed that their mothers' occupations were in the category of artisan, 9.5% claimed that their mothers' occupations were in the category of civil servant while only a small number 3 (1.5%) claimed their mothers were retirees. The bar chart below illustrates this comparison in Figure 4.13.

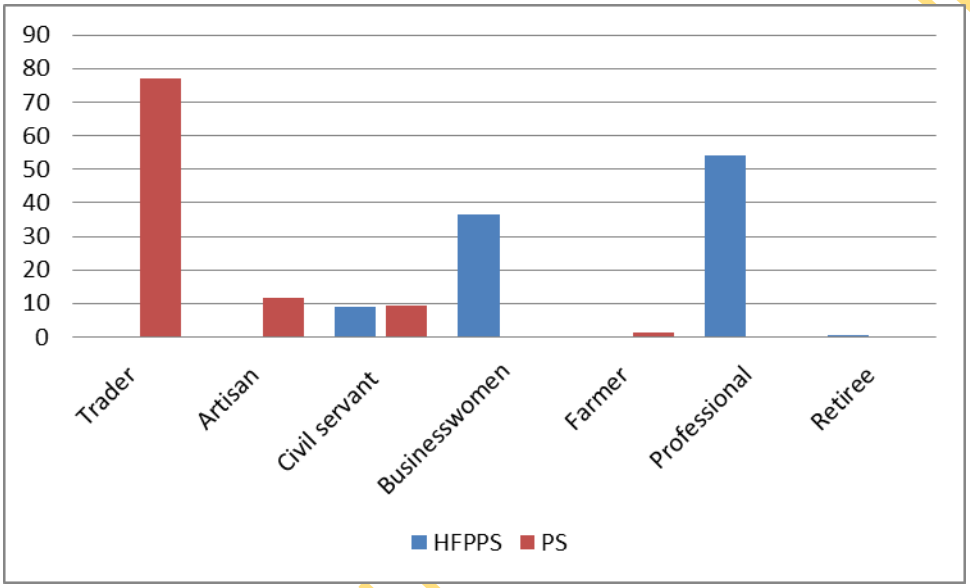


Figure 4.13: Participants' types of school and mothers' occupations

Table 4.14: Participants' types of school and sponsors' income per month

Sponsors'/ income per month	HFPPS n (%)	PS n (%)	Total n (%)
N500,000-1,000,000	176 (88.0)	0 (0.0)	176 (44.0)
N250,000-500,000	18 (9.0)	0 (0.0)	18 (4.5)
N100,000-250,000	5 (2.5)	5 (2.5)	10 (2.5)
N50,000-100,000	1 (0.5)	43 (21.5)	44 (11.0)
N10,000-50,000	0 (0.0)	152 (76.0)	152 (38.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.14, out of the 200 HFPPS participants, a large number, 176 (88.0%), claimed that their parents'/sponsors' income per month ranges from five hundred thousand – 1million (N500,000 - 1,000,000.00), 18 (9.0%) claimed that their parents'/sponsors' income per month ranges between N250,000-500,000 while only 5 (2.5%) and 1 (0.5%) claim that their parents' / sponsors' income per month ranges from one hundred thousand to two hundred and fifty thousand (N100,000.00 - 250,000.00) and ten thousand to fifty thousand (N10,000 - 50,000.00).respectively. Regarding the PS participants, the trend is different. A greater percentage 152 (76.0%) reported that their parents'/sponsors' income per month ranges from ten thousand to fifty thousand (N10,000 - 50,000.00), 43 (21.5%) participants claimed that it ranges from fifty thousand to one hundred thousand (N50,000 - 100,000.00) while only a small number 5 (2.5%) reported that their parents'/sponsors' income per month ranges from one hundred thousand to two hundred and fifty thousand (N100,000 - 250,000.00. The chart showing the comparison is presented in Figure 4.14.

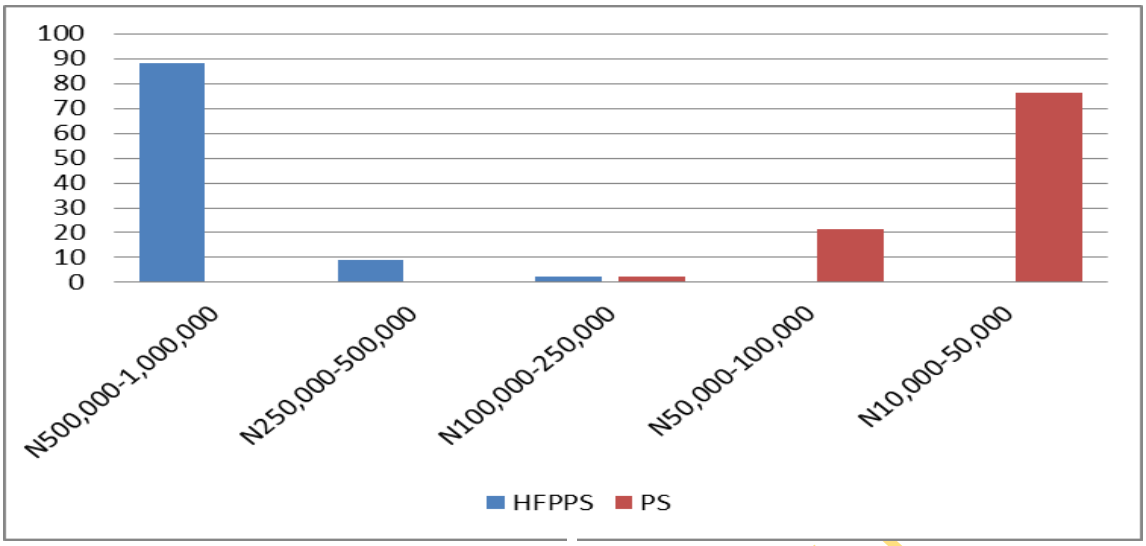


Figure 4.14: Participants' types of school and sponsors' income per month

Table 4.15: Participants' types of school and residential areas

Residential areas	**HFPPS** **n (%)**	**PS** **n (%)**	**Total** **n (%)**
Estate	139 (69.5)	14 (7.0)	153 (38.2)
General neighbourhood	15 (7.5)	146 (73.0)	161 (40.3)
Government residential area	46 (23.0)	40 (20.0)	86 (21.5)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.15, majority of the 200 HFPPS participants, 136 (69.5%), claimed that their parents/sponsors reside in estates, 15 (7.5%) reported that their parents/sponsors reside in general neighbourhood, while only a small number, 15 (7.5%), claimed that their parents/sponsors reside in government residential areas .For PS participants, the trend is different. Majority of the participants, 146 (73.0%), claimed their parents/sponsors reside in

general neighbourhood, 40 (20.0%) reported that their sponsors/parents reside in government residential areas, while only a small number, 14 (7.0%), claimed that their sponsors/parents reside in the estates. The graphical illustration is presented as a bar chart in Figure 4.15.

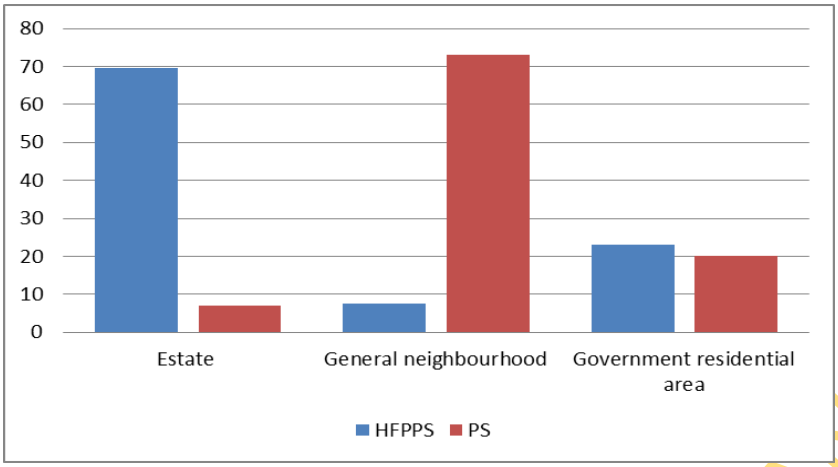


Figure 4.15: Participants' type of school and residential areas

Table 4.16: Participants' types of school and types of parents' houses

House type	HFPPS n (%)	PS n (%)	Total n (%)
Detached house	153 (76.5)	16 (8.0)	169 (42.2)
Semi-detached house	28 (14.0)	37 (18.5)	65 (16.3)
Flat	19 (9.5)	39 (19.5)	58 (14.5)
Multiple occupants	0 (0.0)	108 (54.0)	108 (27.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.16, out of the 200 HFPPS participants, 153 (76.5%) claimed their parents lived in detached houses, 28 (14%) reported that their parents' lived in a semi-detached houses while only 19 (9.5%) lived in flats. The trend is different with the data gathered from PS students. Majority of the participants, 108 (54.0%), claimed their parents lived in multiple

occupant houses, 39 (19.5%) claimed their parents lived in flats, 37 (18.5%) reported their parents' lived in semi-detached houses while a very small number, 16 (8.0%), claimed that their parents lived in detached houses. The graphical illustration is presented in Figure 4.16 below.

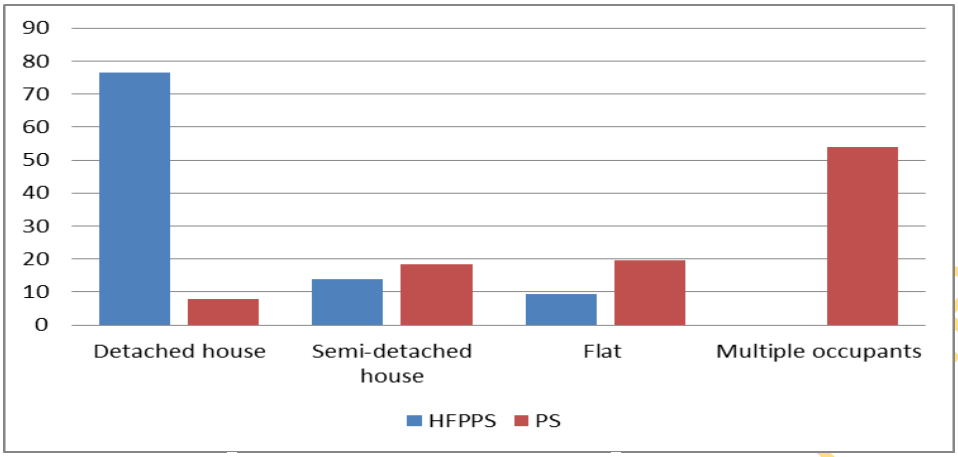


Figure 4.16: Participants' types of school and number of house occupants

Table 4.17: Participants' types of school and numbers of people in the house

Number of people in the house	**HFPPS n (%)**	**PS n (%)**	**Total n (%)**
10 people and above	5 (2.5)	110 (55.0)	115(28.8)
6 people	31 (15.5)	56 (28.0)	87(21.7)
5 people	108 (54.5)	27 (13.5)	135(33.8)
4 people	56 (28.0)	7 (3.5)	63 (15.7)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.17, out of the 200 HFPPS participants, 108 (54.5%) claimed that at least 5 people lived in their houses, 56 (28.0%) claimed that at least 5 people lived in their houses, 31 (15.5%) claimed that at least 6 people lived in their houses, while only small number 5 (2.5%) claimed that at least 10 people lived in their houses. The trend is different for participants that are

in public schools (PS). Majority of them, 110 (55.0%), claimed that at least 10 people lived in their houses, 56 (28.0%) claimed that at least 6 people lived in their houses, 27 (13.5%) reported that at least 5 people live in their houses while a very small number 7 (3.5%) claimed that at least 4 people lived in their houses. A bar chart illustration is presented in Figure 4.17.

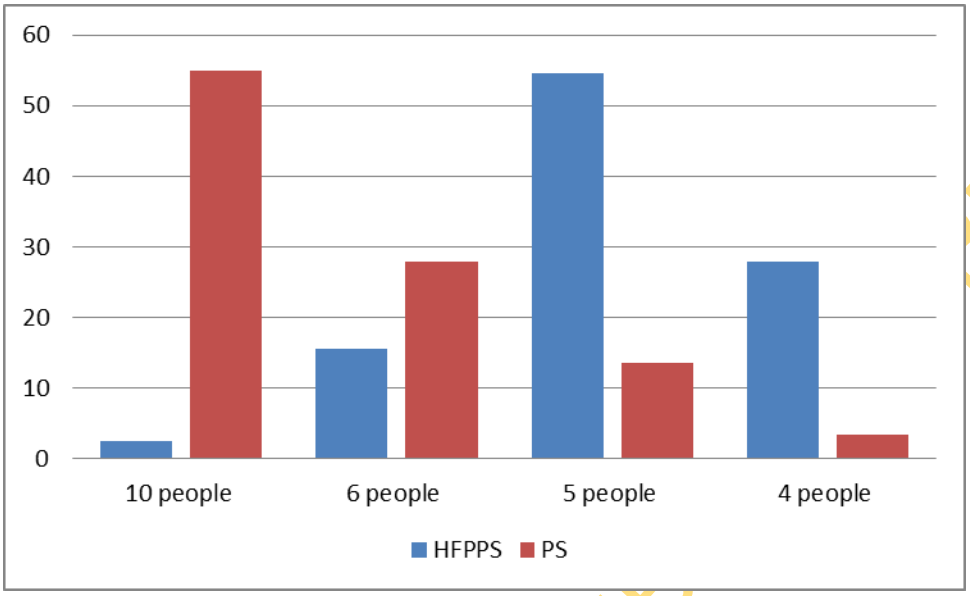


Figure 4.17: Participants' types of school and numbers of people in the house

Table 4.18: Participants' types of school and cooking devices

Cooking devices	**HFPPS n (%)**	**PS n (%)**	**Total n (%)**
Electricity	120 (60.0)	11 (5.5)	131 (32.8)
Gas	80 (40.0)	39 (19.5)	119 (29.8)
Kerosene	0 (0.0)	145 (72.5)	145 (36.2)
Firewood	0 (0.0)	5 (2.5)	5 (1.2)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.18, out of the 200 participants from the High-Fee-Paying Private Schools (HFPPS), 120 (60.0%) claimed that they cooked with electricity while the remaining

40.0% cooked with gas. For participants from the public schools (PS), the trend is different. Majority of the respondents 145 (72.5%) claimed that they cooked with kerosene, 19.5% claimed that they cooked with gas, while only a small proportion 5.5% and 2.5% reported that they cooked with electricity and firewood respectively.

