

**DETERMINANTS OF CANDIDATES' PERFORMANCE IN THE WEST AFRICAN  
SENIOR SCHOOL CERTIFICATE EXAMINATIONS' ENGLISH LANGUAGE AND  
MATHEMATICS IN IMO STATE, NIGERIA**

**BY**

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## ABSTRACT

Despite the core status of English Language and Mathematics, available evidence shows that 50% success is hardly recorded by candidates in the West African Senior School Certificate Examination (WASSCE) in Nigeria. Studies have revealed that factors such as school type, school location and poor teaching methods affect candidates' performance in these subjects at WASSCE. However, there is limited information on other factors (illegible handwriting, writing several examinations within the same period, study habit, coverage of syllabus, test anxiety, monitoring of conduct of WASSCE, assessment of WASSCE scripts, number of teachers and teaching/learning resources) that may affect learning achievement. This study, therefore, investigated the relationship between these factors and candidates' achievement in WASSCE English Language and Mathematics in Imo State, Nigeria.

The study adopted survey design using tracer approach. Purposive sampling technique was used to select 418 past WASSCE candidates who wrote the examination within the period (2010-2013) who were enrolled into Imo State University; Federal Polytechnic, Nekede; Alvan Ikoku College of Education and six continuing education centres; 109 teachers and 53 principals from schools where the candidates attended also participated. The Ten research instruments used were: Study Habit Questionnaire ( $r=0.72$ ), Test Anxiety Scale ( $r=0.69$ ), Students' Rating of Teacher Factors Scale ( $r=0.66$ ), Coverage of Syllabus questionnaire ( $r=0.86$ ), Perceived Legibility of Handwriting Questionnaire ( $r=0.87$ ), Perceived Adherence to Examination Instruction Questionnaire ( $r=0.87$ ), Teachers' Questionnaire ( $r=0.61$ ), Principals' Questionnaire ( $r=0.84$ ), Availability and use of learning resources checklist and an interview schedule for six WASSCE team leaders. Candidates' WASSCE results in the two subjects were used as index of achievement. Percentages and multiple regression were used for data analysis at  $p=0.05$  while thematic analysis was used for the qualitative data.

Ninety per cent of the candidates indicated that they wrote up to four examinations apart from WASSCE, 80.0% claimed that writing many examinations did not affect their performance in WASSCE. About fifty-two per cent of the principals were of the view that WASSCE is effectively monitored, while about 55.0% of the teachers were of contrary opinion. The inter correlation matrix showed that there is no multicollinearity among the predictors. All the predictors jointly accounted for 4.8% and 9.9% of the variance observed in English Language and Mathematics respectively. Study habit ( $\beta=0.01$ ), coverage of syllabus ( $\beta=0.01$ ) and insufficient teachers ( $\beta=0.02$ ) had significant contributions to achievement in Mathematics while others did not. However, none of the factors had any significant contribution to achievement in English Language. Team Leaders revealed that WAEC examiners are objective in assessing candidates' scripts.

Study habit and coverage of syllabus contributed to candidates' achievement in Mathematics. Students should be encouraged to study hard and be assisted to cover the prescribed West African Senior School Certificate Examination syllabus so that they can perform better in the examination.

**Key words:** West African Senior School Certificate Examination, Imo State Secondary School Students, Performance in English Language and Mathematics.

**Word count:** 452

### **CERTIFICATION**

I certify that this thesis was carried out by Mr Daberechukwu Daberenze OPARAKU in the Institute of Education, University of Ibadan.

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## **DEDICATION**

This thesis is dedicated to the **Almighty God** for seeing me through the rigours of this programme.

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the problem

The recently introduced government policy in education in Nigeria requires a child to complete a nine year basic education at the age of fourteen to fifteen years before proceeding to a three year secondary education. The three year secondary education terminates after the students must have written the West African Senior School Certificate Examination (WASSCE) which is presently conducted in Nigeria by the West African Examinations Council (WAEC). The West African Senior School Certificate Examination is among the standardized examinations in Nigeria by which students are assessed to ascertain how much they have achieved after being exposed to the secondary school curricular.

It is a common knowledge that the acceptable performance in the West African Senior School Certificate Examination for both ordinary level certification and entrance for higher education is five credit passes, including English Language and Mathematics (.i.e. any candidate who does not obtain five credit passes including English Language and Mathematics cannot be categorized as having passed the West African Senior School Certificate Examination).

**Table1.1: Percentage of candidates that obtained credit passes in five subjects including English Language and Mathematics in May/June WASSCE and those that obtained credit passes in the two subjects separately (2005-2012)**

YEAR	Eng. & Maths plus three other Subjects.	English Language (A1-C6)	Mathematics (A1-C6)
2005	27.53%	26%	38.66%
2006	15.56%	33.5%	41.12%
2007	25.54%	30.31%	46.75%
2008	13.76%	35.02%	57.28%
2009	25.99%	41.55%	47.04%
2010	23.36%	35.12%	41.50%
2011	30.09%	57.23%	40.34%
2012	39%	58.51%	50.58%

Source: Statistics Dept. WAEC, Lagos.

The table above shows the percentage of candidates that obtained at least five credit passes in English Language and Mathematics in the West African Senior School Certificate

Examination conducted by the West African Examinations Council between 2005 and 2012. From the table, it is clear that fifty per cent success is hardly recorded in the West African Senior School Certificate Examination in Nigeria. Given the importance of English Language and Mathematics in national development, one wonders if the objectives of exposing Nigerian children to the subjects at the secondary school level are being met. The poor performance of candidates in these subjects in the West African Senior School Certificate Examination in Nigeria in recent times is not meeting the required/expectation and has become a source of worry to many stakeholders in the education industry. Obanya (2012) alerts that examination failure signals a doomsday. He concluded that examination failure is only possible where there is education failure. This is because the quality of an educational system is, to some extent, measured by the learning achievement of those who pass through the system. In this case, the quality of a nation's secondary education system can be determined by the achievement of candidates in English Language and Mathematics in terminal examinations like the WASSCE.

The importance of English Language and Mathematics as school subjects and in national development has been stressed. Soyinka (2007) and Jason (2010) have described English Language as a global lingua franca and a major tool for science, events, business, aviation, international trade, journalism, administration, entertainment and diplomacy. To Manivannan (2006), English Language is one tool used to establish viewpoint and promote our worldview. While Joshi (2013) notes that English Language helps students to perform well in their social life, build strong relationships and have better understanding of issues in life. This points to the fact that without English Language, an individual may not properly fit into the world of today. With specific reference to education, English is the language of instruction in Nigerian educational system. Proficiency in English Language affects students' achievement in all subjects because it is the language of instruction in schools (Cardenas, 2011). Thus, Senior School Certificate Examination English Language aims at assessing basic communication skills in written and spoken medium in students (NECO, 2008).

Mathematics, on the other hand, is one subject that promotes reasoning ability in students. It is also a wheel for meaningful development in any society. According to Amadalo (2012), the main objective of teaching mathematics at the secondary school level is to produce people who will be numerate, orderly, logical, accurate and precise in thought. To Odeyemi (2004), mathematics relies on both logic and creativity; and it is pursued both for a variety of practical purposes and for its intrinsic interest. He further posits that the essence of mathematics lies in its beauty of orderliness and precision, and in the intellectual challenge it



provides for those who study it, adding that studented to perceive mathematics as part of the scientific endeavour, comprehend the nature of mathematical thinking and become familiar with key mathematical ideas and skills. Makarfi (2001) sees mathematics as a universal subject that influences all other branches and fields of learning. This is true because almost every course of study in higher institutions of learning undertakes statistics and research methods which require one form of mathematical calculation or the other. Thus, several researches have been conducted to find out the factors that may be responsible for low achievement of candidates in the West African Senior School Certificate Examination English Language and Mathematics in Nigeria.

In search of these factors, Adelakun and Adewale (2011) studied sociological factors that affect assessment in public examinations in Nigeria. Among the findings of the authors is that non recognition of past services of the examiners by examination boards affect the examiners' attitude towards assessment in public examinations. Inother words, since they feel their services such as assessing candidates' scripts are not adequately recognised and remunerated, they may not be thorough in their subsequent assessment services to the examination bodies. They observed that examiners need to demonstrate more commitment, transparency, responsiveness and professionalism during assessment in view of the strategic roles they play in nation building. Addae-Mensa (2006) also considered assessment quality of examiners in Ghana. His study revealed that examiners were not accurate in assessment of candidates' papers. This inaccuracy may be in terms of following the marking scheme or in recording scores awarded. By implication, inaccuracy of examiners could contribute to poor performance in such examinations. Hence, Anikweze (2005) in Onuka (2009) believes that assessment methods could be improved for better schooling and learning. While Evelyn and Joseph (2009) see assessment as the use of a variety of procedures to collect information about learning and instruction. Thus, in the 2013 WASSCE (Nov/Dec), the West African Examinations Council introduced e-Marking which required scanning of scripts and then scoring them online. e-Marking involves fewer examiners and begin shortly after the exams are over as well as reduces the margin of errors by examiners during traditional marking i. e. manual marking with pen (WAEC, 2013).

Also, Orubu (2010) and Solomon (2012) investigated the availability and use of teaching and learning materials in Bayelsa and Ondo state schools respectively. Their studies revealed that non-availability or inadequacy of instructional materials, laboratories, libraries, tables and chairs among others hindered effective teaching and learning in schools. Orubu (2010) reported that non-availability of instructional materialsin schools is caused by poor

maintenance of available ones, vandalization, lack of technical know-how on the use of available ones and inadequate security in schools among other reasons. Taylor (2010) notes that the conditions and availability of resources at a school can play a major role in determining what and how the students learn. He points out that a well-equipped classroom with space and the least amount of distractions will usually help students to focus on instruction. Scholars like Alimi, Eniola and Alabi (2012), and Cynthia and Megan (2008) equally reported a strong relationship between availability and use of instructional facilities and students' academic achievement in senior secondary schools.