A graphical illustration is presented in Figure 4.18.

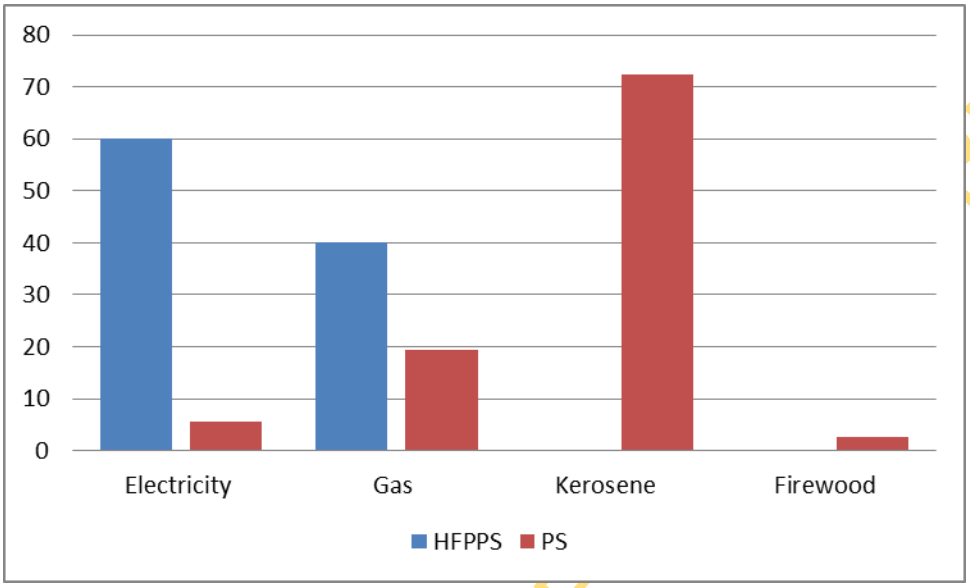


Figure 4.18: Participants' types of school and cooking devices

Table 4.19: Participants' types of school and water source

Water source	**HFPPS** **n (%)**	**PS** **n (%)**	**Total** **n (%)**
Tap/pipe-borne water/ expensive bottled water	185 (92.5)	34 (17.0)	219(54.7)
Bore-hole	12 (6.0)	77 (38.5)	89 (22.3)
Well/ rain/ sachet water	3 (1.5)	89 (44.5)	92 (23.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.19, out of the 200 HFPPS participants, a significant portion of the respondents 92.5% confirmed that their water source was in the category of tap/pipe-borne water/ expensive bottled water, a very negligible number 6.0% and 1.5% reported that their water source is bore-hole and well/rain/sachet water respectively. The trend is different in relation to the data gathered from the public schools (PS) where more of the respondents 44.5% claimed that their water source is well/rain/sachet water, 38.5% also claimed that their water source is from bore-hole and a negligible 17.0% reported that, their water source was in the category of tap/pipe-borne water/ expensive bottled water. A graphical illustration is presented as a bar chart in Figure 4.19 below.

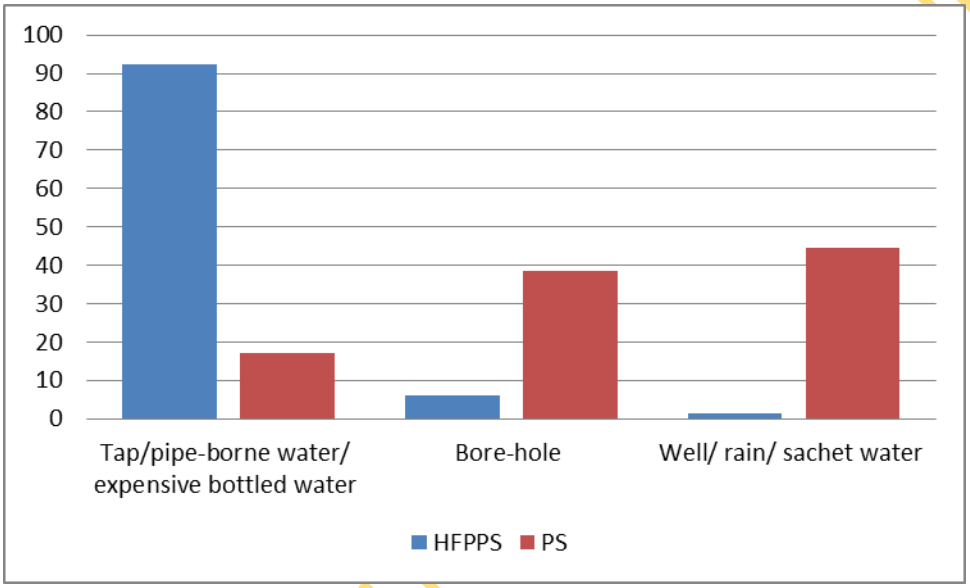


Figure 4.19: Participants' types of water source

Table 4.20: Participants' types of school and toilet facilities

Toilet facilities	HFPPS n (%)	PS n (%)	Total n (%)
Covered pit latrine	0 (0.0)	127 (63.5)	127(31.7)
Open pit latrine	0 (0.0)	16 (8.0)	16 (4.0)
Flush toilet	200 (100.0)	51 (25.5)	251 (62.8)
Bush	0 (0.0)	6 (3.0)	6 (1.5)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.20, all the 200 participants from the high fees paying private schools, constituting 100% of the sample reported that their toilet facility was flush toilet. However, for the participants from the low fees paying public schools, the trend is the reverse. More of the participants, 63.5% precisely, claimed that their toilet facility was covered pit latrine, 25.5% had flush toilets, 8.0% claimed that their toilet facility was open pit latrine while only 3.0% of the them reported that their toilet facility was "bush". A graphical illustration of the comparison is presented in the bar chart in Figure 4.20.

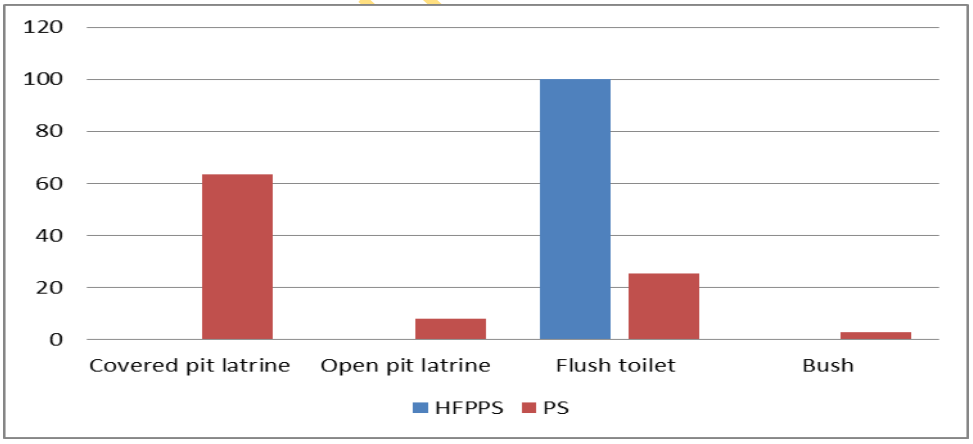


Figure 4.20: Participants' types of school and toilet facilities

Table 4.21: Participants' types of school and types of bathroom

Types of bathrooms	HFPPS n (%)	PS n (%)	Total n (%)
Inside	200 (100.0)	100 (50.0)	300 (75.0)
Outside (Built)	0 (0.0)	86 (43.0)	86 (21.5)
Outside (Makeshift)	0 (0.0)	10 (5.0)	10 (2.5)
None	0 (0.0)	4 (2.0)	4 (1.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.21, All the 200 (100%) participants from the High-Fee-Paying Private Schools had bathrooms that were inside the house. On the hand, the participants from the low fees paying public schools had a different data. Half of the respondents, 50.0% specifically, claimed that their bathroom facilities were inside their houses while the remaining 50.0% was spread over three types of bathroom categories. Forty three percent (43.0%) of respondents claimed their bathrooms were outside (outside), 5.0% reported that their bathroom facilities makeshift while 2.0% of the respondents reported that their houses did not have any bathroom facility. The results are presented in the bar chart in Figure 4.21 below.

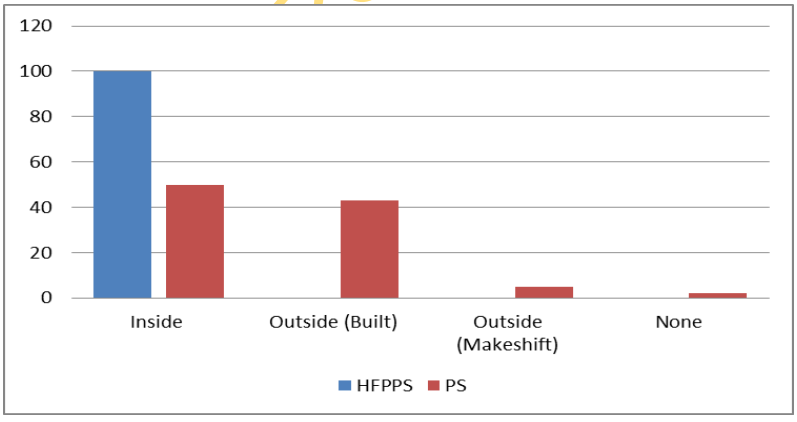


Figure 4.21: Participants' types of school and types of bathroom

Table 4.22: Participants' types of school and types of kitchen

Types of kitchen	HFPPS n (%)	PS n (%)	Total n (%)
Inside	200 (100.0)	158 (79.0)	358 (89.5)
Outside (Built)	0 (0.0)	31 (15.5)	31 (7.8)
Outside (Makeshift)	0 (0.0)	8 (4.0)	8 (2.0)
None	0 (0.0)	2 (1.0)	2 (0.5)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100)**

As presented in Table 4.22, all the 200 (100%) participants in the study that attended high fees paying private schools reported that their kitchen was inside their houses. While respondents from low socio-economic background (low fees paying public schools) 79.4% claimed that their kitchen was inside their house, 15.6% of respondents claimed their kitchen was outside (built), 4.0% reported that their kitchen was outside (makeshift) while only 1.0% claimed that they did not have kitchens that fit into the category. A graphical illustration is presented in Figure 4.22 below.

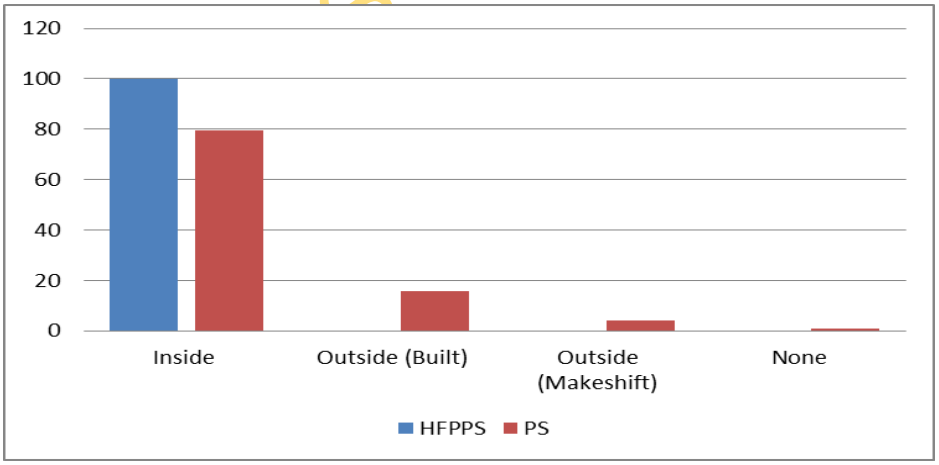


Figure 4.22: Participants' types of school and types of kitchen

Table 4.23: Participants' types of school and ownership of motor vehicles

Ownership of motor vehicle	HFPPS n (%)	PS n (%)	Total n (%)
Yes	187 (93.5)	97 (48.5)	284 (71.0)
No	13 (6.5)	103 (51.5)	116 (29.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.23, out of the 200 participants who attended the High-Fee-Paying Private Schools, 187 (93.5%) claimed that their parents owned motor vehicles while 13 (6.5%) reported that their parents do not have personal motor vehicles. On the other hand, out of the 200 participants who attended low fees paying public schools (PS), 97 (48.5%) claimed that their parents owned motor vehicles while a higher percentage, 51.5%, reported that their parents did not have personal motor vehicles. This is represented graphically in the bar chart in Figure 4.23 below.

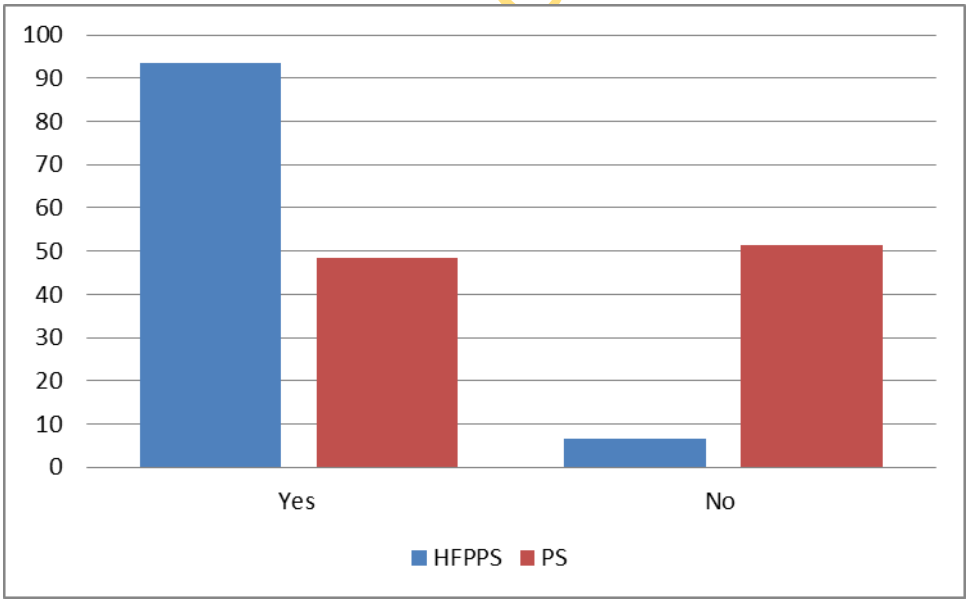


Figure 4.23: Participants' types of school and ownership of motor vehicles

The following subsection discusses the results from the comparison of the participants types of school and ownership of motor cycle ownership.