In separate studies, Uba (2012) and Adepoju (2012) surveyed school quality variables and teacher personality traits that affect learning outcomes in schools. They reported teacher qualification, years of teaching experience, examining experience, in-service training, and punctuality to classes among others as significant determinants of learning outcomes among students. James and Jonathan (2010) observes that the requirements for teacher professional status include aspects such as qualification, continuing professional development (in-service training), and adherence to a code of conduct. They further added that a country defines its teacher qualifications in terms of her students' learning outcomes, which are presented as statements of what a learner knows, understands, and is able to do on completion of a learning process. It is the view of Taylor (2010) that if a teacher serves as an ideal role model, demonstrates competence, effective skills, expertise and confidence in the subject he or she is teaching, the students will respond positively by having good grades.

Debra, Celeste, Zena, Diane and Michael (2006) found a positive relationship between teacher salary and experience and students' academic achievement in the USA. Kimberly and Paul (2009) also hinted that African countries alone needs to recruit between two to four million teachers to meet the Education For All (EFA) goals, while eighteen million teachers are to be recruited worldwide to achieve the Universal Primary Education goal by 2015. This is supported by Obanya (2012) who observes that the teacher situation in Africa is characterized by both quantitative insufficiency and qualitative inadequacy. Obanya noted that the number of teachers is insufficient for the teaming population of students who need their services. While the Commonwealth (2008) draws attention to the brain-drain of teachers in secondary schools which it attributes to low salaries and poor conditions of service. It notes that secondary school teachers' salaries were generally low and below the poverty line.

Some studies have equally examined the contribution of feedback from continuous assessment to performance of students in examinations. Onuka (2009) sees feedback as the

application of evaluation results for correcting anomalies in students' performance. His study found that the feedback resulting from school based assessment assisted students to discover their areas of strength and weaknesses, which they strive to strengthen or ameliorate. Osoba and Bakare (2008) found a significant difference between the academic performance of students with delayed feedback and those with prompt feedback in multiple choice questions. Their findings showed that students with prompt feedback did better academically than those with delayed feedback. They equally reported a significant difference between the level of test anxiety of students with prompt feedback and those with delayed feedback. According to them, students with delayed feedback were more test anxious than those with prompt feedback. They identified feedback and test anxiety as factors that could affect academic performance and suggested prompt feedback to students on their performance in both internal and external (SSCE) examinations. Also, Falaye (1995) reported that students who received either immediate or delayed feedback performed better than those who did not receive feedback at all. She added that the feedback helped to improve performance in subsequent task. According to her "... this information (feedback) in turn stimulated the learners to correct their errors and to perform better subsequently". It is a common knowledge that feedback plays significant role in formative evaluation i.e. feedback is important in preparing candidates for senior school certificate examinations.

Akanbi (2007) identified Learner's immaturation in chronological age as a cognitive factor that affect candidates' performance in public examinations. According to Akanbi, the age at which children enrol for schooling may affect their cognitive capability and ability to gain maximally from academic endeavour. This is supported by Oparaku (2010) who, in discussing the blind spots in secondary education in Nigeria, observed that it is now rampant to see children gaining entrance to secondary school between the ages of eight to nine years old. Obviously, these children attempt senior school certificate examination at an age when they are not cognitively matured to sit for the examination. It is, therefore, not impossible that writing WASSCE at an early age contributes to poor performance of candidates in senior school certificate examination.

A number of scholars have attributed students' academic achievement to their gender (Thomas and Stokton, 2003; Machine and McNally, 2006; Elia and Philip, 2007). Maltem and Serap (2004) also reports that a smaller number of female students managed to enter the university in Turkey and when they do so, they enter with lower scores. The authors, however, concluded that once the female students are admitted to the university, they excel in their studies and perform better than their male counterparts. Martins (2004) investigated the

role of gender on secondary school students' academic performance in Edo State, Nigeria. He reports that schools with high proportion of boys performed better in Senior School Certificate Examination than schools with high proportion of girls. Adeleke (2012) also reports that male students performed significantly higher than females in Number and Numeration, Algebraic process, Geometry, Mensuration and Trigonometry in Senior Secondary Mathematics. Based on this, Adeleke suggested that a periodic career workshop should be organized for female students to be taught the importance of mathematics.

In the same vein, Aremu (2011) identified attitude, students' low self-concept and poor study habits as psychological factors responsible for poor performance in senior school certificate examinations. According to the author, negative attitude of students towards school work affect their preparation for and performance in examinations, while poor study habit will normally translate to poor management of time, poor comprehension, poor assimilation, poor retention, and poor recall of facts by students, especially during examinations. Aremu, however, suggested cognitive restructuring, use of modelling strategy, assertiveness training, behaviour modification and guidance and counselling as the way out. The finding of Aremu is corroborated by Olaleye (2004) and Adetoro (2012), who in separate studies, report study habit as having significant effects on academic achievement of students.

In the view of Markman (2012), students who studied by testing themselves are likely to perform better and achieve more in academic activities. He advised students to engage in deeper self-testing before any examination. Also, Ogbodo (2012) observed that productive study habits require learners to prepare personal time table for themselves, and allocate time to each subject depending on how difficult the subject is to them. She outlined early arrival to classes, reading, note-taking; teacher consultation among others as factors that enhance good study habits. Harry and Herbert (1997) worked on study habits of sixty-nine first year Engineering students in Pennsylvania. They reported that study habit is associated with achievement status of students i.e. students who studied more had higher achievement scores than those who studied less. Reena (2010) recommends that students should form or join a study group and attend all their classes in order to improve their study habits.

Another factor that could affect students' performance in examinations is test anxiety. Bimbola (2004) after an experimental study reports test anxiety as one of the factors having significant effects on students' academic achievement in senior secondary schools. Zeidner (1998) sees test anxiety as a combination of perceived physiological over arousal (i.e. being excited because one feels a question is cheap), feelings of worry and dread, self-depreciating thoughts and tension that occur during test situations. It is a physiological condition in which

students experience fear and tension before and/or during examinations. Saland (2012) adds that test anxiety can drastically hinder an individual's ability to perform well in school as well as negatively affect achievement in examinations. Cassady (2010) asserts that between 25-40 per cent of students experience test anxiety. According to him, anxiousness is evoked when a student believes that the evaluative situation (i.e. an examination) exceeds his or her intellectual capabilities. He maintains that test anxiety manifest in wet hands, delay in approaching questions and feelings of nervousness during examinations. Saland (2012) reports that test anxiety is caused by ineffective teaching; pressure from peers, family and teachers; poor prior testing performance and poor study habits. While Donna (2011) opines that test anxiety can lead to poorer grades and lower scores on standardized tests (such as WASSCE).

Scholars like Shikuku (2012) studied the effect of syllabus coverage on students' performance in Kenya Certificate of Secondary Education Examination (KCSEE) between 2003 and 2007. The study result shows that coverage of syllabus has a significant effect on students' performance i.e. schools that cover the syllabus 100% performed better than those that did not cover the syllabus fully. Amadalo, Shikuku and Wasike (2012) also found a positive relationship between coverage of syllabus and students' performance in national examinations. Hence, WAEC (2009) notes that examination syllabuses are not properly covered before examinations in some cases. It maintained that some candidates, and perhaps their teachers, limit their preparation for WASSCE to some sections of the syllabus and that candidates who do not cover the syllabus properly may not answer all the required questions to pass their WASSCE. Uwadiae (2000) also observes that students are poorly equipped academically by their schools to create the desired confidence to face public examinations.

Uduh (2010) and the WAEC (2004-2007) equally identified students' inadequate preparation, poor coverage of the syllabus, failure to adhere to rubrics, lack of understanding of the demands of the questions, illegible hand writing and spelling mistakes, shallow knowledge of subject matter, incorrect interpretation of questions, poor knowledge of examination techniques, test anxiety and examination malpractices as causes of candidates' poor performance in senior school certificate examination. Adherence to rubrics has to do with strictly following instructions while answering WASSCE questions. Atul (2000) in Uduh (2010) therefore, suggested that a candidate who does not understand examination instructions at first should read them again as non-adherence to examination instructions may affect performance in such examination. However, it may not be out of place for candidates to ask supervisors/invigilators for clarification of instructions where they do not understand

before attempting the questions. Uduh (2010) advised that candidates should write legibly and be sure of the correct spelling of any word they want to write.

Ola-Gbadamosi (2009) investigated curriculum factors responsible for students' performance in public examinations. He found inconsistency and insincerity on the part of government in addressing problems of schools and the funding requirements; lack of competent, conscientious and highly motivated teachers; inadequate and poorly maintained infrastructure, ill-equipped laboratories, libraries, insufficient teaching aids, over population of schools and over-crowded classrooms amongst other factors as determining performance in public examinations. He called on the government to employ highly motivated, conscious and efficient teachers for our schools, especially at the senior secondary school levels.

Oke(2010)considered the effect of school type on candidates' performance in West African Senior School Certificate Examination. The study involved one thousand, two hundred students and six hundred teachers from sixty secondary schools of different ownership status, and their performance in WASSCE between 2002 and 2006. Findings of the study revealed that private school candidates performed better than public school candidates. Also, Ibode and Oparaku (2007) studied the effect of school type on candidates' performance in WASSCE. The study involved fifteen private schools and fifteen public schools. The authors found private school candidates performing better than public school candidates in Lagos State between 2005 and 2007. Likewise, Okwilagwe (2005) in evaluating the private-public school dichotomy, found private schools to perform better than public schools in senior school certificate examination by both WAEC and NECO between 2000 and 2001 in Ibadan, Oyo State.

Earlier, Isiugo-Abanihe and Labo-Popoola (2004) studied school type and school location as environmental factors in learning English as a second language. They equally found private schools to perform better in SSCE by NECO in Osun State than public schools, while urban schools did better than rural schools. But David and Kathleen (2006) report that public school graduates did better in national examinations than their private schools peers in Indonesia. Their findings also show that students from Muslim private schools did not do better academically than students from other secular private schools. They concluded that higher quality inputs at public junior secondary schools promote higher test scores. While Lorenzo (2004) reports that private high schools appear to be associated with low academic performance in Milan, Italy.

However, Abena (2001) noted that the comparison between the performance level of children in private and public schools is not a fair one. She pointed out that the class size in

the private schools is smaller with children having access to books that they can take home to study, and therefore teachers can give individual attention to them. This small class size results in low candidature in public examinations. While public schools have very large classes and experience large candidature in public examinations. Therefore, if size of candidature is considered, then it is truly unfair to compare the performance of private and public schools in public examinations.

Obanya (2012) while delivering the WAEC Endowment Fund Lecture noted that students at the senior secondary school level in Nigeria are exposed to so many examinations in their final year. Apart from the terminal examinations which they sit for thrice in an academic session, they sit for several national and international examinations. In senior secondary three (SS3), candidates sit for Mock Examination prior to the May/June WASSCE, IGCSE by Cambridge in U.K, American SAT, France International Baccalaureate (IB) and so on. Even, a reasonable number of SS3 students sit for the UTME to qualify for admission into higher institutions in September when their WASSCE results are released. Obanya describes this situation as a climate of stress and drudgery which may not produce desirable results. It, therefore, appears that the number of examinations written by candidates within the same period of time may affect their performance in WASSCE. Personal experience has shown that most papers in WASSCE and IGCSE are taken simultaneously, the same day and time by the same set of candidates. The school authorities thus plead for IGCSE papers to be taken after the WASSCE paper since WASSCE is a home based examination. By the time candidates complete these examinations, they are already switched off i.e. they are exhausted from writing school MOCK, UTME, WASSCE, IGCSE, IB, SAT etc. Thus, some private school owners, especially in Lagos State, attribute the performance in SSCE by National Examinations Council (NECO) to this situation and therefore no longer enrol their students for NECO SSCE.

Monitoring is another variable of concern in this study. Valedoz and Bamberger (1994) sees monitoring as an internal activity of programme management, the purpose of which is to determine whether programmes have been or are being implemented as planned i.e. whether resources are being mobilised or products are being delivered on schedule. They noted that monitoring is a continuous activity which aims at ensuring that a programme achieves its defined objectives within the prescribed time-frame and budget. The authors isolated two types of monitoring namely: *input monitoring* which occurs when a programme is going on and *output monitoring* which is done to determine the quality of products and services. As Kathleen (1988) puts it, monitoring can be defined as activities pursued by teachers to keep

track of student learning for purposes of making instructional decisions and providing feedback to students on their progress. According to Phil (2007) Monitoring ensures that all activities are carried out by the right people and in time.

Monitoring of senior school certificate examination is an input monitoring done by public examination bodies concerned to ensure that school authorities, supervisors, invigilators and candidates conform to the stipulated guidelines for conducting the examination. They use both their staff members and mainly competent staff members of tertiary institutions in the country to monitor the conduct of senior school certificate examination. These monitors give regular feedback to the examination bodies on the progress of and conduct of such examinations. The feedback helps the management of the examination bodies to plan the implementation of subsequent examinations as well as decide on reported cases of irregularities during the examinations.

From the fore-going, it is clear that performance of candidates in senior school certificate examinations in Nigeria is raising a lot of heat and therefore the issue is being approached from different angles by scholars and stakeholders. Therefore, there is a need to carry out a study that would investigate some factors that are responsible for poor performance of candidates in West African Senior School Certificate Examination conducted by the West African Examinations Council.

## **1.2 Statement of the problem**

The varying levels of candidates' academic achievement in schools have been a subject of investigation all over the world. In Nigeria, the performance of candidates in the West African Senior School Certificate Examination has not met the required expectation. Available evidences of the performance in the examination conducted by the West African Examinations Council between 2005-2012 shows that fifty per cent success is hardly recorded in English Language and Mathematics in WASSCE in Nigeria over the years.

Usually, public disapproval follows the release of Senior School Certificate Examinations in the country due to the low level of candidates' performance in the examinations. This disapproval also emanates from the vast majority of candidates who could not meet university entry requirement of credit passes in five subjects including English Language and Mathematics. These two subjects are compulsory requirements for admission into undergraduate degree programmes in most universities in Nigeria.

Despite the outcry and condemnation of candidates' poor performance in WASSCE, there seems to be little or no studies relating performance in the examination to ability of



candidates to understand and follow examination instructions, legibility of candidates' handwriting, writing of too many examinations (school, national and international) within the same period, teachers' and students' coverage of prescribed WASSCE syllabus, the efficacy of monitoring WASSCE conduct, and the objectivity of assessment procedure, all of which this study focused on. In addition to this, previous studies on factors affecting learning achievement tend to focus on students who have not yet sat for WASSCE, especially those in senior secondary two (SS2). But participants in this particular study constitutes past WASSCE candidates. This study therefore, investigated some determinants (age, gender, study habit, test anxiety, perceived adherence to instructions, perceived legibility of handwriting, number of examinations written within the same period of time, coverage of syllabus, provision of continuous assessment feedback to students, prompt attendance to classes, teaching/examining experience, qualification) of candidates' performance in West African Senior School Certificate Examination which is conducted by the West African Examinations Council (WAEC) in Imo State, Nigeria.

### **1.3 Research Questions**

- 1) Does over-load of candidates (writing many examinations within the same period of WASSCE) affect performance in WASSCE English Language and Mathematics in Imo State?
  
- 2) What is the perception of Principals and Teachers on the impact of external monitoring of WASSCE by WAEC on the conduct and performance of candidates in English Language and Mathematics in Imo State?
  
- 3a) What is the principals' and teachers' rating of student factors (age, gender, study habit, test anxiety, perceived adherence to instructions, perceived legibility of writing, coverage of syllabus) that affect performance in WASSCE?
  
- b) What is the principals' rating of teacher factors (provision of CA feedback to Students, prompt attendance to classes, coverage of syllabus, teaching/examining experience, qualification, gender) that affect performance in WASSCE?
  
- 4a) What is the perception of principals, teachers and candidates on examiners' objectivity in assessing WASSCE scripts?

b) Is WAEC objective in assessing candidates' scripts in WASSCE English Language and Mathematics in Imo State in terms of the procedure and the use of the right personnel?

5) Does the obtained regression equation resulting from a set of seven student predictor variables (age, gender, study habit, test anxiety, perceived adherence to instructions, perceived legibility of handwriting, coverage of syllabus) reliably predict candidates' performance in WASSCE a) English Language and b) Mathematics in Imo State?

6) Does the obtained regression equation resulting from a set of six teacher predictor variables (provision of CA feedback to students, prompt attendance to classes, coverage of syllabus, teaching/examining experience, qualification, gender) reliably predict candidates' performance in WASSCE a) English Language and b) Mathematics in Imo State?

7) Does the obtained regression equation resulting from a set of four ownership predictor variables (school type i.e. private or public, school location, sufficient teachers and availability of learning resources) reliably predict candidates' performance in WASSCE a) English Language and b) Mathematics in Imo State?

#### **1.4 Scope of the study**

This study covered school principals, senior secondary school English Language and Mathematics teachers in all Senior Secondary Schools in Imo State. The tracer study focused on the following Variables: Predictor (student and teacher variables, school facilities, school type and location, assessment quality, number of examinations taken at the same time, external monitoring of WASSCE among others) and Criterion (candidates' performance in WASSCE English Language and Mathematics).

#### **1.5 Significance of the study**

This study is very significant because it gives an insight into the causes of candidates' persistent poor performance in the West African Senior School Certificate Examinations (WASSCE) in Nigeria. The findings of the study exposed some issues that go into preparation and conduct of WASSCE by WAEC especially the May/June diet. Finally, the outcome of this study will enable educational planners to fashion out new ways by which teaching and learning could be enhanced, leading to high academic performance of

candidates in Senior School Certificate Examinations in the country. The result of the study also adds to existing literature on senior school certificate examination and students' performance in Nigeria in particular and in the world generally.

### **1.6.1 Operational Definition of Terms**

**Undergraduates:** These are first year students of Universities, Polytechnics and Colleges of Education in Nigeria.

**Assessment:** This is the marking of candidates' scripts to determine their performance/achievement in WASSCE.

**School Owner/Type:** This is the ownership status of a secondary school i.e. whether it is owned by the government or the private.

**Past Candidates' of WASSCE:** These are students who have written WASSCE and are found in institutions of higher learning and in continuing education centres.

**Objectivity of Assessment:** This is the procedure and thoroughness of assessing WASSCE scripts by examiners and other personnel involved in the process.

### **1.6.2 Conceptual Definition of Terms**

**Supervisor:** The person that carries WASSCE questions to schools on behalf of examination bodies for administration on the candidates.

**Invigilator:** Teaching staff of a school that assists the supervisor to administer the examination on the candidates.

**Test Anxiety:** Candidates' fear to attempt WASSCE questions.

**Examiner:** A person recruited by an examination body to mark candidates' WASSCE scripts.

**Teaching Experience:** This is the number of years a teacher has taught.

**Qualification:** Academic and Professional certificates possessed by a teacher.

**Candidates:** These are students who enrolled for WASSCE and made themselves available for the examination.

**External Monitor:** A person hired or sent by an examination body to monitor WASSCE processes in schools without prior knowledge and information to the supervisor/invigilator/candidates. The person may or may not be a staff of the examination body.

**Academic Achievement:** This refers to the performance of students (candidates) in learning activities which is always measured in terms of their scores and grades.

**Orlu:** Educational Zones 1&2 in Orlu senatorial district of Imo State.

**Okigwe:** Educational Zones 1&2 in Okigwe senatorial district of Imo State.

**Owerri:** Educational Zones 1&2 in Owerri senatorial district of Imo State.

### **1.7 Abbreviations**

**SSCE:** Senior School Certificate Examination

**WASSCE:** West African Senior School Certificate Examination

**WAEC:** West African Examinations Council

**NECO:** National Examinations Council

**KCSE:** Kenya Certificate of Secondary Education

**C.A.:** Continuous Assessment.

**JSCE:** Junior School Certificate Examination

**SAT:** Scholastic Aptitude Test

**IGCSE:** International General Certificate of Secondary Education

**UTME:** Unified Tertiary Matriculation Examination

**IB:** International Baccalaureate

**OW:** Owerri

**SEMB:** Secondary Education Management Board.

**ENG:** English Language

**MATHS:** Mathematics

## **CHAPTER TWO**

### **LITERATURE REVIEW**

The literature for this study was reviewed in the following areas:

- 2.1 Importance of Secondary Education
- 2.2 History of The West African Examinations Council(WAEC)
- 2.3 Learning Resources and Academic Achievement
- 2.4 Teacher Factors and Academic Achievement
- 2.5 Students Factors and Academic Achievement
- 2.6 School Type, and Location and Academic Achievement
- 2.7 Concept of Examination and its Nature
- 2.8 Challenges in Public Examining in Nigeria
  - 2.8.1 Examination Malpractice in Senior School Certificate Examination
  - 2.8.2 Large Candidature in Senior School Certificate Examination
  - 2.8.3 Poor Performance in Senior School Certificate Examination
- 2.9 Continuous Assessment in Senior Secondary Schools
- 2.10 Factors Affecting English Language Teaching and Learning
- 2.11 Factors Affecting Mathematics Teaching and Learning
- 2.12 Theoretical Background
  - 2.12.1 Mastery Learning Theory
  - 2.12.2 Behavioural Learning Theory
  - 2.12.3 Cognitive Learning Theory
- 2.13 Conceptual Framework
- 2.14 Gaps filled by the study

#### **2.1 Importance of Secondary Education**

Secondary education is the education which children receive after primary school and before the tertiary stage (FGN, 2004). It is the final stage of compulsory education, preceded by primary education and followed by higher education.