Table 4.24: Participants' types of school and ownership of motor cycles

Ownership of motor cycle	**HFPPS n (%)**	**PS n (%)**	**Total n (%)**
Yes	13 (6.5)	49 (24.5)	62 (15.5)
No	187 (93.5)	151 (75.5)	338 (84.5)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.24, out of the 200 participants that attend High-Fee-Paying Private Schools, only a very small number 13 (6.5%) claimed that their parents owned a motor cycle, while 187 (93.5%) reported that their parents did not have personal motor cycles. Similar trend was observed among participants from the low fee paying public schools. Forty-nine (24.5%) claimed that their parents owned motor cycles while (75.5%) reported that their parent did not have personal motor cycles. A graphical illustration is presented in Figure 4.24.

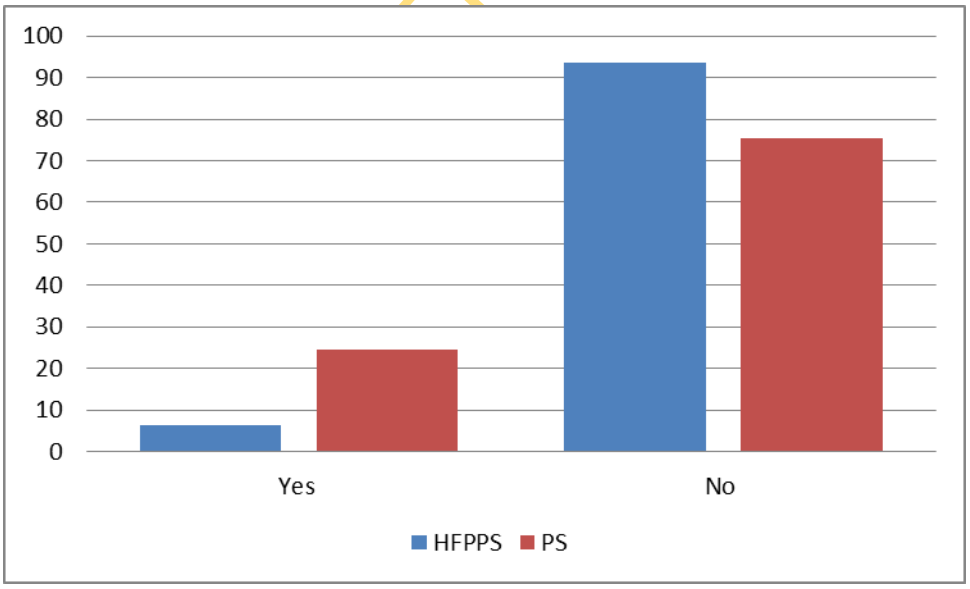


Figure 4.24: Distribution by participants' types of school and ownership of motor cycles

Table 4.25: Participants' types of school and ownership of bicycles

Ownership of bicycle	HFPPS n (%)	PS n (%)	Total n (%)
Yes	142 (71.0)	34 (17.0)	176 (44.0)
No	58 (29.0)	166 (83.0)	224 (56.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.25, out of the 200 participants who attended the High-Fee-Paying Private Schools, a very large number, 142 (71.0%), claimed that they owned bicycles, while only 58 (29.0%) reported that they did not have bicycles. Inverse trend is observed among the participants the low fee paying public schools as only 17.0% claimed that they have bicycles while 83.0% reported that they did not have bicycles. A bar chart is used in the illustration in Figure 4.25 below to show this comparison.

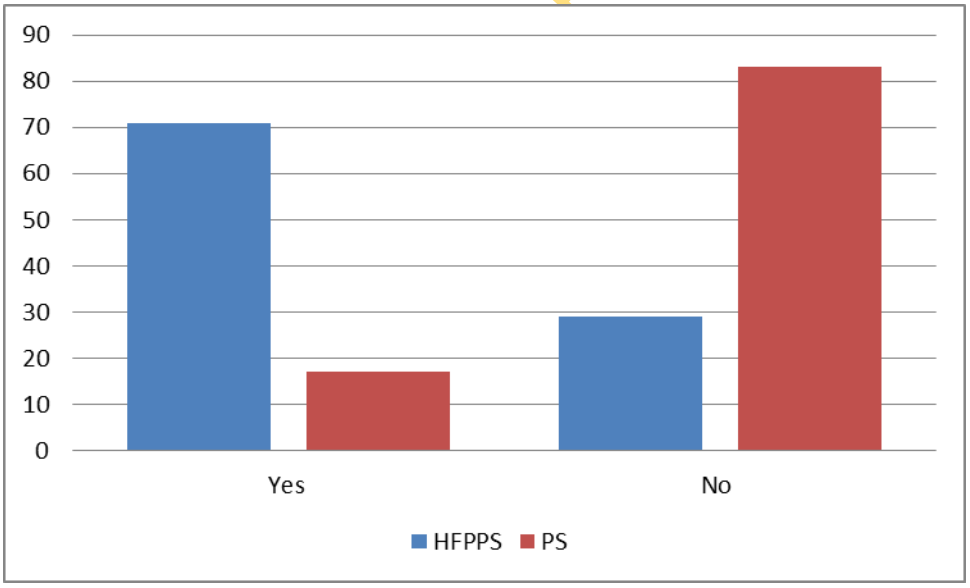


Figure 4.25: Participants' types of school and ownership of bicycles

Table 4.26: Participants' types of school and ownership of television sets

Ownership of television	HFPPS n (%)	PS n (%)	Total n (%)
Yes	200 (100.0)	192 (96.0)	392 (98.0)
No	0 (0.0)	8 (4.0)	8 (2.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.26, out of the 200 participants from the High-Fee-Paying Private Schools, none did not have a television at home as 100% marked yes as their response to the item on ownership of television. Similarly, out of the 200, low fee paying public schools, 96.0% claimed that they have television in their houses and only 4.0% reported that they did not. The comparison is illustrated with the use of bar chart in Figure 4.26 below.

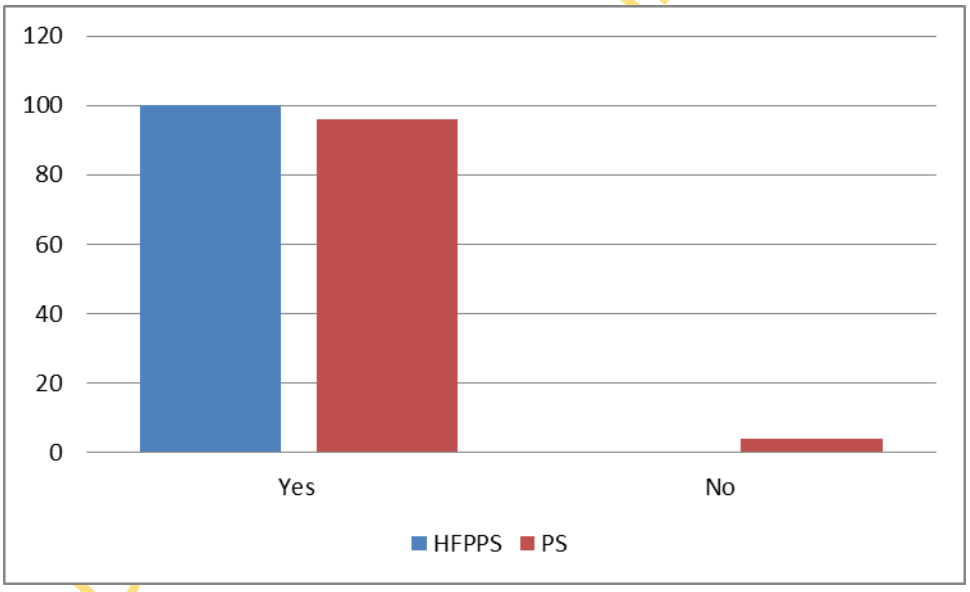


Figure 4.26: Participants' types of school and ownership of television sets

Table 4.27: Participants' types of school and ownership of radio

Ownership of radio	HFPPS n (%)	PS n (%)	Total n (%)
Yes	131 (65.5)	149 (74.5)	280 (70.0)
No	69 (34.5)	51 (25.5)	120 (30.0)
Total	**200 (100.0)**	**200 (100.0)**	**400(100)**

As presented in Table 4.27, out of the 200 participants that attended the High-Fee-Paying Private Schools, more than half of the participants, 65.5%, claimed that they had radio in their houses while 34.5% reported otherwise. Similarly, out of the 200 participants from the low fee paying public schools, 74.5% claimed that they had radio sets in their houses while only 25.5% reported that they did not. A graphical illustration is presented in Figure 4.27 below.

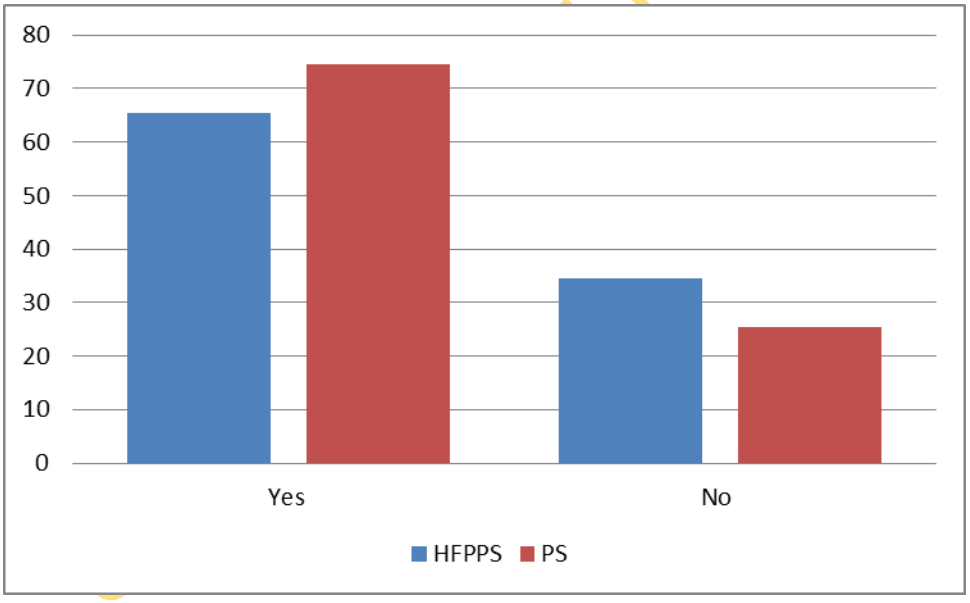


Figure 4.27: Participants' types of school and ownership of radio

Table 4.28: Participants' types of school and ownership of mobile phone

Ownership of mobile phone	HFPPS n (%)	PS n (%)	Total n (%)
Yes	200 (100.0)	172 (86.0)	372 (93.0)
No	0 (0.0)	28 (14.0)	28 (7.0)
Total	**200 (100.0)**	**200 (100.0)**	**400**

As presented in Table 4.28, out of the 200 participants who attended the High-Fee-Paying Private Schools, none did not have a mobile phone as 200 (100%) claimed that they had mobile phones. Similarly, out of the 200 participants who were in the low fees paying public schools, 172 (86.0%) claimed that they had mobile phones while only 28 (14.0%) reported that they did not have mobile phone. A graphical illustration is presented in Figure 4.28.

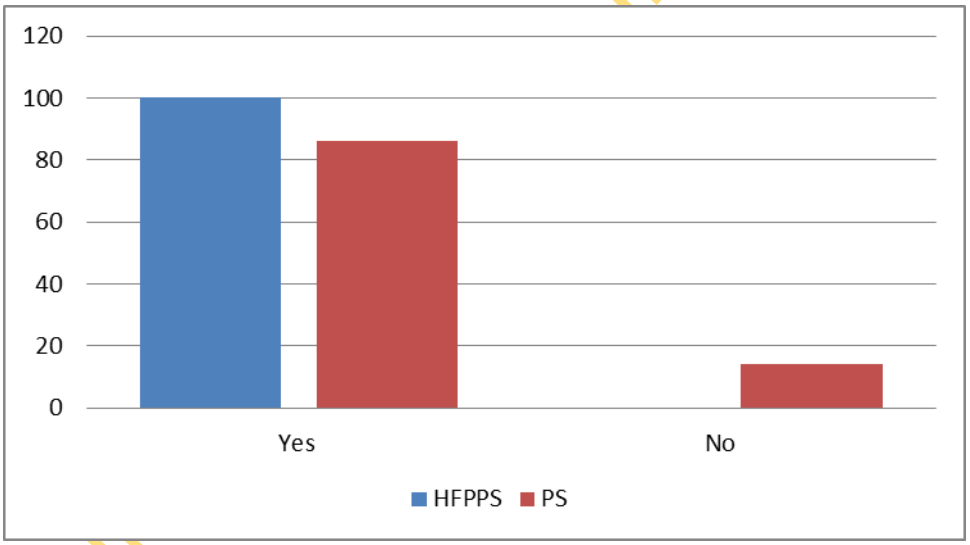


Figure 4.28: Participants' types of school and ownership of mobile phones

Table 4.29: Participants' types of school and ownership of computers

Ownership of computer	HFPPS n (%)	PS n (%)	Total n (%)
Yes	195 (97.5)	172 (86.0)	367(91.8)
No	5 (2.5)	28 (14.0)	33 (8.2)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.29, out of the 200 participants from the high fees paying private schools, 195 (97.5%) claimed that they have computers while only a very insignificant 5 (2.5%) reported that they did not have computers. An inverse trend was discovered among the students that attend the low fee paying public schools. The data revealed that only a small percentage of the participants (25.5%) reported that they owned a computer while a very large number (74.5%) did not own computers. A graphical illustration of this comparison is presented in Figure 4.29 below.

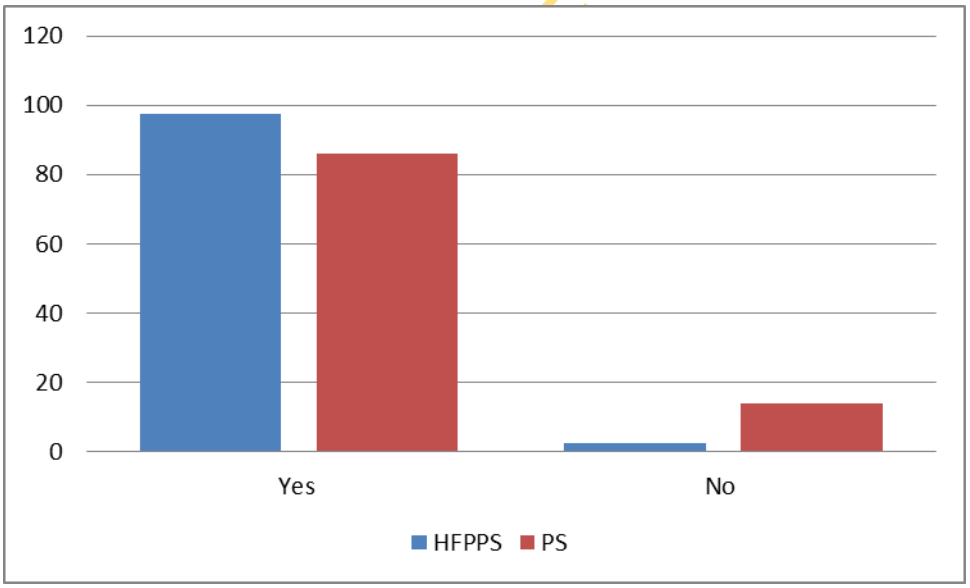


Figure 4.29: Participants' types of school and ownership of computers

Table 4.30: Participants' types of school and ownership of DVD players

Ownership of DVD player	HFPPS n (%)	PS n (%)	Total n (%)
Yes	195 (97.5)	169 (84.5)	364(91.0)
No	5 (2.5)	31(15.5)	36 (9.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.30, out of the 200 participants that attend the High-Fee-Paying Private Schools, 197 (97.5%), constituting a high percentage claimed that they had DVD players at home while only a very insignificant number 5 (2.5%) reported that they did not have DVD players at home. The trend among the students of the low fee paying public schools is similar with a large number, 169 (84.5%), claiming that they had DVD players while an insignificant 15.5% of the participants did not have DVD players at home. The graphical comparison is presented in the bar chart in Figure 4.30 below.

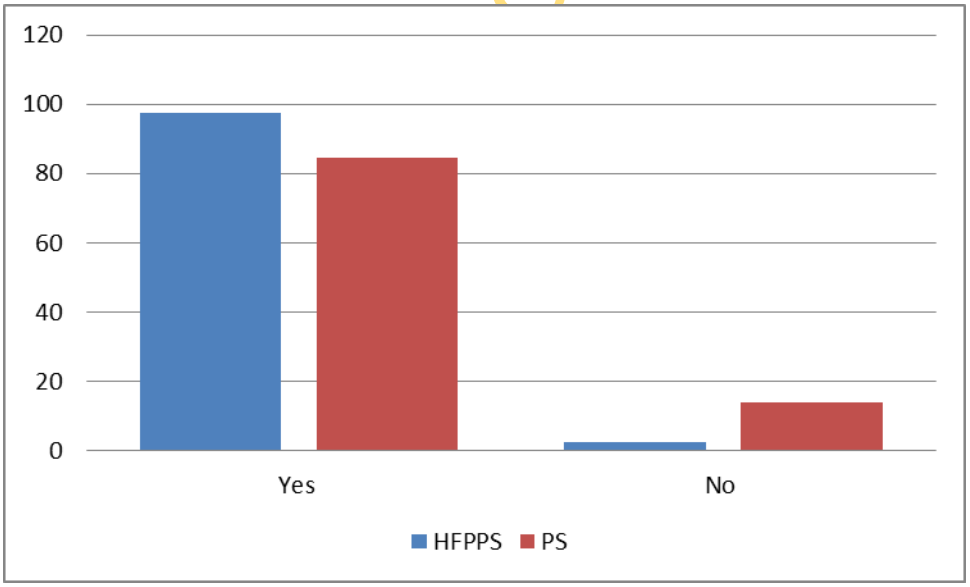


Figure 4.30: Participants' types of school and ownership of DVD players

Table 4.31: Participants' types of school and availability of family drivers

Availability of family driver	HFPPS n (%)	PS n (%)	Total n (%)
Yes	167 (83.5)	22 (11.0)	189 (47.3
No	33 (16.5)	178 (89.0)	221 (52.7)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.31, out of the 200 participants who attended the High-Fee-Paying Private Schools, 167 (83.5%) claimed that their parents have drivers at home while only a small number 33 (16.5%) reported that their parents did not have drivers. The trend among the participants from the low fee paying public schools is different. A large number 178 (89.0%) reported that their parents did not have drivers while only a small number 22 (11.0%) have parents with who employed drivers. A graphical illustration is presented in Figure 4.31 below.

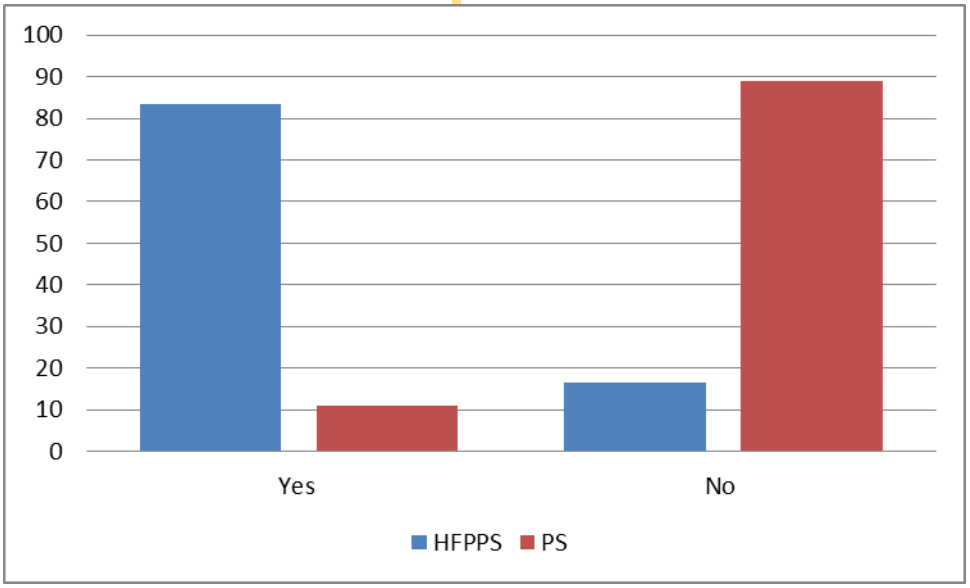


Figure 4.31: Participants' types of school and availability of family drivers

Table 4.32: Participants' types of school and availability of house helps

Availability of house helps	HFPPS n (%)	PS n (%)	Total n (%)
Yes	142 (71.0)	10 (5.0)	152 (38.0)
No	58 (29.0)	190 (95.0)	248(62.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.32, out of the 200 participants from the High-Fee-Paying Private Schools, 142 (71.0%) claimed that their parents have house helps at home while only a small number, 58 (29.0%) reported that their parents had house helps. However, the trend among the participants from the low fee paying public schools is different. One hundred and ninety (190), constituting 95.0% of this group of participants reported that their parents did not have house helps while only 10 (5.0%) of them had house helps at home. A graphical illustration is presented in Figure 4.32 below.

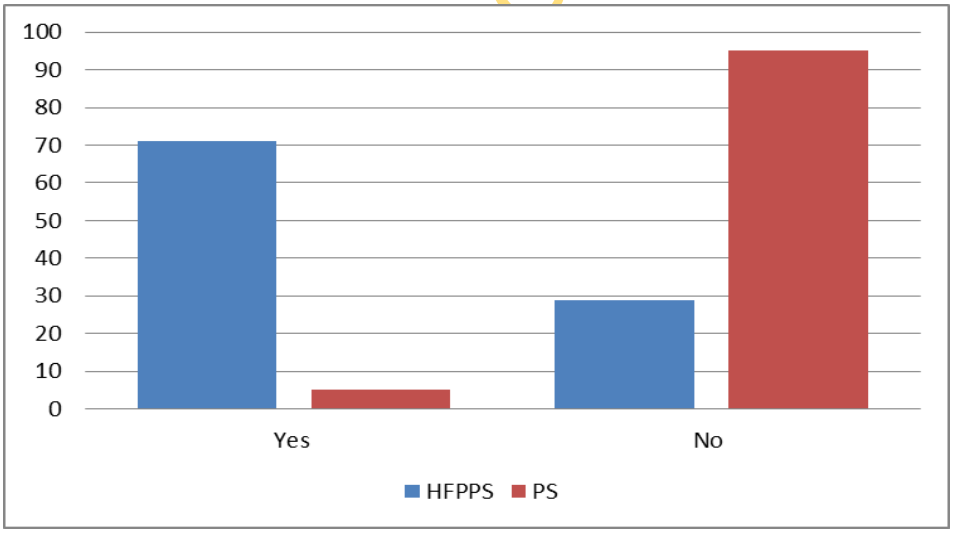


Figure 4.32: Participants' types of school and availability of house helps

Table 4.33: Participants' types of school and availability of cooks at home

Availability of cooks	HFPPS n (%)	PS n (%)	Total n (%)
Yes	109 (54.5)	14 (7.0)	123 (30.8)
No	91(45.5)	186 (93.0)	277 (69.2)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.33, out of the 200 participants who were from the High-Fee-Paying Private Schools, 109 (54.5%) claimed that their parents have cooks while 91 (45.5%) reported that their parents did not have cooks. However, the trend among the participants who were selected from the public schools (PS) was inverse. A large number, 186 (93.0%), reported that their parents did not have cooks while only a negligible number, 14 (7.0%) claimed they had cooks at home. This comparison is presented graphically in Figure 4.33 below.

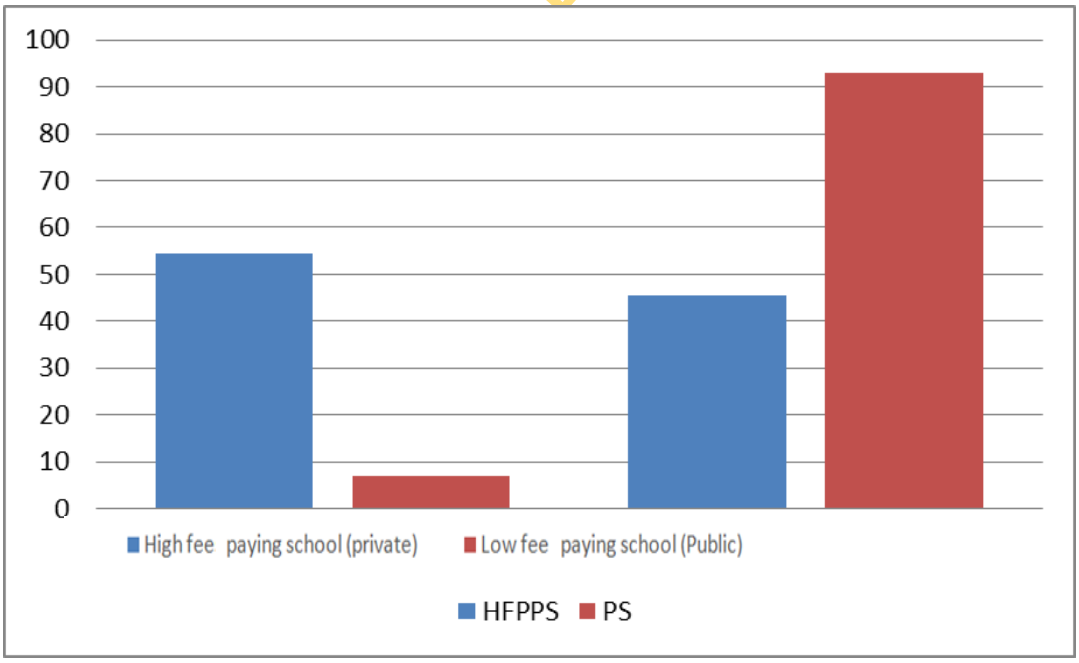


Figure 4.33: Participants' types of school and availability of cooks at home

Table 4.34: Participants' types of school and availability of washermen

Availability of washerman	HFPPS n (%)	PS n (%)	Total n (%)
Yes	119 (59.5)	7 (3.5)	126 (31.5)
No	81 (40.5)	193 (96.5)	274 (69.5)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.34, 119 (59.5%) of the participants who attended High-Fee-Paying Private Schools claimed that their parents have washman at home while 81 (40.5) indicate that they did not. However, the trend among the participants who were from the low fee paying public schools is different. A large number, 193 (96.5%) of the participants reported that their parents did not have washmen while only a very small number of this group, 7 (3.5%), had washmen at home. A graphical illustration is presented as bar chart in Figure 4.34 below.

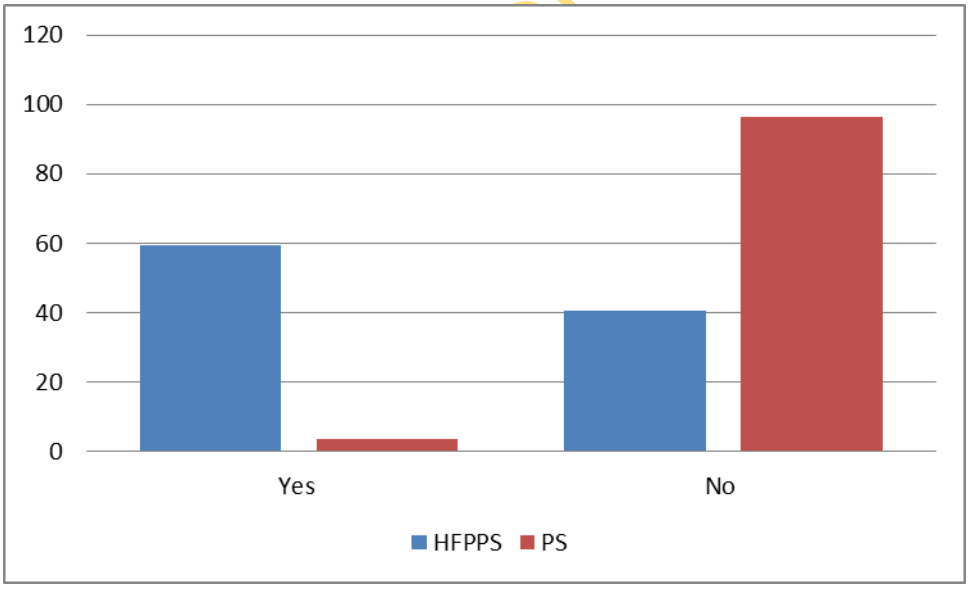


Figure 4.34: Participants' types of school and availability of washmen at home

Table 4.35: Participants' types of school and availability of gardeners at home

Availability of gardener	HFPPS n (%)	PS n (%)	Total n (%)
Yes	110 (55.3)	7 (3.5)	117 (29.3)
No	89 (44.7)	193 (96.5)	282 (70.7)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.35, out of the 200 participants who were from the High-Fee-Paying Private Schools, more than half, 110 (55.3%) claimed that their parents have gardeners at home while 89 (44.7%) reported that their parents did have gardeners. The trend among the participants from the low fee paying public schools was different as a large number, 193 (96.5%), reported that their parents did not have gardeners. Only a negligible number, 7 (3.5%) had gardeners. A graphical illustration is presented in Figure 4.35 below.