The Britannica concise Encyclopaedia sees secondary education as “the traditional second stage in formal education, typically beginning at ages 11-13 and ending usually at ages 15-18”. Two things can be deduced from this definition. First, one cannot receive secondary education without first receiving primary education. Thus, in the three step formal

education, secondary education is the second and the bridge between primary education and tertiary education. Secondly, the age limit for students to receive secondary education is between 11 and 18 years. This age is very significant in the general development of the individual.

Intellectually, Jean Piaget opined that this stage is characterized by the development of ability for abstract reasoning, higher level of conceptualization and the systematic forming and testing of hypothesis (Iroegbu, Nkwocha and Onyemerekeya, 2001). Secondary education is the stage of intellectual maturity. To this end, one may conclude that secondary education consolidates primary education as well as lays the foundation for tertiary education.

Seeing the strategic position of secondary education in our educational system, it is very pertinent to lay a solid foundation at that level. Laying a wrong foundation of secondary level has two major implications: one, primary education will not be consolidated and therefore, lost; two, higher education will not be guaranteed and thus very black. To lay this solid foundation, conscious effort should be made to ensure that only qualified and competent teachers with education background should teach in secondary schools.

The goals of the Nigerian society should be transmitted more at the secondary school level because it is the stage at which citizens and individuals get to the climax of socio-cultural and intellectual development. Hence, the Teachers' Code of conduct manual (2004) notes "since the teacher is the pivot of the education system, it implies that the teacher is a critical determinant of the success or failure of these goals".

The TRCN (2002) defined a teacher as "a person who had undergone approved professional training in education at appropriate levels, capable of imparting knowledge, attitudes and skills to the learner". No wonder Falayajo (2004) emphasized that a teacher must be a fully qualified graduate in his/her teaching subject. Thus, the TRCN isolated the following categories of teachers in the Nigerian School System shown in table 2.1.

**Table 2.1: Class of Teachers in the Nigerian Educational System**

Class of Teacher	Description
A – Class	Holders of Ph.D in Education or Ph.D in other fields plus Education (e.g PGDE, NCE)
B – Class	Holders of Master’s degree in Education or Masters in other fields plus education (e.g PGDE, NCE).
C – Class	Holders of Bachelor’s degree in education or Bachelor’s degree in other field plus education (e.g. PGDE, NCE).
D – Class	Holders of the Nigerian Certificate in Education (NCE) or equivalent, Teachers’ Grade II certificate.

Source: Teachers’ Registration Council Handbook (2002).

In line with the general saying that “no educational system can rise above the quality of its teachers”, and in order to enhance a solid secondary education, there is need for a combination of class B and class C Teachers to teach at the secondary school level. This is because performance of candidates at the Senior School Certificate Examination level is a predictor of higher/tertiary education. According to Ayodele (2007) these teachers belong to the hard core teaching professionals and will constitute “good teachers” to prepare candidates for such standardized examination as the Senior School Certificate Examination. While Afemikhe (1995) argues that good teachers would beget good students from which the system can get a replenishment of its teaching stock.

Supporting the above, Okpala (2008) contended that “we cannot have intelligent students, without having intelligent teachers to teach them”. Hence, having quality teachers in secondary schools, especially at the Senior Secondary School level, is a sine-qua-non if candidate must perform well at the West African Senior Certificate Examination which in Nigeria today is being conducted by the West African Examinations Council (WAEC).

## **2.2. History of the West African Examinations Council**

(Retrieved from [www.weacnigeria.org.ng](http://www.weacnigeria.org.ng) on June 27<sup>th</sup>, 2012)

The West African Examinations Council (WAEC) was established in 1952 following the acceptance of the Jeffery Report by the then Colonial Government(s) in the Gold Coast (now Ghana), Nigeria, Sierra-Leone and The Gambia, who passed appropriate ordinances in their Legislative Assemblies in 1951. The ordinances charged the council with the responsibility of determining the examinations required in the public interest in West Africa and empowered it to conduct such examinations and award appropriate certificates.

The Jeffery Report had strongly recommended the setting up of West African Examinations Council in the then four British Colonies of Nigeria, Gold Coast, Sierra-Leone and The Gambia. Liberia later joined the council in 1974. The ordinances have now been replaced with the Convention which confers Legal personality on the council as an international organization.

### **Structure of the Council**

The Council which now operates under a new convention signed in 1982 consists of 60 members, representing the Governments, the Universities, secondary schools and other interests in the five member countries. Prof. PAI Obanya Nigeria is the current chairman. The first chairman under the convention was Nigeria's Professor M.O. Oyawoye.

Nigeria is represented by 13 members, 5 of whom are nominees of the federal government. The Director of Education in the Federal Ministry of Education, Abuja is statutorily the Chief Government Nominee in the Council. He is also the chairman of the Nigerian National Committee of the Council and the Administrative and Finance Committee.

The Council functions through some committees which include:

1. The International Administrative and Finance Committee, which oversees the financial and administrative matters of the Council as a whole. It acts on behalf of the Council in between main council meetings.
2. The Examinations Committee which deals with all matters relating to examinations.
3. The Appointments committee which handles the appointment, discipline and promotion of officers of Registrar cadre or the international staff of the council.
4. The Tenders' Board which considers and awards all international tenders for the council, and
5. National Committee which is the highest policy-making body of the council in each member country. It has its own National Sub-Committees such as National Examinations Committee, National Appointments Committee, National Administrative and Finance Committee and National Tenders' Board.

### **2.3 Learning Resources and Academic Achievement**

Philia and Kennedy (2010) looked at the effect of teaching/learning resources on the academic performance of four hundred and five senior secondary school students in Bondo



district of Kenya. Two hundred and forty-two students were randomly selected from nine schools in the three divisions out of the twenty-four schools in Bondo district. The schools were stratified into co-educational day, co-educational boarding, boys boarding and girls boarding. The study used one research instrument to collect data to answer three research questions. The multiple regression analysis showed a positive correlation between laboratory/textbook among other variables and students' academic performance in mathematics. While Ambogo (2012) examined the relationship between availability of both human and non-human resources for teaching/learning and students' performance in the science subjects in Eldoret Municipality of Kenya. Stratified random sampling was used to select fourteen head teachers, fifty-six teachers and three hundred and eight form three students based on school performance in KCSE between 2001-2005 in science subjects. The result revealed that schools where textbooks and laboratory chemicals were available and utilised performed better than schools that lacked it.

Musa (2011) investigated learning resources and students' performance in day and boarding secondary schools in Zaria Municipality. The study was a survey in design and involved four hundred respondents: three hundred and forty students and sixty teachers. He reported no significance relationship between availability of learning resources and students' academic achievement. Zachariah (2011) noted that achievement in mathematics in Kenyan secondary schools has been poor over the years. This situation prompted him to investigate the adequacy and extent to which resources for mathematics teaching and learning are available and used for achievement in the subject. His study was an ex-post facto design, involved six-hundred and sixty-one form three students and seventy-one mathematics teachers. The findings indicate that secondary schools in the country are poorly equipped with teaching and learning resources for mathematics.

Orubu's (2010) study focused on the availability and use of teaching-learning materials in primary schools in Bayelsa State, Nigeria. The researcher purposively sampled ten public and ten private schools in two local government areas for the study, which involved one hundred and nine teachers. The findings of the study showed that there is dearth of instructional materials in most of the schools, and that teachers do not use instructional materials to teach because they are not available. Ambaliyu (2008) also investigated the availability and utilization of material resources for learning Chemistry in Oyo State, Nigeria. The researcher made use of one thousand, two hundred and fifty SS2 students from fifty secondary schools in eight local government areas of the state in the non-experimental study. The result of the study showed that 70% of the listed resources were available in most of the

schools, while 38% of them were not put into effective use. The non-utilization of available ones affected academic achievement of students in the subject.

#### **2.4 Teacher Factors and Academic Achievement**

Babatunde (2010) investigated teacher-related factors influencing achievement in social studies. The study was correctional in design and involved three thousand, three hundred and seven pupils, four hundred and twenty-five social studies teachers from one hundred and fifty schools in fifteen local government areas of three states in South-Western Nigeria. The result shows that there was a significant relationship between teacher-related variables (assessment style, qualification, years of teaching experience and teaching style) and achievement in social studies.

Uba's (2012) study examined school quality variables as correlates of students' learning outcomes in Cross River State, Nigeria. The non-experimental study focused on English Language, Mathematics and Agricultural Science. A total of six schools, one hundred and eighty teachers and seven hundred and twenty students served as participants in the study. The study result revealed that teacher effectiveness, qualification, years of teaching experience among others had positive contributions to learning outcomes in the subjects of focus.

Famoroti (2012) also considered teacher motivation and effectiveness as correlates of students' learning outcomes in Government among senior secondary schools in Ekiti State, Nigeria. Eighty Government teachers and eight hundred students from eight public schools in eight local governments participated in study. The result showed that teacher motivation (salary, promotion etc.) and teacher effectiveness had significant contributions to learning outcomes in Government.

#### **2.5 Student Factors and Academic Achievement**

Martins (2004) in a descriptive survey investigated the role of gender on secondary school students' academic performance in Edo State, Nigeria. The study involved fifty randomly selected secondary schools while the Pearson Product Moment Correlation statistics was used to determine the relationship between gender and students' academic performance. Linear regression was used to estimate the influence of gender on students' academic performance. The study revealed a significant relationship between gender and students' academic performance, while schools with high proportion of boys performed better than those with high proportion of girls in the senior school certificate examination (SSCE)

between 1989 and 1994 in Edo State. Adeleke (2012) studied the patterns of students' achievement in selected topics in mathematics. The study was non-experimental in design. It made use of four hundred and thirteen SS3 students from ten schools in three local government areas of Ibadan metropolis of Oyo State, Nigeria. The study data which was analysed with descriptive statistics revealed that male students generally performed significantly higher than female students in the components of mathematics investigated.

Osoba and Bakare (2008) investigated the effect of feedback on students' performance in multiple-choice items in Economics. The study adopted a one-shot evaluative design, and purposively selected two hundred SS2 students of the International School, University of Lagos. The result showed a significant difference in the level of test anxiety of students with prompt feedback and those with delayed feedback. Students with delayed feedback were more test anxious than those with prompt feedback. The study also reveals that students with prompt feedback did better than students with delayed feedback, and no significant difference in the performance of male and female students in the prompt feedback group. Onuka (2008) in an experimental study, considered Teacher-initiated Student-peer Assessment as a means of improving learning assessment in large classes. The researcher used cluster sampling to select two hundred and eighty students from four secondary schools in Kogi central senatorial zone. The study focused on English Language and Mathematics and was intended to see the effectiveness of using students in assessment in large classes. The result of the data analysed with t-test statistics showed that the experimental group achieved better than the control group.

Harry and Herbert (1997) worked on the study habit of sixty-nine first year college engineering students in Pennsylvania, USA. The study involved twenty-seven female students and forty-two male students. Their Scholastic Aptitude Test (SAT) scores and their grade-point averages were equally obtained from their departments. The result of the study did not show significant difference in gender on aptitude and grades, but it showed that female students scored higher on the compulsiveness study habit scale than the male students. They recommended the introduction of special programmes to help students study more meaningfully so that their overall academic performance can improve. Adetoro (2012) investigated study habit among other variables as correlates of academic achievement of students in Chemistry Practical in schools of science in Oyo State, Nigeria. The non-experimental study had two hundred and forty SS2 students purposively selected from six schools as participants. The study found study habit as having a positive influence on students' academic achievement.

Shikuku (2012) studied the effect of syllabus coverage on secondary school students' performance in mathematics in Kenya Certificate of Secondary Education (KCSE). The study covered eighty-five secondary schools in Kakamega South district, sixteen of which were purposively selected. Sixty-four people made up of the head teacher, head of mathematics department and two randomly selected teachers served as respondents. The study, which was a descriptive survey, reported that syllabus coverage has a significant effect on student performance in mathematics at KCSE between 2003 and 2007.

## **2.6 School Type, and Location and Academic Achievement**

David and Kathleen (2005), while working on World Bank research working paper 3604, evaluated the impact of school type on the academic performance of junior secondary school students who are graduating into senior secondary schools in Indonesia. The study covered public schools and all kinds of private schools. The researchers considered variables like school location, type of elementary school attended (public, private or missionary), student characteristics like gender, family background among others. A total of two thousand, seven hundred and thirty-three students made up the sample. After controlling for a number of variables like time-varying characteristics, the result of the study shows that public schools scored 0.15 against 0.3 standard deviation of private schools, while students attending Muslim private schools did better than those attending other secular private schools. The scholars concluded that higher quality inputs promote higher test scores.

Alimi, Ehinola and Adekunle (2012) studied school type, facilities and academic achievement of students in secondary schools in Ondo State, Nigeria. Their study was designed to find out whether facilities and students' performance are related in private and public secondary schools respectively. The study design was survey, while proportionate sampling technique was used to select fifty schools in the state. The independent t-test was used to analyse the data which revealed a significant difference in facilities available in public schools and private schools, but did not show a significant difference in the academic performance of students in both type of schools. The researchers suggested procurement of more facilities in public schools to enhance performance of students.

Okwilagwe's (2005) study was concerned with evaluating the missing link between the private and public school dichotomy, using the metropolitan city of Ibadan as a case study. The study used eight secondary schools, four public schools which were between fifteen to twenty years old, and four private schools which were three to six years old. Besides scheduled interviews, documentary analysis was used to establish students'

achievements in both schools in public examinations. The result of the study revealed that success rate in both SSCE by WAEC and NECO between 2000-2001 ranges from 20% - 50% in public schools, and 50% - 70% in private schools.

Isiugo-Abanihe and Labo-Popoola (2004) considered school type and location as environmental factors in learning English as a second language. The study, which was non-experimental in design, investigated the extent to which school type and location affects performance in English Language in Osun state, Nigeria. The study made use of one thousand and eighty SS3 students in twelve local government areas of the state. Stratified random sampling was used to select public and private schools in both urban and rural areas. The outcome of the study reveals that schools in urban areas performed better than those in rural areas, while private schools outperformed public schools in the English Language Achievement Test (ELAT).

Ibode and Oparaku (2007) equally studied school type as a determinant of candidates' performance in the West African Senior School Certificate Examination (WASSCE) in Lagos, Nigeria. The study was non-experimental in nature. It involved thirty secondary schools: fifteen public schools and fifteen private schools. The sample covered model, unity, conventional and missionary schools. The study made use of independent t-test statistics to analyse the secondary data obtained from the West African Examinations Council (WAEC) on the performance of past results of candidates of the sampled schools between 2005 and 2007 in eight subjects. The result showed that private schools performed better than public schools generally, while unity schools out-performed missionary schools within the period investigated.

Oke (2010) examined the effect of school ownership (school type) on candidates' performance at the West African Senior School Certificate Examination (WASSCE) in Nigeria between 2002 and 2006. The study adopted a cross-sectional design to cover the six geo-political zones of the country. The researcher used multi-stage sampling to select sixty secondary schools for the study. While a total of one thousand, two hundred SS3 students and six hundred teachers were involved in the study. The sample covered all classes of unity schools, state model colleges, other state schools and missionary schools; and focused on seven subjects. The result shows that about 85% of the private schools used in the study had a performance index of good and above as against 39% of the public schools. While Lorenzo (2004) reports that private high schools appear to be associated with low academic performance in Milan, Italy.

Commenting on the performance level of private and public school pupils in Ghana, Prof. Florence Abena Dolphyne while delivering the 2001 WAEC endowment lecture series noted:

*“For the moment, let me say that it must be obvious to all of us that in Ghana, the comparison between the performance level of children in private and public schools is not a fair one. To start with, class size in the private schools is smaller and therefore teachers can give individual attention to their pupils. The teachers are also able to give regular assignments, which is not possible in most public schools where class sizes ranges from 50 to 70 pupils. Children in private schools have access to books that they can take home to study, while teachers in public religiously collect the books at the end of class for fear of it getting lost...”pg15*

Brennan (2008) compared students’ performance in Mathematics and Reading across school types (Charter Schools, Conventional Public Schools and Hawaiian Language & Culture-based schools (HLCB) across three grades levels (5, 7 &10) in Hawaii, United States. He found no significant difference in the mean score of conventional public schools and HLCB schools in upper grades. While students in conventional public schools did better in lower grades. He also reports that mean scores are highest among both Hawaiian and non-Hawaiian and in Western Focused Charter Schools. Brennan believes and asserts that no school is culture free.

Kanayiaupuni and Ishibashi (2005) compared the academic achievement of Native Hawaiians in Charter schools and in regular schools. They found that Native Hawaiian students in charter schools scored better on standard tests for Reading and Mathematics than their counterparts in regular public schools. Peter (1985) reports that students in Government schools are more likely to achieve higher than those in non-government owned schools in Australia due to strong holding power of government schools.

Anders and Mikael (2008) evaluated achievement effects of choice and competition between private and public schools at the nine-year school level in Sweden on Short, Medium and Long –Term educational outcomes. They found that students in private schools have moderate short term educational outcomes and did not find any impact on medium or long-term educational outcomes on high school GPA, University attainment or years of schooling.

## 2.7 Concept of Examination and its Nature

Examination is the pivotal point around which the whole system of education revolves and the success/failure of the system of examination is indeed an indication of the success/failure of a particular system of education (Wilayat, 2009). However, with reference to educational setting, Hornby (1995) in Ojerinde (2005) defines examination as “a formal test of somebody’s knowledge or ability in a particular subject, especially by means of written questions or practical exercise”. Since test connotes examination, Nworgu (1992) contends that it is “a structured situation comprising a standard set of questions to which an individual is expected to respond”. Structured situation here implies that examination has procedure, starting from teaching and learning by teachers and students in the classroom and terminating at the very point of taking decisions on the result and outcome of such examination.

Anastasi (1982) sees a psychological test as “essentially an objective and standardised measure of a sample of behaviours”. Sampled behaviour perhaps may mean that a test/examination has a content area from where the questions are to be drawn. This emphasizes the importance of scheme of work, syllabus and ultimately table of specification in teaching, learning and examination process.

Null and Scannel (1972) were of the opinion that examination is a “procedure or measuring instrument, usually a paper and pencil test, used to measure students’ progress towards curricular goals, knowledge or skills usually acquired through classroom instruction”. This definition appears very comprehensive because before an examination is given, students (candidates) are taught based on certain stated objectives, which are either at instructional or national level. Other scholars like Iwuji (1997); Adewuyi and Oluokun (2001) agree that test is an instrument for measuring human behaviour and educational attributes.

Similarly, Oparaku (2005) argues that the main purpose of examination is to ascertain the abilities and competencies of the students. He maintained that examination has a central position in our educational system. While Okpala, Onocha and Oyedeji (1993) were of the view that examination is organised to evaluate the cumulative or broad knowledge in a student’s educational development.

Examination could be internal (i.e. within the school) or external (i.e. public examination). Internal examinations are examinations organized by teachers for students of a named school. It is popularly known as “Teacher-made-test” because they are generated and administrated by the classroom teachers within the school environment. While public examinations are examinations that are organized by public examining bodies within a country or region, usually at the same time of the day i.e. public examinations are simultaneously administered on the same day and time within a country or region.

Ojerinde (2005) defines public examination as any examination designed for a clearly defined target, set, administered and scored by an establishment different from that in which the examinees receive their training. He opined that public examinations are usually, designed to be administered simultaneously in all centres. Embedded in this definition is the fact that (1) public examination bodies do not prepare the candidates for their examinations; (2) a candidate sitting for public examination must attain a prescribed age and class; (3) the administration, scoring and release of candidates result is uniformly and centrally done by the public examining bodies.