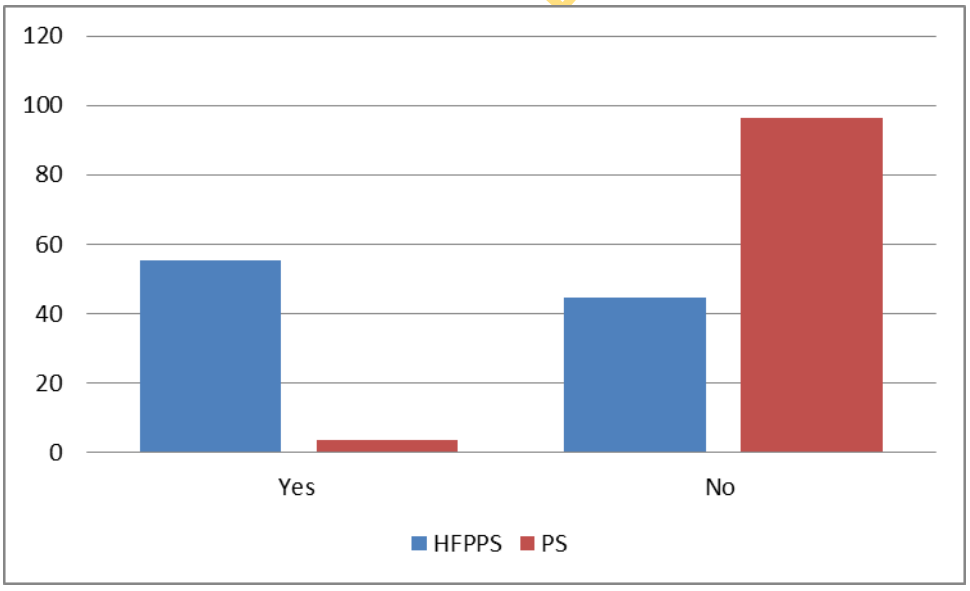


Figure 4.35: Participants' types of school and availability of gardeners at home

Table 4.36: Participants' types of school and availability of gatekeepers

Availability of gatekeepers	HFPPS n (%)	PS n (%)	Total n (%)
Yes	146 (73.4)	9 (4.5)	155(38.0)
No	53 (26.6)	191(95.5)	244(62.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.36, out of the 200 participants from the High-Fee-Paying Private Schools, a large proportion, constituting 146 (73.4%) in number claimed that their parents have gate keepers at home while a small number, 53 (26.6%) reported that their parents did not. The trend among respondents in the low fee paying public schools is different. A large number, 191 (95.5%) of the participants reported that their parents did not have gatekeepers while only a very small number 9 (4.5%) claimed that their parents had gate keepers. A graphical illustration is presented in Figure 4.36 below.

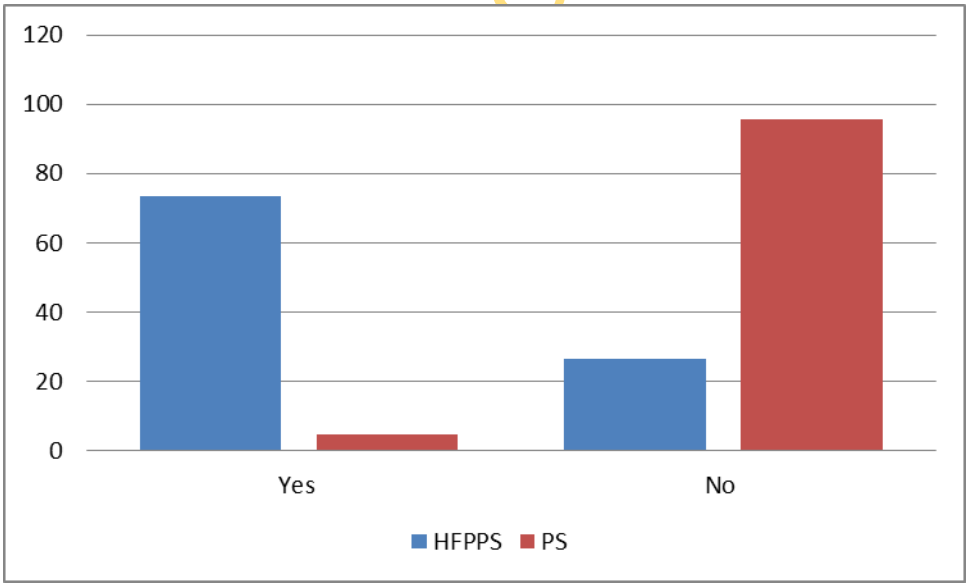


Figure 4.36: Participants' types of school and availability of gatekeepers at home

Table 4.37: Participants' types of school and personal access to electronics at home

Electronics	Response	HFPPS n (%)	PS n (%)
Mobile phone	Yes	200 (100.0)	172 (86.0)
	No	0 (0.0)	28 (14.0)
DSTV	Yes	200 (100.0)	64 (32.0)
	No	0 (0.0)	136 (68.0)
IPad	Yes	173 (86.5)	32 (16.0)
	No	27 (13.5)	168 (84.0)
Laptop/computer	Yes	200 (100.0)	60 (30.0)
	No	0 (0.0)	140 (70.0)
Internet	Yes	200 (100.0)	60 (30.0)
	No	0 (0.0)	140 (70.0)

As presented in Table 4.37, out of the 200 participants who attended the High-Fee-Paying Private Schools, a large proportion, 86.5% and above claimed that they have access to all the electronics studied while only a very small proportion 13.5% reported that they did not have access to one electronic (IPad) at home. The trend among participants who were in the low fees paying public schools is different. For access to mobile phone a large proportion of respondents 86.0% claimed they had access while only 14.0% did not. However, the proportion who had access to other electronics in this group was insignificant as only 32.0%; 16.0%; 30.0%; and 30.0% of the participants reported they had access to DSTV, IPad, Laptop/computer and internet respectively. Majority of the students of the low fee paying public schools had no access

to the sophisticated and expensive electronics. A graphical illustration is presented in Figure 4.37 below.

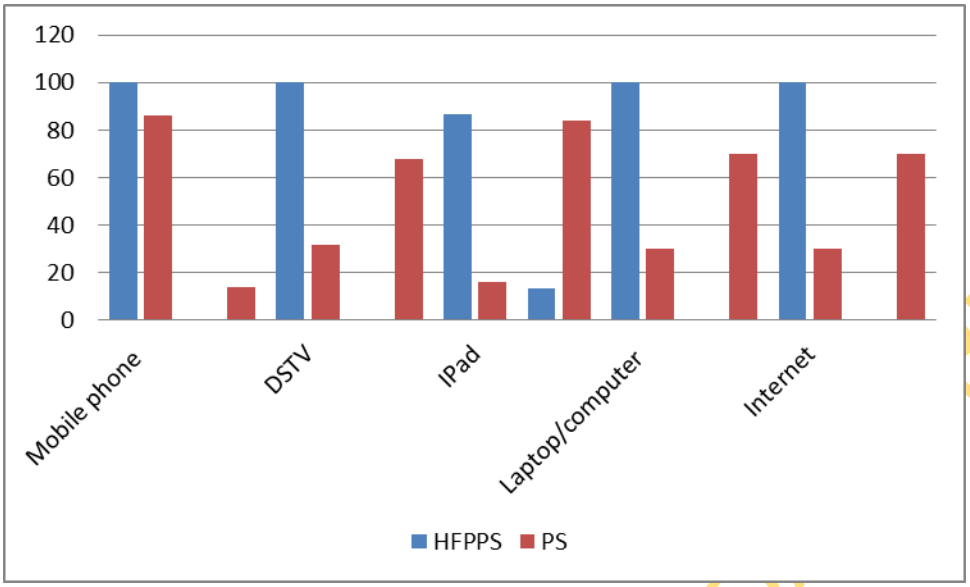


Figure 4.37: Participants' types of school and access to electronics

Table 4.38: Participants' types of school type of food taken as breakfast

Food taken as breakfast	HFPPS n (%)	PS n (%)	Total n (%)
Bread & Tea only	0 (0.0)	44 (22.0)	44(11.0)
Bread, Butter & Tea only	0 (0.0)	44 (22.0)	44 (11.0)
Bread, Butter, Tea & cereal	31 (16.5)	0 (0.0)	31 (7.7)
Bread, Butter, Eggs, Cereal & Tea	166 (83.0)	0 (0.0)	166 (41.5)
Yam & Oil	0 (0.0)	16 (8.0)	16 (4.0)
Yam & Stew	0 (0.0)	0 (0.0)	0 (0.0)
Yam & Fish or Meat Stew	3 (1.5)	0 (0.0)	3 (0.8)
Yam & Eggs	0 (0.0)	37 (18.5)	37 (9.3)
Pap only	0 (0.0)	7 (3.5)	7 (1.7)
Pap with Sugar	0 (0.0)	15 (7.5)	15 (3.8)
Pap with Sugar and Milk	0 (0.0)	13 (6.5)	13 (3.2)
Pap with Akara/Moi-Moi	0 (0.0)	24 (12.0)	24 (6.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.38, a large proportion (83.0%) of the 200 students from the High-Fee-Paying Private Schools ate a combination of bread, butter, eggs, cereal and tea for normal breakfast while 17.3% of the respondents had other kinds of food as presented in Table 4.38 above. On the other hand, the students of the public schools had only an insignificant 22.0% that each had either one or a combination of bread and tea only; bread, butter and tea only or yam and eggs while all others had other kinds of food such as yam and oil, yam and stew, pap and *akara,*

pap and *moinmoin* as presented in Table 4.38 above. A graphical illustration is presented in Figure 4.38 below.

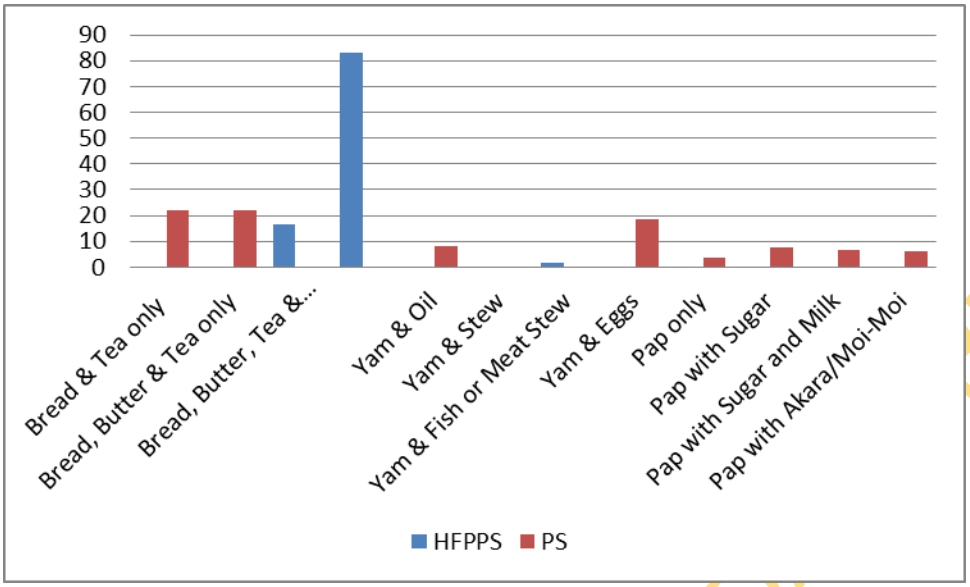


Figure 4.38: Participants' types of school and food eaten as breakfast

Table 4.39: Participants' types of school and travelling to other countries

Travelling to native English countries	**HFPPS** **n (%)**	**PS** **n (%)**	**Total** **n (%)**
Once a year	103 (51.5)	31 (15.1)	134(33.5)
More than once a year	87 (43.5)	18 (9.0)	105(26.3)
Never	10 (5.0)	151 (75.9)	161(40.2)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.39, out of the 200 participants from the high fees paying private schools, more than half of the respondents 51.5% claimed they travel outside Nigeria at least once a year, 43.5% reported that they travel outside Nigeria more than once a year, while a very negligible

proportion (5.0%) had never travelled outside Nigeria. There is a reverse trend with the participants in the low fee paying public schools where 75.9% of the sample had never travelled outside Nigeria, 15.1% had travelled outside Nigeria at least once a year while 9.0% of PS participants had travelled outside Nigeria more than once a year. A graphical illustration is presented in Figure 4.39 below.