The World Bank (2002) notes that public examinations are typically formal, summative and controlled by an agency external to the school where the student has studied. It can be deduced from this definition that public examinations take place at the end of schooling. According to the World Bank, public examinations are usually preferred because they allow greater standardization of tasks and conditions, and hence greater comparability of results. This is supported by Falayajo (2004) who notes that public examinations have had a very important place in our educational system, in most cases, being used to select candidates into successive levels in the system. It can be concluded that Falayajo was referring to Senior School Certificate Examination here.

However, public examinations in Nigeria and elsewhere are not without some challenges. Ojerinde (2004) enumerated these challenges to include (1) Examination Malpractices (2) Large candidature (3) Poor performance and so on.



## **2.8 Challenges in Public Examining in Nigeria**

### **2.8.1 Examination Malpractice**

#### **2.8.1.1 Meaning of Examination Malpractice**

Onuka and Obialo (2004) are of the view that there is hardly any examination conducted by public examining bodies in Nigeria that have not been characterised by examination malpractice. While Asimolowo (1997) in Omuka and Obialo (2004) opined that examination malpractices are not a new phenomenon (in Nigeria) except that its current dimension is alarmingly high. The new dimensions of examination malpractices in most educational systems made Ojerinde (2004) to note:

*Examination malpractice, which is becoming hydra-headed, is, perhaps, the greatest; though by no means the only problem the operators have to battle with. This single problem is threatening to destroy the industry, which thrives on the confidence of its clientele. The end to this problem does not appear within the horizon (pg427).*

It is Ojerinde's view that all public examining bodies in Nigeria are being confronted by the menace of examination malpractices. The worst still is the fact that the solution to this menace is by no means visible, with school examinations also battling with it. Onunkwo (2002) opined that examination malpractice is about the most serious problem destroying the integrity of WAEC. In his view, "students usually cheat by copying from others inside examination halls, WAEC supervisor and invigilators often promote malpractice by telling students answers to questions they (students) are not familiar with. Some of them also circulate written materials among students in the examination hall. Indeed, this is disturbing since it lowers the validity and reliability of certificates issued by WAEC".

What then is examination malpractice? Oparaku (2005) defines examination malpractice as anything that hinders the smooth conduct of any examination. He opines that if chewing gum in the examination hall hinders the smooth conduct of an examination, it constitutes examination malpractice. Ongom (1994) corroborated Oparaku's view when he considered any form of "wrong-doing" in examination as examination malpractice. Shonekan (1996) further defines the vice as any acts of omission or commission which contravenes stipulated rules and regulations on the conduct of examinations to the extent of undermining the validity and reliability of the tests and ultimately the integrity of the certificates (awarded in the case of senior school certificate examination).

The World Bank (2002) noted that malpractice involves a deliberate act of wrongdoing, contrary to official examination rules, and is designed to place a candidate at an unfair advantage and disadvantage. This shows that some candidates are placed at advantage while others are disadvantaged whenever an examination is malpracticed. Thus, candidates who ought not to have passed, have the seal of the examining bodies to have passed (STAN, 2001).

Oparaku (2005) notes that examination malpractice could be BEFORE, DURING or AFTER an examination. *Before* an examination involves attempts by candidates to have prior knowledge of examination questions. *During* examination is a cooperative offence involving both candidates and officials where candidates are assisted with the knowledge of examination officials to cheat in the examination. *After* involves attempts by candidates to obtain their grades before the results are officially released. This is further supported by Wulayat (2009) who defined examination malpractice as any illegal act committed by a student single-handedly or in collaboration with others like fellow students, parents, teachers, supervisors, invigilators, printers, or anybody or group of people before, during or after an examination in order to obtain underserved 'marks' or 'grades'. This definition shows that examination malpractice is student/candidate focused i.e. it aims at helping the candidates succeed unfairly in examinations.

From the above definitions, it has been established that there are clearly stated rules and regulations guiding the conduct of examinations and that whenever such rules are contravened, examination malpractices has occurred. The menace of examination malpractice is biting hard and deep into our educational system that Wale (2008) expressed surprise at the involvement of parents, teachers and college principals in perpetuating the vice in our education system. The result is that what started as canker worm has grown into a monster that has permeated practically every educational institution in the country from primary to tertiary.

#### **2.8.1.2. Origin of Examination Malpractice**

According to Onyekakeya (2012) when 'expo' debuted in Nigeria in 1970, it was a big surprise to the entire nation. With WAEC officials made up of teachers, invigilators and supervisors of the pre-war generation who had integrity, there was consternation in the land

as to what brought about cheating in the examination. It has never happened before. Some attributed it to the Nigeria civil war that had just ended at that time.

Being that the 1970 May/June WAEC examination was the first after the civil war that ended in January of that year, many thought that the candidates had become radicalized by the war. Most of the candidates were big boys that fought in the war and came back to school to complete their education. That first 'expo' made big headlines and was the talk of the town. Everyone frowned at an incident that had never been seen before and thought that it would not be seen again. But that was a wrong projection. The 'expo' did not stop but instead grew to become pervasive in the country.

### 2.8.1.3 Causes of Examination Malpractice

The World Bank (2002); Oparaku (2005) and Onuka and Obialo (2003) identified the following causes of examination malpractice amongst others.

1. **Inadequate Preparation:** If teachers fail to adequately prepare students by teaching them thoroughly in the process of teaching and if students fail to learn thoroughly i.e. being present during lessons and reading on their own, examinations definitely will be malpracticed. It is therefore, advised, that teachers and students prepare adequately for examinations.
2. **Lack of Facilities:** Lack of teaching and learning facilities like textbooks, library, laboratories and even shortage of teachers in schools hampers the teaching and learning process and results in examination malpractice.
3. **Examination Leakage:** Whenever the questions meant for an examination are leaked by examination officials either at printing or administration level, such examination is malpracticed as the candidates have prior knowledge of the question before they enter the hall to write.
4. **High Stakes of the Examination:** Since success in any examination has some implications on the future of the candidates, stakeholders tend to engage in all forms of unwholesome practices just to "pass". This is most common in public examinations like SSCE which determines receipt of further education and even employment opportunities for school leavers.
5. **Personal Factors:** Some stakeholders in education are more prone to cheating,

especially to make up for negligence in performing their duties. For example, teachers who do not attend classes to teach tend to award students marks as a proof of their effective teaching while students who have not been regular and attentive in class tend to cheat in examinations to obtain grades as a proof of good learning.

6. **Location of examination centres:** Examination centres located in remote areas tend to receive examination materials ahead of time and receive less supervision during administration of examination. Irregularities are usually not far from these centres.
7. **Teachers' Negative Attitude:** Most teachers are highly care-free about their job. Many are not properly trained, some come to school very late and when they do, they hardly go for lessons even when students remind them. These attitudes and many others result in poor coverage of the syllabus. Thus, students being inadequately prepared will find a way of malpracticing to pass.
8. **Low Salary Levels:** Salaries of teachers, examination officials and remuneration of examiners are often very low. Under this circumstance, bribes before, during and after an examination may be irresistible.
9. **Over Population:** Most government owned schools are highly overpopulated with students. In such schools, teaching and learning amenities will obviously be inadequate. Therefore, this reflects during examinations.
10. **Pressure:** Most students are under the pressure and influence of their peers, parents and the society. Such pressures are seen in unnecessary competitions and comparisons. Evidently, students malpractice examination to meet up with the challenges of such pressures.
11. **Shortage of Teachers:** There is noticeable shortage of teachers in especially the overpopulated government schools to prepare students for examinations. This results in mass cheating by candidates to make up for subjects not taught and areas not covered by the available few teachers.

#### **2.8.1.4 Forms of Examination Malpractice**

Asuru (2005) summarizes what constitutes examination malpractices as provided by decree no 33 of 1999 into:

1. Stealing of question papers, answer sheets or scripts of any other candidate.

2. Impersonation i.e. where an individual who is not a candidate writes an examination for a registered candidate.
3. Alteration of and tampering with a document issued to a candidate in relation to an examination.
4. Disorderliness in an examination. This includes leaving an examination hall or mixing with any other person with an intent to cheat.
5. Unlawful communication or attempt to communicate in the examination hall.
6. Loitering in an examination area. This involves a person who is not registered for an examination but comes into an examination centre with intention to aid a candidate in anyway.
7. Possession of and/or use of offensive weapons or any other materials at or near an examination hall;
8. Misconduct in an examination hall.
9. Failure to obey the lawful orders of a supervisor, invigilator or agent of an examination body;
10. Wilfully obstructing a supervisor, an invigilator or agent the examination body concerned.
11. Forging, altering and tampering with result slips. This includes certificate forgery, alteration of scores, grades etc. on a result of slip or certificate.
12. Breach of duty by a person who is for the time being under a duty to discharge any function with respect to the conduct of an examination.
13. Alteration of or tampering with scores by examiners or any other person. This included acts pertaining to aiding and abetting a candidate to cheat at an examination.
14. Disclosure of contents or information pertaining to a question paper by a person employed to print or charged with the responsibility of printing.
15. Conspiracy, aiding, abetting or counselling any other person to commit an offence. This mostly applies to parents, guardians, teachers, and communities etc. who “encourage” their children, wards, and students to indulge in malpractice.
16. Attempt to commit or is an accessory to an act which constitutes an offence. It is noteworthy that an attempt to commit the act is itself an offence.
17. A person who incites, procures or induces any other person by any means whatsoever

to commit an offence under this Act (has committed an offence).