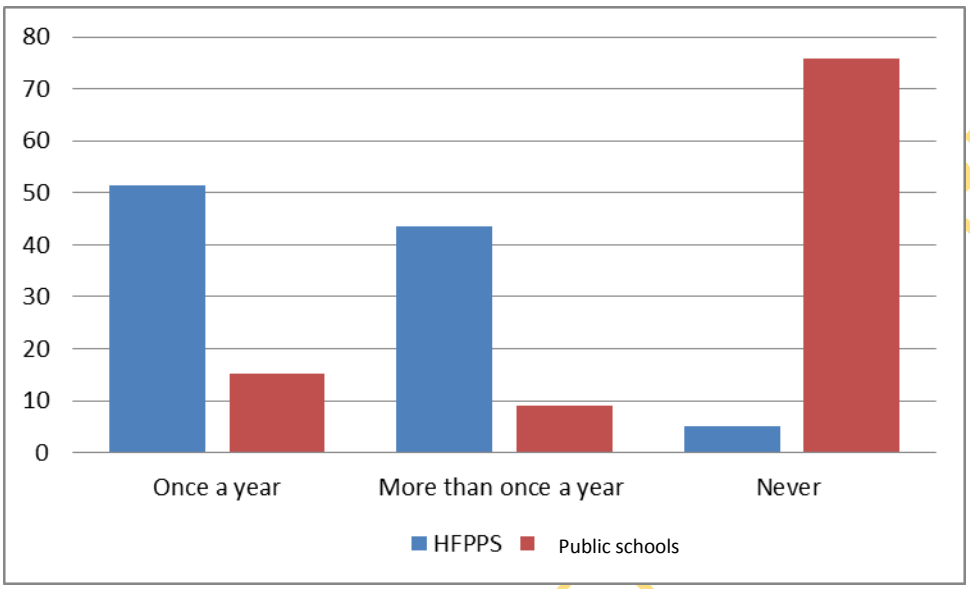


Figure 4.39: Participants' types of school and frequency of travels outside Nigeria

Table 4.40: Participants' types of school and travels to where English is a first language

Travelling to Britain and America	**HFPPS** **n (%)**	**PS** **n (%)**	**Total** **n (%)**
Yes	191 (95.5)	8 (4.0)	199(49.8)
No	9 (4.5)	192 (96.0)	201 (50.2)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.40, out of the 200 participants from the high fees paying private schools, a significant proportion (95.5%) claimed that they had travelled to countries where English is a

first language while only an insignificant proportion (4.5%) reported that they had not travelled to any country where English is a first language. The trend among participants from the low fee paying public schools is different. Only an insignificant proportion (4.0%) reported that they had travelled to countries where English is a first language while a large proportion of the participants (96.0%) claimed they had not travelled to countries where English is a first language. A graphical illustration is presented in Figure 4.40 below.

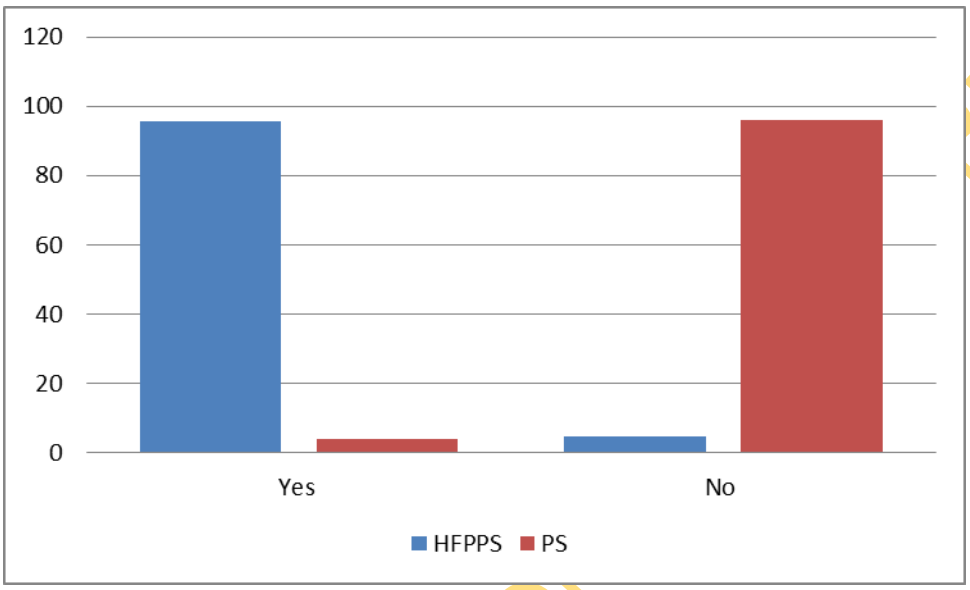


Figure 4.40: Participants' types of school and travels to where English is a first language

Table 4.41: Participants' types of school and where they spent the first five years of their lives

Where participants spent the first five years of their lives	HFPPS n (%)	PS n (%)	Total n (%)
Nigeria	163 (81.5)	198 (99.0)	361(90.1)
Ghana	0 (0.0)	1 (0.5)	1 (0.3)
Cameroon	0 (0.0)	1 (0.5)	1 (0.3)
United Kingdom	28 (14.0)	0 (0.0)	28 (7.0)
UAE	1 (0.5)	0 (0.0)	1 (0.3)
USA	8 (4.0)	0 (0.0)	8 (2.0)
Total	**200 (100.0)**	**200 (100.0)**	**400 (100.0)**

As presented in Table 4.41, out of the 200 participants from the High-Fee-Paying Private Schools, a large proportion (81.5%) spent their first five years in Nigeria, 14.0% spent their first five years in United Kingdom, 4.0% spent their first five years in United States of America while only 0.5% spent their first five years in United Arab Emirate. For the participants form the low fee paying public schools, almost all the respondents (99.0%) spent their first five years in Nigeria, while only 0.5% each spent their first five years in Ghana and Cameroon respectively. A bar chart illustration is presented in Figure 4.41 below.

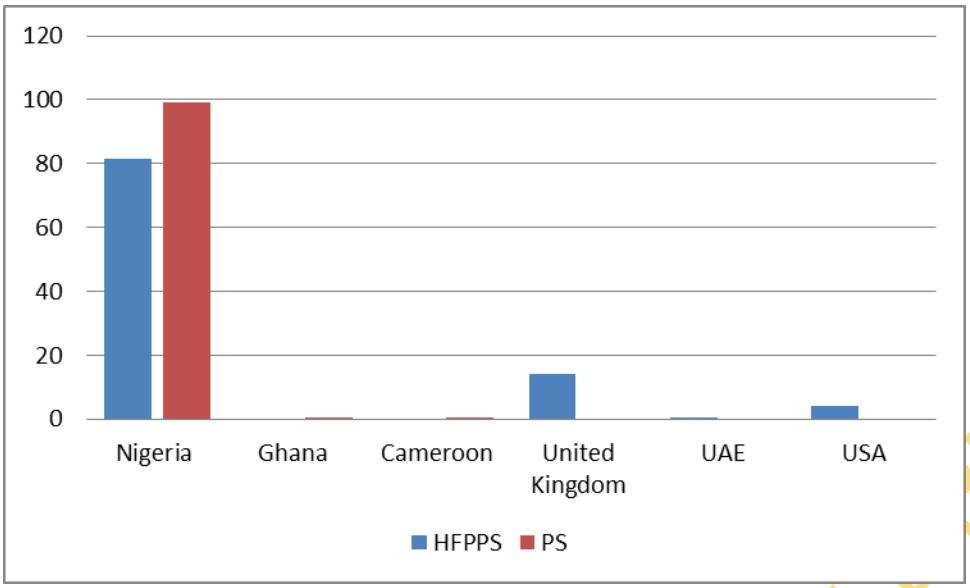


Figure 4.41: Participants' types of school and where they spent the first five years of their lives

Overall Result from Demographic analysis

The overall result on the socio-economic background was done. The result is presented in Table 4.42 below.

Table 4.42: Independent t-test for the classification of participants based on their socio-economic backgrounds

Grouping variable	N	Mean	SD	Std. Error Mean	t-value	Sig.
High socio-economic background	200	3.14	.521	.037	4.254	.000*
Low socio-economic background	200	1.75	.582	.041		

***significant at 0.05 level; df = 398**

As presented in Table 4.42 above, the result was statistically significant $t(398) = 4.254$, $p < .05$. This result implies that the students can be classified into high and low socio-economic

backgrounds. The mean difference between the two groups was 1.39 at the 95% confidence interval.

The demographic analysis has confirmed that the students from the high fee paying schools and public schools are significantly different in terms of their socio-economic backgrounds such that they could be classified into the socio-economic classes high and low. This has given the premise for the classification of the participants into the two socio-economic classes in subsequent analyses.

Phonological Correlate Test Results

In this section, the statistical analysis of the results of the participants' performances in the phonological correlate test are presented and discussed.

Research question two

1.Do Oyo and Ogun secondary school students from different socio-economic backgrounds jointly under-differentiate the long and short vowels /I i: æ a: ɒ ɔ: ʊ u:/?

The data collected from the participants' production of the sentences and passage that constitute the PCT, were scored and statistically analysed. The secondary school students from high and low socio-economic backgrounds were assessed on long and short vowel differentiation. The result is presented in Table 4.43 below.

Table 4.43: Independent t-test for correlates of secondary school students' socio-economic backgrounds and English vowel differentiation

Grouping variable	N	Mean	SD	Std. Error Mean	t-value	Sig.
High socio-economic background	200	21.97	6.135	.434	44.384	.000*
Low socio-economic background	200	1.43	2.278	.161		

*significant at 0.05 level; df = 398

As presented in Table 4.43, the result was statistically significant t(398) = 44.383, p < .05. This result implies that Oyo and Ogun secondary school students from separate socio-economic backgrounds statistically significantly differ in their long and short vowel differentiation. Secondary school students from high socio-economic background (M = 21.97; SD = 6.135) performed better in the differentiation of long and short vowels than secondary school students from low socio-economic background (M = 1.43; SD = 2.278).The mean difference between the two groups was 20.54 at the 95% confidence interval. This implies that secondary school students from the high socio-economic background dirfferientiate better the long and short vowel than their counterparts from the low socio-economic background.

Research question three

Do Oyo and Ogun secondary school students, from different socio-economic backgrounds, monophthongise the SBE diphthongs (/eɪ/ /əu/ /aɪ/ /au/ /ɔɪ/ /ɪə/ /ɛə/ /uə/)?

To provide an answer to research question two, secondary school students from high and low socio-economic backgrounds were assessed on the monophthongisation of some SBE diphthongs and a triphthong. The results are presented in Table 4.44 below.

Table 4.44: Independent t-test for the correlates of secondary school students' socio-economic backgrounds and the monophthongisation of SBE diphthongs

Grouping variable	N	Mean	SD	Std. Error Mean	t-value	Sig.
High socio-economic background	200	10.91	3.159	.223	42.965	.000*
Low socio-economic background	200	.712	1.139	.080		

***significant at 0.05 level; df = 398**

As presented in Table 4.44, the result was statistically significant t(398) = 42.965, p < .05. This result implies that Oyo and Ogun secondary school students from separate socio-economic

backgrounds statistically significantly differ in the non-monophthongisation of SBE diphthongs. Secondary school students from the high socio-economic background (M = 10.91; SD = 3.159) performed better in the monophthongisation of SBE diphthongs than secondary school students from the low socio-economic background (M = .712; SD = 1.139). The mean difference between the two groups was 10.20 at the 95% confidence interval.

Research question four: 4. Do Oyo and Ogun secondary school students, irrespective of their socio-economic backgrounds, under-differentiate the dental fricatives/ Θ ð / and alveolar plosives /t, d/?

To provide an answer to this research question, secondary school students from high and low socio-economic backgrounds were assessed on the production of the dental fricatives / Θ ð /. The results are presented in Table 4.45 below.

Table 4.45: Independent t-test for correlates of secondary school students' socio-economic backgrounds and dental fricatives

Grouping variable	N	Mean	SD	Std. Error Mean	t-value	Sig.
High socio-economic background	200	30.61	8.672	.613	35.280	.000*
Low socio-economic background	200	5.63	5.007	.354		

***significant at 0.05 level; df = 398**

As presented in Table 4.45, the result was statistically significant t(398) = 35.280, p < .05. This result implies that Oyo and Ogun secondary school students from separate socio-economic backgrounds statistically significantly differ in the assessment of dental fricatives. Secondary school students from high socio-economic background (M = 30.61; SD = 8.672) performed better in the production of the dental fricatives / Θ / and / ð / than secondary school students from

low socio-economic background (M = 5.007; SD = 5.007). The mean difference between the two groups was 24.98 at the 95% confidence interval.

Research question five: Does Oyo and Ogun secondary school students' appropriate or inappropriate production of the voiced palatal alveola fricative /ʒ/ correlate with their socio-economic backgrounds?

To provide an answer to this research question, secondary school students from high and low socio-economic backgrounds were assessed on their production of the voiced palato-alveola fricative /ʒ/ and the results presented in Table 4.46 below.

Table 4.46: Independent t-test for correlates of secondary school students' socio-economic backgrounds and palato-alveola fricatives

Grouping variable	N	Mean	SD	Std. Error Mean	t-value	Sig.
High socio-economic background	200	30.61	8.67	.613	35.280	.000*
Low socio-economic background	200	5.63	5.00	.354		

***significant at 0.05 level; df = 398**

As presented in Table 4.46, the result was statistically significant t(398) = 35.280, p < .05. This result implies that Oyo and Ogun secondary school students from separate socio-economic backgrounds statistically significantly differ in the production of the voiced palato-alveola fricative /ʒ/. Secondary school students from high socio-economic background (M = 30.61; SD = 8.67) performed better in the production of the voiced palato-alveola fricatives than secondary school students from low socio-economic background (M = 5.63; SD = 5.00). The HFPPS students approximate to SBE better than the PS students. The mean difference between the two groups was 24.98 at the 95% confidence interval.

Research question six: Do Oyo and Ogun secondary school students drop the glottal fricative /h/ sound in their speeches based on their socio-economic backgrounds?

Secondary school students from high and low socio-economic backgrounds were assessed on the dropping of the /h/ sound where it should be produced in English words. The result is presented in Table 4.47.

Table 4.47: Independent t-test for the correlation of secondary school students socio-economic backgrounds based on /h/-dropping.

Grouping variable	N	Mean	SD	Std. Error Mean	t-value	Sig.
High socio-economic background	200	9.40	1.84	1.84	55.62	.000*
Low socio-economic background	200	.350	1.37	1.37		

***significant at 0.05 level; df = 398

As presented in Table 4.47, the result was statistically significant t(398) = 55.62, p < .05, this result implies that Oyo and Ogun secondary school students from separate socio-economic backgrounds statistically significantly differ in the h-dropping assessment. Secondary school students from high socio-economic background (M = 9.40; SD = 1.84) performed better in h-dropping assessment by producing the /h/ sound in English words than secondary school students from low socio-economic background (M = .35; SD = 1.37). The mean difference between the two groups was 9.05 at the 95% confidence interval.