**Table 2.2: Other forms of examination malpractice, their description and personnel involved.**

<b>Examination</b>	<b>Description</b>	<b>Involves</b>
<b>Development</b> Leakage	The content of the examination or any part of the examination is disclosed prior to taking the examination	Usually it involves one or more of the following: staff members of examination authorities, printers, proof readers and messengers, personnel employed to develop the papers (setters) or to determine its suitability (moderators) and school administrators.
<b>Preparation</b> Test preparation	Can be malpractice if the students have access to the items or questions before taking the paper. Conventional test preparation including practice on parallel type papers or on copies of old paper does not normally qualify as malpractice.	Normally involves staff members of examination authorities, proof readers and messengers, personnel employed to develop the papers (setters) or to determine its suitability (moderators) and school administrators.
<b>Administration</b> Impersonation	An individual who is not registered as a candidate takes the place of one that is registered.	Usually it involves collusion between school principals and the examination supervisor. Frequently involves university students or teachers taking the test for monetary reward or as a favour for a girlfriend or boyfriend. Sometimes young employees are coerced to take the examination.
External assistance	Individuals who are not	Usually involves

	examination candidates giving unauthorized assistance to candidates.	invigilators (exam room supervisors) dictating answers, writing answers on the blackboard, circulating sheets of worked out answers during the course of the exam or acting as couriers of material into the examination centre. In some instances, external helpers have used pagers, phones, or broadcast answers.
Smuggling of foreign materials	This is perhaps the most common form of malpractice. It relates to the introduction of unauthorized material (e.g. notebooks, "crib notes", charts and answer booklets complete with answers) into the examination hall. Material is frequently smuggled in pants, shoes, hems and bras or information is written on part of the body.	Usually only candidates are involved.
Copying	Reproduction of another candidates work with or without permission.	Usually involves only the candidate but can be facilitated by inadequate spacing between desks and lax supervision.
Collusion	Unauthorized passing of information between candidates usually by exchanging notes or scripts.	Usually involves only the candidate but can be facilitated by inadequate spacing between desks and lax supervision.
Intimidation	Examination officials including supervisors and markers of papers are physically threatened.	Usually involves people seeking support for individual candidates. Candidates have also placed weapons in clear view of

		supervisors to intimidate them.
Substitution of scripts	Replacing answer sheets handed out during the course of the exam with ones written outside the centre before, during or after the exam.	Usually involves examination body officials, invigilators and sometimes teachers working outside the examination room.
Improper assignment	Deliberate placing of candidates in centres under the supervision of corrupt officials.	Examination office or local educational officials.
Ghost Centres	Fictitious examination centres	Established by corrupt examination officials where candidates can complete the exam with the support of helpers and without supervision.
<b>Marking</b> Marker malpractice	Deliberate alteration of mark designed to inflate or deflate a candidate's original mark.	Can be initiated by exam official, by candidates (making contact with the marker) or markers (making contact with the candidate).
Awards and Certificates	Deliberate enhancement of initial award and/or certificate	In the past usually confined to examination officials, but in more recent years included printers and candidates with high level skills in technology.

Source: The World Bank Group (2002) [www1.worldbank.org/education/exams/malpractice.asp](http://www1.worldbank.org/education/exams/malpractice.asp) Retrieved on April 8<sup>th</sup>, 2008.

### 2.8.1.5 Effects of Examination Malpractice

- (1) Onunkwo (2002) notes that examination malpractice lowers the validity and reliability of certificates issued by WAEC (public examination bodies). This view means that the authenticity of the grades in such certificates is usually questioned whenever and wherever they are presented.



- (2) Onunkwo also noted that the WAEC (and other public examination bodies) spend too much time, energy and money to eradicate malpractices in their examinations. This supports the view of Ongom (1994) who lamented that examination malpractice increases the cost of conducting examinations
- (3) STAN (2001) reports that examination malpractice leads to withholding of candidates' results. It revealed that in 1995, 40 students of the University of Lagos were expelled over forgery, which it quotes Adebayo (1996) as reporting that the result of 12,000 candidates were withheld in Nov/Dec SSCE in 1993 in Rivers State alone. Besides withholding of results, examination malpractice may also lead to outright cancellation of candidates results. Thus, the Exams Ethics Newsletter (2003) concludes that:

“If you add the cost of result cancelled by NABTEB, NECO, WAEC, NTI, then you are talking of a conservative less of N10 billion each year to examination malpractice. Add the cost of students expelled or suspended or ordered to re-sit examinations in Universities, Polytechnics and College of Education, the cost is better imagined” pg. 8.

- (4) The Examination Ethics newsletter (2003) further identified the following effects of examination malpractice:
- a. Production of low quality labour force making selection of competent employees a highly expensive enterprise.
  - b. Production of low quality professionals which result in incompetence and fatal errors in medicine, construction, justice delivery etc.
  - c. Production of a culture of fraud and corruption in public and private sector institutions as it plants the seed of fraud and corruptions in the fertile minds of students.
  - d. Makes it difficult for higher institutions to instil order and discipline as their intakes are already started on the route of corruption.
  - e. Examination malpractice results in unemployment because products of examination malpractice are highly unproductive.
  - f. Examination malpractice delays the processing of candidates scores, especially where suspects or case are to be investigated.
  - g. It denies brilliant students the opportunity of being admitted into institutions

of higher learning.

### **2.8.1.6 Solutions of Examination Malpractice**

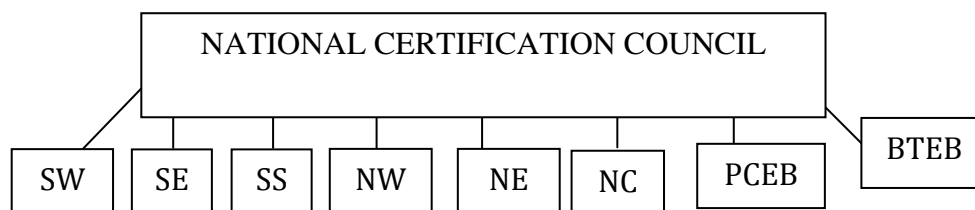
1. STAN (2001) suggests that the federal government should direct its agencies (e.g. NOA) to develop and mount programmes which will help to instil discipline into children at primary and secondary school levels. It also adds that the War Against Indiscipline should be expanded to include War Against Examination Malpractice (WAEM).
2. The World Bank Group (2002) recommended more severe punishment for culprits of examination malpractice. The measures recommended includes reduction of 30-50% marks from the grades obtained in specific subjects; disqualification from taking the examination in the current year and in serious cases, the following year or even for two years (for students); disqualification from testing or examining even forever and other administrative disciplinary measures (for teachers, examiners, staff of examining bodies); punishment under the criminal code amongst others. Each of these recommended punishments are subjects to the gravity of the malpractice perpetuated in an examination by those involved. These measures, if implemented, will, no doubt, serve as a deterrent to people who contemplate examination malpractice.
3. Onuka and Obialo (2003) are of the view that adequate funding of education, recruitment of well-qualified teachers, excellent teaching, healthy learning competition, proper guidance and counselling of students, adequate security measures at examination centres as well as adequate preparation for examinations by both teachers and students would reduce incidences of malpractice in our examination system.
4. Oparaku, (2005) suggested adequate remuneration of teachers, provision of scholarship for intelligent and hardworking students, well equipped libraries and laboratories, serious scrutiny of activities in private schools, serious policing of those who type examination questions, etc. as solutions to the menace of examination malpractice in Nigerian schools. He also called for the established of examination malpractice unit in all schools at all levels of the education system. The unit will

investigate examination malpractice cases and recommend appropriate sanctions where a case is established.

### **2.8.2 Large Candidature in Senior School Certificate Examination**

Large candidature is one of the contemporary challenges facing public examining in Nigeria (Ojerinde, 2005). In fact, Onunkwo (2002) notes that the number of candidates who sit for WAEC examinations annually falls in hundreds of thousands (now they run into millions) and this poses a great problem to effective supervision and invigilation. He concluded that numerous supervisors, invigilators and examiners are needed and this costs WAEC (and other public examination bodies) a huge sum of money yearly.

Large candidature occurs when an examination body has more candidates than it could manage. Ojerinde (2004) notes that “with the successful implementation of the Universal Basic Education (UBE) programme, it is envisaged that about four million candidates will sit for Senior School Certificate Examination in the year 2010”. He, therefore, advocated for the establishment of Zonal Examination Boards in each of the six geo-political zones in the country, with a National Certification Council (NCE) to oversee the activities of the zonal boards. Each zonal Examination Board is to conduct Senior School Certificate Examination and Junior School Certificate Examination in the states within the geo-political zones. This is diagrammatically illustrated in figure 2.2.



NB

SW = South West Zonal Examination Board

SE = South East Zonal Examination Board

SS = South-South Zonal Examination Board

NW = North West Zonal Examination Board

NE = North East Zonal Examination Board

NC = North Central Zonal Examination Board

PCEB = Private Candidates Examination Board

BTEB = Business and Technical Examinations Board

Fig 2.1 : Structure of National Certification Council. Source: Ojerinde (2005)

Apart from large candidature, Nigerian classrooms are overcrowded especially in government owned schools i.e. large classes are being experienced in Nigerian Schools especially at senior secondary level. The classes are larger in urban areas, particularly these UBE days. The NTI M.D.Gs training manual for social studies (2011) defines a large class as a class where pupils are above 20. According to it, “Learners in excess of 20 in any classroom are difficult to control and supervise. Managing learning activities also become a special problem where seating facilities and learning materials are insufficient. The tendency of learners to become passive, noisy and undisciplined easily manifest and teachers may get easily frustrated. This situation hinders effective and quality teaching and learning, preparatory to senior school certificate examination.

Several scholars have attempted to find out how class size affects students learning in classrooms. For example, Ayodele (1988) conducted a survey on the relative effects of the problems of class size and location of schools on academic performance of pupils. He found that though classes were larger in urban areas, the pupils performed better academically than those from rural areas where classes were fewer. He notes that his findings suggest that class size is just one of the many factors which decides the intellectual attainment of children and

that the child has a great advantage if he has to learn in an urban environment which apparently enriches academic pursuits.

Also, Ayodele and Araromi (1992) reports that large urban classes did better still than the small rural classes. They note that the class size is not as strong as location of school in determining academic achievement and advised teachers not to worry but to ensure availability of rich instructional aides to support their quality teaching, especially in language classes. Bothered about assessment in large classes, Onuka (2008) suggested a teacher initiated – student peer assessment as a way of improving learning outcomes in large classes. In this approach, the teacher has to select brilliant and trustworthy students, trained them on how and what to assess as well as supervise the assessment process.

### **2.8.3 Poor Performance in Senior School Certificate Examination**

Standards are set in public examinations on the expected conduct of candidates and invigilators/supervisors during an examination. Standards are also set on the performance of candidates if they are to be certified and declared as having passed such examination. For instance, in the Senior School Certificate Examination, the standard expected of candidates to be certificated is five credit passes inclusive of English Language and Mathematics which are general subjects in the secondary school system.