Research question seven: Do Oyo and Ogun secondary school students apply the phonetic cues to stress based on their socio-economic backgrounds?

Secondary school students from high and low socio-economic backgrounds were assessed on application of the phonetic cues to stress. The results are presented in Table 4.48 below.

Table 4.48: Independent t-test for the correlation of secondary school students' socio-economic backgrounds and the application of the phonetic cues to stress

Grouping variable	N	Mean	SD	Std. Error Mean	t-value	Sig.
High socio-economic background	200	5.78	2.472	.175	30.155	.000*
Low socio-economic background	200	.27	.760	.054		

***significant at 0.05 level; df = 398

As presented in Table 4.48, the result was statistically significant $t(398) = 30.155$, $p < .05$. This result implies that Oyo and Ogun secondary school students from separate socio-economic backgrounds statistically significantly differ in the application of the phonetic cues to stress. Secondary school students from high socio-economic background ($M = 5.78$; $SD = 2.472$) performed better in the application of the phonetic cues to stress than secondary school students from the low socio-economic background ($M = .27$; $SD = .760$). The mean difference between the two groups was 5.51 at the 95% confidence interval.

Research question eight: 8. Are there differences in the assignment of intonation tunes by Oyo and Ogun secondary school students based on their socio-economic backgrounds?

Secondary school students from high and low socio-economic backgrounds were assessed on assignment of intonation tunes.

The results are presented in Table 4.49 below.

Table 4.49: Independent t-test for the correlation of secondary school students' socio-economic backgrounds and assignment of intonation tunes

Grouping variable	N	Mean	SD	Std. Error Mean	t-value	Sig.
High socio-economic background	200	15.30	4.335	.306	35.280	.000*
Low socio-economic background	200	2.81	2.503	.177		

***significant at 0.05 level; df = 398**

As presented in Table 4.49, the result was statistically significant $t(398) = 30.155$, $p < .05$. This result implies that Oyo and Ogun secondary school students from separate socio-economic backgrounds statistically significantly differ in the assignment of intonation tunes. Secondary school students from high socio-economic background ($M = 15.30$; $SD = 4.335$) performed better in the assignment of intonation tunes than secondary school students from low socio-economic background ($M = 2.81$; $SD = 2.503$). The mean difference between the two groups was 12.49 at the 95% confidence interval.

Research question nine: 9. Can Oyo and Ogun secondary school students be stratified into different social classes based on their pronunciation skills?

Secondary school students from high and low socio-economic backgrounds were assessed on their overall performance.

The results are presented in Table 4.50 below.

Table 4.50: Independent t-test for the correlation of secondary school students' socio-economic backgrounds and their overall performance in English pronunciation

Grouping variable	N	Mean	SD	Std. Error Mean	t-value	Sig.
High socio-economic background	200	77.22	13.178	.932	65.442	.000*
Low socio-economic background	200	8.97	6.556	.464		

***significant at 0.05 level; df = 398

As presented in Table 4.50, the result was statistically significant $t(398) = 65.442$, $p < .05$, this result implies that Oyo and Ogun secondary school students from separate socio-economic backgrounds statistically significantly differ in their overall performance. Secondary school students from high socio-economic background ($M = 77.22$; $SD = 13.178$) performed better in the overall assessment of all the pronunciation aspects studied than the secondary school students from low socio-economic background ($M = 8.97$; $SD = 6.556$). The mean difference between the two groups was 68.25 at the 95% confidence interval.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter is a summary of the entire study. It also includes conclusions on the previous chapters, most especially on the results of findings, and recommendations for further studies.

5.1 Summary

This study comprises five chapters. In the introductory chapter, the discussions of the background to the study where the basic ideas that necessitated the need for this kind of study are explored. Some of the very important ideas explored include linguistic variation which is presented as inherently dynamic. In the discussion of linguistic variation, emphasis is placed on social variation, which is the main focus of the study. Earlier studies on Nigerian English, with specific ones that perceived NE as regionally homogenous linguistic entity is explored. It should be noted that many of these studies concentrated on the aspect of social varieties of NE with focus on educational attainment. Also, the chapter reports that some other groups of researchers focused on the geo-tribal sub-varieties of NE.

In addition, chapter one highlights the works on correlation as well as variationist sociolinguists that investigated the relationship between linguistic structures (phonology, syntax, and lexicon) and social categories and statuses, such as sex, age, socio-economic class and many others. Labov's pioneering efforts and how he set down the tenets of variationist sociolinguistics, with the central focus of the theory as a description of the range of socially related resources for producing linguistic expressions, are also explained. This is viewed as affecting every level of linguistic system ranging from pronunciation to syntactic structures and beyond, as well as classifiable in relation to geographical, social and linguistic parameters.

Furthermore, the statement of problem that makes a case for a study such as this is presented. Issues raised include dearth of literature on the speeches of adolescents in relation to their socio-economic background; the concern that previous studies on adult participants have revealed that Nigerian English is different from standard forms such as Standard British English, hence the need to confirm further using adolescents; that pronunciation has been confirmed a major challenge to Nigerian speakers of English, using only adults as participants. In consequence, the

general locus of the study is to investigate any coincidence between Southwest Nigerian adolescents' socio-economic backgrounds and their production of English segmentals and suprasegmentals as well as conformity to phonotactic rules regarding consonant clustering and spelling/pronunciation discrepancies.

Furthermore in chapter one, one aim and nine objectives are thus identified. The objectives cover the confirmation of the socio-economic background of the participants, a test of the segmentals/phonemes as well as the suprasegmentals features of stress and intonation that have been confirmed as problematic to Nigerian speakers of English. Nine research questions are drawn from the objectives as the premise for the study. In addition, the study's significance is identified as a specific contribution to literature on Nigerian English, Nigerian English phonology and variationist sociolinguistics. The importance to language curriculum planners and language teachers is buttressed.

In chapter two, relevant literature regarding the ideas and concepts presented in the study are explored. The works of Labov, who pioneered the variationist theory and other scholars who have worked on variation in the use of language, especially English, are discussed. Many of these reviewed works examined the linguistic and social factors underlying variation. The advantage of the rich contributions to this aspect of sociolinguistics is the opportunity it affords to place the relation of language to social groups in a cross-cultural perspective.

Works within Nigerian English scholarship that could be placed within variationist sociolinguistics are also reviewed. Their emphasis on regional variants, using social indexes such as educational attainment, social acceptability and international intelligibility, are pointed out. This is done in order to reveal the missing link that the present study is attempting to fill among the existing literature on sociophonology in Nigeria.

Literature is also reviewed on Nigerian English segmentals as well as the suprasegmentals. Other studies that stand as the interface between segmental phonology and suprasegmental phonology, related concepts in the segmental aspect and others in the suprasegmental axis are also discussed. The literature on Nigerian English sociolinguistic studies is also explored, thereby revealing the dearth of literature on the interplay between socio-economic background and the pronunciation skills of Nigerian adolescents, instead of adults, as done by earlier scholars.

Furthermore, in chapter two, the two theories that constitute the framework for the study, that is, William Labov's variability concept and metrical theory are discussed. Variability concept is presented as the juxtaposition of language choices with social variables while Prince and Libbermann's metrical theory is identified as the framework for the analysis of the cues to stress by the use of metrical grid, one of its tools. The choice of metrical grid is explained as motivated by the need to confirm the (S)trong/ (W)eak alternation which determines the peculiar stress-timed rhythm of English in the speeches of the two social groups. Stress being one of the challenging suprasegmentals to Nigerians, this would determine the presence or absence of stressed and unstressed syllable alternation in the speech forms of Ibadan metropolis secondary school students.

The methodology of the research is discussed in chapter three. This covers the data gathering technique (random sampling), the target population Southwest Nigerian Secondary School students from differing socio-economic backgrounds (high and low), the participants (four hundred), drawn from four schools in South-West Nigeria, (students from the upper socio-economic background, who attend international secondary schools where students pay between three and five million Naira per annum and students from the lower class who attend a tuition-free state-owned secondary school). The data gathering techniques which include the use of questionnaires to confirm the social variables in order to ascertain the socio-economic backgrounds of the students and to confirm the amount paid per annum by the students, were also discussed. A validated list of sentences and a passage were used to gather data from the participants for the linguistic aspect of the study. In addition, the chapter presents how the performances of the students were scored and how the data were analysed using t-test for significance and metrical grid representation to corroborate the findings from the statistical analysis.

Chapter Four comprises the analysis of the data, covering the aspects of socio-economic background which confirms the participants are from different sociolinguistic backgrounds that could be termed high and low. All the HFPPS students fall into the high socio-economic class and the PS students into the low socio-economic background. The chapter reports that the results presented revealed a significant difference in the performances of HFPPS and PS from the differing socio-economic backgrounds in the production of the English segmentals, consonant

clusters, words whose sounds differ remarkably from the spellings, and the suprasegmentals of stress, intonation and rhythm.

5.2 Conclusions

The objectives and research questions drawn for the study have generated results on which the conclusions are premised. The first objective was set to confirm whether South-west Nigerian secondary school students could be socially stratified into high and low classes or not. It was discovered that they could be socially stratified. Based on socio-economic parameters such as their school fees, parental income, travelling to countries where English is spoken as a first language and other social variables, all the students that are in the HFPPS have been confirmed as belonging to the high socio-economic class while the public school students were all confirmed as belonging to the low socio-economic class, based on the same parameters. This confirms the findings of Labov (1964) that people could be stratified along socio-economic classes.

The second objective was tested. It was set to find out whether English long and short vowel pairs /ɪ - iː/, /æ - a/, /ʊ- uː/, / ɒ-ɔː/ were under-differentiated or not in the speeches of the participants from different socio-economic classes. It was discovered that the adolescents in the High-Fee-Paying Private Schools could discriminate the English long and short sounds, adequately differentiating meaning and approximating to Standard British English, while the students in the public schools under-differentiated the sounds, confirming previous studies (Odumuh ; Jowitt, 1991; Utulu, 2014) on Nigerian English vowels.

The third objective investigated the monophthongisation of English diphthongs /aɪ, aʊ, ɔɪ, əʊ ɪə,eɪ, eə/ or absence of this in the speeches of the participants from different socio-economic classes. It has been confirmed in this study that the HFPPS students from the high socio-economic class did not monophthongise the English diphthongs but produced them with their full quality while the PS students from the low socio-economic class monophthongised the diphthongs, especially the /eɪ / and /əʊ/ diphthongs while /ə / is replaced by vowels from Nigerian local languages in the production of /ɪə/ and /eə /. This confirms the finding of Utulu (2014) that Educated Urhobo (Nigerian) English has the tendency to monophthongise the English diphthongs and lose the quality of the sound to the local languages. Akinjobi (2004),

earlier confirmed that Educated Yoruba (Nigerian) English is characterised by a preponderance of strong local sounds in the position of standard English / ə /.

The fourth objective is to verify the under-differentiation of the dental fricatives /ɵ, ð/ and alveolar plosives /t, d/ in the speeches of the selected students from different socio-economic classes. It was discovered that the HFPPS students differentiated the two sets of sounds and produced /ɵ, ð/ sounds with close approximation to RP while majority of the PS students deviated significantly by substituting /t/ and /d/ for /ɵ, ð/ (a case of under differentiation) as confirmed by previous studies for Nigerian English (Jibril, 1982 ; Jowitt, 1991; Bobda, 1995, 2007; Udofot , 2004; Utulu, 2014).

The fifth objective set to verify the production of English palatal fricative /ʒ/ in the speeches of selected participants from different socio-economic classes was also tested. This sound also differentiated the participants by social stratification because the students from the High-Fee-Paying Private Schools, who are from the high socio-economic classes, approximated to the RP pronunciation of the sound while the public school students substituted other sounds such as / j/ and / z / for / ʒ /.

According to Utulu (2014), phoneme substitution is a concept used in contrastive linguistics (Lado, 1957; Weinreich, 1968), or loanword phonology (Haugen, 1950; Broselow, 2004; Egbokhare, 1990) to refer to the alteration or replacement of second (target) language (L2) phoneme by foreign language speakers. The substitution of a phoneme typically involves subjecting the sound(s) of an L2 to the first language's (L1) restrictions on its phonemic system. For example, in Yoruba English, the replacement of voiced alveolar fricative, /z/ by /s/, as in 'zip' being rendered as 'sip', is subject to the restriction that /z/ does not occur in native Yoruba phonology.

Researchers in NE, such as Banjo (1971), Jibril (1982), Bobda, (1995, 2007), Udofot (2004), among others, give classic examples of Nigerian English speakers' substitution of SBE dental fricatives /θ/ and /ð/ for alveolar stops /t/ and /d/. According to them, the substitution of the SBE dental fricatives is as a result of the difference in the phonemic systems of English and Nigerian mother tongues which lack dental fricatives in their phonology. Similarly, the substitution of

dental fricatives has been reported in Urhobo English (Kelly, 1969; Onose, 2003; Ojarikre, 2007), where both fricatives are substituted for the respective alveolar stops /t/ and /d/. Like the NE researchers cited in the foregoing, Kelly and others also explained that the substitution of SBE dental sounds for alveolar stops is motivated by the non-occurrence of dental fricatives in Urhobo.

The sixth objective is to verify whether Southwest Nigerian Secondary School students drop the h-sound in their speeches or not, based on their social classes. It was discovered that the participants were stratified, based on their performances, as the HFPPS students from the high socio-economic class produced the /h/ sound appropriately while the PS students dropped the sound where they should be produced. An interesting observation is the use of the /h/ sound in contexts where they are not present such as before *are* /a:/.

The seventh objective was set to verify the presence or absence of the phonetic cues to stress in speeches of participants from different socio-economic classes. It was discovered that the basic phonetic cues to stress such as pitch prominence and the alternation of strong and weak syllables were applied by the HFPPS students while the PS students produced the words with stress on the wrong syllables, without adequate pitch prominence and with no alternation of strong and weak syllables as characteristic of RP. The performance of the HFPPS approximated to Standard British English while PS students confirm previous findings that Nigerian speakers of English do not assign English stress appropriately (Akinjobi, 2004, 2012; Ilolo, 2013; Akindele, 2013; Adeniyi, 2012).

The eighth objective was set to find out whether or not there was a difference in intonation tune assignment by the participants, based on their socio-economic classes. The performances of the participants reflected social stratification as the HFPPS students assigned the right intonation tunes while the PS students could not. While the HFPPS students conformed to Standard British English, the PS students confirm previous findings that Nigerian speakers of English do not assign appropriate tunes, especially the complex ones, to English utterances (Akinjobi and Oladipupo, 2005; Oladipupo, 2005)

The ninth objective was set to find out whether Southwest Nigerian students could be stratified into socio-economic classes based on their total pronunciation skills. Overall, this study has

confirmed a high correlation between socio-economic classes and the phonological competence of secondary school students in the high fee paying private school and the public school studied. Labov's variability identifies the plausibility of establishing objective distribution of linguistic features and delineating socio-economic backgrounds on the basis of them. In relation to the tested areas of difficulty for Nigerians in the use of English segmentals (long and short vowel differentiation, monophthongisation of English diphthongs, substitution of English alveola plosives for dental fricatives, palato-alveola fricative production, /h/-dropping) as well as the suprasegmentals of stress and intonation, it has been clearly delineated that the adolescents from the high socio-economic background approximated to Standard English production while the ones from the low socio-economic background could not differentiate between long and short vowels, monophthongised SBE diphthongs, substituted /t, d/ for /ɵ,ð/ substituted / j, z/ for the palatal alveola fricative /ʒ/ and dropped the /h/ sound in English words. They also did not apply the phonetic cues to English stress as well as assign appropriate intonation to English intonation groups.

5.3 Recommendations

The study clearly establishes the fact that there is high dichotomy in the performances of the students of High-Fee-Paying Private Schools and their public school counterparts in the tested variables. The performances of the public school students in the tested aspects of pronunciation are poor while those of the High-Fee-Paying Private Schools approximate closely to Standard British English. Meanwhile, the results of the demographic analysis have confirmed that they could be stratified according to their socio-economic background into social classes. This implies that there is a tendency for students from the low socio-economic classes to perform poorly in English pronunciation. As a result of these discoveries in the study, the following recommendations are made.

There is a serious need for government to intervene in the provision of useful information on pronunciation skills for curriculum planners and language teachers in the public schools. In addition, language laboratories should be established in the schools to help the students in the practice of English pronunciation.

Moreover, planners of the curriculum and other stakeholders must ensure that the contents are relevant and practical. They must also make sure that the curricula are implementable across all schools, especially the low fee paying. Monitoring of the implementation of the curriculum contents needs to be re-introduced. This is capable of giving feedback to the curriculum planners regarding the suitability or otherwise of the contents with regards to the teaching and learning of English pronunciation.

There is also a need for the teachers of oral English at public schools to attend conferences, workshops, seminars, symposiums and other training programmes. This will enhance self-development. In most public schools, basic facilities that can stimulate learning are missing. This should be provided. In addition, knowledge on new techniques of teaching pronunciation should be utilised adequately in the classroom.

In conclusion, government should help in fostering mutual interaction between the students of the high fee paying schools and their counterparts in the public schools through a variety of programmes. Since "a major issue of discussion among applied linguists who are concerned with the teaching of English is the choice of a pronunciation models for the 21st century" (Akinjobi 2012:49), students from the high fee paying schools can serve as potential models of RP to their counterparts in public schools in organised interactional programmes of government. Likewise, proprietors of high fee paying schools should also organise programmes that could encourage these adolescents to interact. This could serve as a means of giving back to the society.

Schools could organise programmes such as tutorials or summer coaching classes for the students from the public schools, using computer mediated sources of mother tongue pronunciation. This will serve as a significant response to the recommendations of Akinjobi (2012), Fajobi (2013), Banjo (2014), Bamgbose (2014), Awonusi (2014), Fakoya (2014) and many others for the retention of RP "as the target more so now that ICT has made it possible for learners as well as non-native teachers to practise with materials developed by native speakers" (Akinjobi, 2012:59).

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APPENDICES

Appendix 1

Students' Questionnaires

DEPARTMENT OF ENGLISH
UNIVERSITY OF IBADAN

Dear Respondent,

This research is being carried out in the Department of English of the University of Ibadan.

Kindly note that the information you are required to give will be used for academic purposes only and will be treated with utmost confidentiality.

Thank you for your co-operation.

1. What is the name of your school?.....

2. In which city is it located?.....

3. What is your designation (e.g. class teacher)?.....

4. What class(es) do you teach?.....

5. How many students are in your class?.....

Please answer questions 6 – 10 by circling only ONE option. Question 9 may have more than one answer.

6. What are the current school fees paid by the students?

N2 million and per annum above [ ]
They don't pay [ ]
Others specify .....

7. Do the parents pay their wards' school fees promptly?

Yes [ ]

No [ ]

8. How many parents have not paid their wards' fees for this academic session?

90% [ ]

70% [ ]

50% [ ]

< 20% [ ]

Not applicable [ ]

9. Do the students in your school write any of the following examinations?

Cambridge GCE/IGCSEs

Edexcel

SAT/TOEFL

International Baccalaureate

Yes [ ]

No [ ]

10. Do you consider your school to be an international school?

Yes [ ]

No [ ]

11. Upon graduation, majority of the students in this school go on to

National Tertiary Institutions [ ]

Foreign Tertiary Institutions [ ]

Learn a trade [ ]

Set up a business [ ]

Do not complete secondary school [ ]

Appendix 2

Principals' questionnaires

DEPARTMENT OF ENGLISH
UNIVERSITY OF IBADAN

B

Dear Respondent,

Kindly note that the information you are required to give will be used for academic purposes only and will be treated with utmost confidentiality.

Thank you for your co-operation.

Please fill in, tick or circle your answers as appropriate.

1. What is the name of your school?
.....

2. In which city is it located?
.....

3. You are Male [ ] Female [ ]

4. What nursery school did you attend?.....

5. What primary school did you go to?.....

7. What language(s) do you speak?
.....

8. What is your first language?.....

9. What language(s) do your parents speak to you?.....

(Please tick one)

10. My school fee per annum is:

N2 million and per annum above [ ]

We don't pay [ ]

Others specify .....

11. My school fees are paid by:

One or both of my parents [ ]

A relation/sponsor [ ]

Government [ ]

12. What is the highest grade of school your father has completed?

University [ ]

Polytechnic/Monotechnic/College of Education [ ]

Secondary School/Technical College [ ]

Primary School [ ]

No formal education [ ]

13. What is the highest grade of school your mother has completed?

University [ ]

Polytechnic/Monotechnic/College of Education [ ]

Secondary School/Technical College [ ]

Primary School [ ]

No formal education [ ]

14. What kind of income does your father receive?

Salary from paid employment [ ]

Income from self-employment [ ]

Pension [ ]

Support from relatives [ ]

Support from community/church [ ]

15. What kind of income does your mother receive?

Salary from paid employment [ ]

Income from self-employment [ ]
Pension [ ]
Support from relatives [ ]
Support from community/church [ ]

16. (Not applicable to all) If you have a sponsor/relation paying your school fees, what kind of income does he/she receive?

Salary from paid-employment [ ]
Income from self-employment [ ]
Pension [ ]
Support from relatives [ ]
Support from community/church [ ]

17. What are your parents' occupations?

Father _____ Mother _____

18. (Not applicable to all) If you have a relation/sponsor paying your fees, what is his/her occupation?

_____

19. Based on the options provided, can you make a guess as to how much your parents or sponsors earn per month?

N1, 000,000 – N500, 000 [ ]
N500, 000 – N250, 000 [ ]
N250, 000 – N100, 000 [ ]
N100, 000 – N50, 000 [ ]
N 50,000 – N10, 000 [ ]

Residential Area

20. I live within:

An Estate [ ]
A Government Reserved Area [ ]
A General Neighbourhood [ ]

21. The house we live in belongs to:

My parents/one of my parents [ ]
Government [ ]
A landlord/a relation [ ]

22. What type of house do you live in?

Detached house (*storey building/bungalow with own compound)* [ ]
Semi-detached house (*storey building/bungalow with partially shared compound*) [ ]
Flat [ ]
Multiple Occupant dwelling (*face me, I face you*) [ ]
Others (please specify) [ ]

23. How many people live in your house?

10 people [ ]
6 people [ ]
5 people [ ]
4 people [ ]
Others (please specify) [ ]

24. What do you normally use for cooking?

Electricity [ ]
Gas [ ]
Kerosene [ ]
Charcoal [ ]
Firewood [ ]

25. What is the main source of water for drinking in your house?

Tap/Pipe-borne water/ expensive bottled water [ ]
Bore-hole [ ]
Well/rain/sachet water [ ]

26. What type of toilet facility do you use in your house?

Covered Pit Latrine [ ]
Open Pit Latrine [ ]
Flush Toilet [ ]
Bush [ ]
Others (please specify) .....

27. What type of bathroom do you use?

Inside (each room with one) [ ]
Outside (built) [ ]
Outside (makeshift) [ ]
None [ ]

28. What type of kitchen do you use?

Inside [ ]
Outside (built) [ ]
Outside (makeshift) [ ]
None [ ]

Questions 29 – 32. Please circle your answers. Some questions may have more than one answer.

29. Do you have any of the following in your house?

Motor vehicle	Yes	No
Motor cycle	Yes	No
Bicycle	Yes	No

30. Do you own any of the following in your house?

Television	Yes	No
Radio	Yes	No
Mobile Phone	Yes	No
Computer	Yes	No
DVD Player	Yes	No

31. Do your parents employ the following in your house?

Driver	Yes	No
House help	Yes	No
Cook	Yes	No
Washman	Yes	No
Gardner	Yes	No
Gateman	Yes	No

32**.** Do you have personal access to any of the following?

Mobile Phone	Yes	No
DSTV	Yes	No
IPad	Yes	No
Laptop/Computer	Yes	No
Internet	Yes	No

33. Which of these do you normally have for breakfast?

Bread & Tea only	[ ]
Bread, Butter & Tea only	[ ]
Bread, Butter, Tea & Cereal	[ ]
Bread, Butter, Eggs, Cereal & Tea	[ ]
Yam & Oil	[ ]

Yam & Stew [ ]

Yam & Fish or Meat Stew [ ]

Yam & Eggs [ ]

Pap only [ ]

Pap with sugar [ ]

Pap with sugar & milk [ ]

Pap with akara/moi-moi [ ]

Others (please specify) .....

34. How often do you travel outside Nigeria?

Once a year [ ]

More than once a year [ ]

Never [ ]

35. Have you travelled to countries where English is a first language such as Britain and America?

No [ ]

Yes [ ]

36. Where did you spend the first five years of your life? .....

Appendix 3

Validated Sentences and Passage

DEPARTMENT OF ENGLISH

UNIVERSITY OF IBADAN

NOTE: Please read the following as naturally as possible. Thank you. Start by completing the following sentences with the appropriate information:

My name is……..……

I am a student of ……..

My research data number is……

(Read the number on your questionnaire)

EXERCISE ONE

1. Henry picked the wreath for our counsellor.
2. Vivian and her peers left their towels on Phoebe's chair in London.
3. I have a vat with the clerk.
4. I really love the bar of chocolate in the pan.
5. He puts a bandage as blood oozes from a cut on his brother's arm.
6. He took me to another research group.
7. I checked the cot before sorting the items on the couch.
8. Churchill got his xylophone at the court after a thorough session.
9. I will put the Europeans before the Asians in training and coaching.
10. Some Zionists can have visions of eternal life without any seizure.
11. I want your opinion on this theory of life and sorrow.
12. He took five millilitres of the mixture as instructed in the texts he read.
13. About one sixth of the pupils wrote the examination.

14. The plumber listened to the policeman sing as he checked his chassis number.
15. *Yellow Yellow Yacht and the Ballet in the Rain* is my best novel.

EXERCISE TWO

Impatience has been around for a long time. Several people have the reputation for being totally impatient across the world's geography, especially since the industrial age. There is nothing new about people losing their patience while stuck in traffic, waiting in line to use automated teller machines, getting records at personnel offices or listening to politicians' campaigns. But some experts believe that people are less patient than in the past - for reasons that might surprise you. Some analysts suggest that in recent years, many people are less patient because of technology. According to the *Gazette of Montreal*, Canada and *The Guardian* of Japan, some researchers suggest that "digital technology, from cellphones, to cameras, to emails, to iPods, and today's harsh economic realities, is changing our lives and assumptions". Family psychologist, Dr. Jenniffer Hartstein, makes some sobering observations. She explains that "we have become an immediate gratification culture, and we expect things to move quickly, efficiently and in the way we want. When things are comatose, we tend to become increasingly frustrated and irritable, a sign of impatience". She adds, "We've lost the art of just slowing down and enjoying the moment".

APPENDIX 4

Score Sheet

SEGMENTALS						TOTAL	
Vowel Differentiation	/I/- /i:/ 1Picked- Wreath 2Vivian-Phoebe's	/æ/- /a/ - /a:/- /ɜ:/ 3Vat- Clerk 4Bar-pan	/ʊ/- /u:/ 5Put-oozes 6Took-group	/ɒ/ - /ɔ:/ 7Cot-sorting 8Got-court			**10**
English Diphthongs/Triphthongs	9/eI/-Asians	9/eI/-Training	9/ əʊ/-Coaching	10/ aɪə/-Zionists	11/ɪə/-Theory		**10**
Consonant Clusters	12Mixture /kstʃ/	12Instructed /str/	12Texts /ksts/	13Sixth / ksθ/	13Examination /gz/		**10**
Silent Letters	14Plumber	14Listened	14Chassis	15Yacht	15Ballet		**10**
	Supposedly Difficult Sounds						**10**
/ʌ/	4 love,	5blood					**2**
/ð/	5brother,	6another					**2**
/ŋ/	9training	9coaching					**2**
/ʒ/	10vision	10seizure					**2**
/ɵ/	8thorough	11theory					**2**
SUPRASEGMENTALS							
Appropriate stress assignment	Ge'ography	'Automated	Su'ggest	Montre'al	'Comatose		**15**
Phonetic Cues to Stress	Suggest	Comatose	For a	(Listening) to	(Because) of		
Pitch Prominence	-gest	Co-	None	None	None		**5**
Duration	Gest	Co-	Reduced	Reduced	Reduced		**5**
Vowel weakening	sə-	-ma-	ə ə	ə	-ə-		**5**

Appendix 4

Scoring Format for the Validated Sentences and Passage