Poor performance, which Ojerinde (2005) identified as a major challenge of public examining in Nigeria, occurs when a large number of the candidates perform below the set standards in any examination. Poor performance is different from examination malpractice. Examination malpractice occurs when candidates, supervisors or any other unconcerned persons or group of persons engage in activities that disrupts the smooth conduct of an examination. Examination malpractice is a major cause of poor performance in Senior School Certificate Examination in Nigeria (Uduh, 2010).

From the background of this study, it has been established that the performance of candidates in Senior School Certificate Examination in Nigeria is really poor. Hence, Uduh (2010) attribute poor performance in this examination to candidates' inadequate preparation, poor coverage of the syllabus, failure to adhere to rubrics, lack of understanding of the demands of the questions, illegible handwriting, poor spelling of basic words, and test anxiety among others.

Ola-Gbadamosi (2009) considered the Government, the teachers and the learners as human and curriculum factors that could affect performance in public examinations. According to him, Government has the duty of establishing and maintaining standards in schools. The teachers are the pivots and standard custodians and bearers in the schools while the students are to follow teachers' standard (positive ones) to achieve the goals of establishing schools. Ola-Gbadamosi also pointed out that curriculum objectives, curriculum contents, planning, development and organization, instructional materials, instructional methods, quality of learning (student variables) and government/schools variables are the overall curriculum factors that affect candidates' performance in public examinations.

Other researchers like Adelokun and Adewale (2011) and Addae-Mensa (2006) have considered examiner and assessment quality as factors that could affect candidates' performance in public examinations. In separate studies in Nigeria and Ghana respectively, they reported that older and more matured examiners were more careful in assessment of candidates than the budding examiners.

Also, the WAEC Chief Examiners Report (2004, 2005 and 2007) notes that poor coverage of the syllabus, poor usage of the English language, non-expansion of points, non-adherence to rubrics and instructions and so on are core factors that affect candidates' performance in Senior School Certificate Examination in Nigeria. Although, various factors affect candidates' performance in various subjects, if these central factors are tackled by all the parties in the system (teachers and learners in particular) there is no doubt that candidates' performance in Nigeria will definitely improve.

Furthermore, Alabi (2000) found the following factors to be responsible for poor performance amongst Senior Secondary School Students:

- (i) Poor teaching i.e. Senior Secondary School teachers do not devote enough time to teaching. They skip classes always without explanation.
- (ii) Large class size i.e. many teachers had to contend with overcrowded classes. This affects their efficiency and the attention students individually get from them.
- (iii) Lack of parental supervision and encouragement at home i.e. many parents do not bother to find out what their children learn in school not to talk of finding out whether they even get to school when they leave house. Alabi is of the view that if parents supervise and show interest in their children's homework and assignment, the

performance in school will surely improve.

- (iv) Students' reliance on all forms of assistance "Expo" to pass examinations. This is examination malpractice, which have been identified by Uduh (2010) and Ojerinde (2005) as a major challenge of public examining in Nigeria today.
- (v) Indolence and poor study habits on the part of students.
- (vi) Teacher dominated classroom instructional activities among other factors.

Alabi recommended that teachers should acquaint themselves with contemporary approaches to teaching by attending remedial programmes, seminars, symposium etc. He advised students to cultivate good study habits and not rely on assistance during examination and parents should provide academic materials due to them and regularly check the exercise books of their children to find out what they are doing in school, while government should employ only specialist teachers for the various subjects offered in the secondary school system. To improve candidates' performance in the Senior School Certificate Examination in Nigeria, Uwadiae (2007:14-17) advices

a) Students to:

- positively change their attitude to learning;
- show equal interest in all the subjects they registered for;
- prepare adequately for their examinations;
- exhibit excellent treatment of questions to produce good response through effective communication and command of the English Language.

b) Teachers to:

- be more enduringly committed to their profession;
- diagnose their students' weaknesses with the aim of eliminating them through stimulating teaching strategies;
- do some counselling alongside their primary teaching assignment;
- recognise the differences among students and seek to meet their individual needs;
- endeavour to participate in WAEC coordination and marking sessions to enable them have more experience in standard evaluation and assessment procedures.

c) Assessors to:

- maintain the quality of its assessment tools;
- devise means of eliminating all forms of examination malpractice;
- sustain the existing comparability of the grades awarded...;

-maintain the non-gender biased setting of objective items and essay questions in its papers;

-investigate thoroughly all cases of candidates who seek redress as some of them claimed they were impersonated.

d) Other Stakeholders in Education:

-Government should provide the wherewithal for meaningful teaching to take place, including adequate remuneration of teachers, conducive learning environment, and sponsorship of teachers' attendance at professional workshops, seminars and conferences and improved funding for education.

-Inspectors of education should be more alive to their duty of ensuring effective monitoring of schools.

-The Ministries of Education should introduce and monitor quality control measures in the administration and scoring of Continuous Assessment.

-Government at all levels should create more awareness of the importance of vocational and technical subjects and provide incentives for technical school graduates in terms of job placement and admission into tertiary institutions.

-Parents and guardians should strive to provide the basic needs of their wards to enable them attain the threshold of motivation needed to bring about significant improvement in their academic performance.

## **2.9 Continuous Assessment in Senior Secondary Schools**

### **2.9.1 Introduction**

Continuous Assessment is a basic component of the May/June diet of the SSCE in Nigeria. WAEC (2004) notes that the WASSCE is made up of two components viz: the Continuous Assessment and the External Examination. The Continuous Assessment forms 30% whilst the External Examinations forms 70% of the total assessment. The Continuous Assessment of candidates for the `three years of secondary education are required by WAEC and NECO at least two months before the commencement of the external component of at the SSCE final assessment. This means that the terminal school examinations form the Continuous Assessment component of the SSCE.

Special computer sheets are usually provided by both WAEC and NECO for the recording of candidates Continuous Assessment scores. In fact, WAEC provides separate computer sheets for each of the three years of secondary education. Principals of schools are



usually mandatorily required to collate and certify the Continuous Assessment scores before forwarding same to WAEC and NECO. The Continuous Assessment scores are so important for the May/June diet of SSCE in Nigeria that WAEC (2004) and NECO (2008) affirms that “Only candidates whose complete Continuous Assessment scores have been submitted two months to the date of writing the final SSCE, shall be eligible. They further assert that “non-receipt of the Continuous Assessment scores on schedule from a school may lead to non-release of results of candidates of the school.”

### **2.9.2 Meaning of Continuous Assessment**

There is consensus among scholars on the meaning of Continuous Assessment. Ojerinde and Falayajo (1984) sees Continuous Assessment as a method of finding out what the pupils have gained from learning activities in terms of knowledge, thinking, character development and industry. While Osokoya and Odinko (2005) adds that Continuous Assessment is a mechanism whereby the final grading of a child at the end of a week, a term of a session of primary (or any other level of education) school education in the cognitive, affective and psychomotor domains of behaviour systematically takes into account all the performance of the child during the given period. These definitions affirm that Continuous Assessment covers the three domains of learning in order to produce children who are promptly alert and physically fit for the Nigerian Society.

Yoloye (2004) notes that Continuous Assessment is formative achievement and that it is used to assess the individual progress during the course of instruction. He adds that the overall assessment is based on the cumulative progressive performance. Yoloye’s definition of Continuous Assessment agrees with that of Osokoya and Odinko that Continuous Assessment should be progressively conducted weekly, to cover every topic or content presented to the learners in the classroom. This practice helps teachers to identify weaknesses in their teaching and in the students’ learning and provide remediation as instruction progresses to the end of the term. This corroborates Iwuji (1997) who opined that Continuous Assessment in education is a systematic and comprehensive processes of identifying a student’s potential in his cognitive, affective and psychomotor domains with a view to helping him develop these for effective social and economic functioning within the society’s modern culture.

Furthermore, the Institute of Education, University of Ibadan, in the Lagos Eko training manual for English Language (2010) defines Continuous Assessment as a systematic, comprehensive and guidance oriented procedure of finding out the overall gains that a student has made in terms of knowledge, attitudes and skills after a given set of learning experiences. This definition is comprehensive as it emphasized both the domains of learning and the characteristics of Continuous Assessment.

Ojerinde and Falayajo (1984) notes that Continuous Assessment is systematic in the sense that it requires operational plan, that is, what measurement are to be made of the pupils' performance, at what time intervals or times during the school year, including the nature of tools to be used in the measurement while Okonkwo (2004) adds that being systematic implies that Continuous Assessment activities should be planned and executed according to the plan rather than a spur of the moment exercise. Ojerinde and Falayajo opined that Continuous Assessment is comprehensive in the sense that many types of instruments are used in determining the performance. Okonkwo (2004) identified two aspects of comprehensiveness. First, the assessment must encompass all the three domains of behaviour, while the second involves utilization of various evaluation instruments. Table 2.4 shows the various instruments that can be used for Continuous Assessment at the various domains of leaning.

Again, Ojerinde and Falayajo (1984) observes that Continuous Assessment is cumulative since any decisions to be made at any point in time on the pupils takes into account all previous decisions i.e. decisions and records kept by the teacher on each pupil. Okonkwo (2004) further explains that decisions on the child, which are to be taken on the basis of the assessment data, should involve all assessment data accumulated from his/her point of entry into the school to the time the decision is being taken. Finally, Continuous Assessment scores are guidance-oriented because information obtained is used to counsel and guide the learners on further development in character and career.

### **2.9.3 Rationale for introducing Continuous Assessment**

Continuous assessment was one of the recommendations of the Justice Sogbetun Tribunal which was set up to investigate the massive leakage of SSCE by WAEC in 1977 (Expo '77). The tribunal proposed that certification of school leavers should be based on the

external examination and results from schools periodic testing of candidates. This recommendation was adopted and it gave birth to the practice of Continuous Assessment in Nigeria's educational system. The National Policy on Education (2004) gave credence to this by affirming that *“educational assessment and evaluation shall be liberalized by their being based in whole or in part on continuous assessment of the progress of the individual”* pg. 4.

WAEC (1989) further justifies the need for Continuous Assessment in schools by saying that ‘the single final examination, which was summative in Nature, has become threatening and anxiety provoking with teachers teaching almost exclusively for examinations. This lamentation by WAEC suggests that the formative evaluation which prepares candidates for the summative evaluation has no place in the final assessment of candidates. Hence, the justification for the introduction of Continuous Assessment in the educational system.

Based on the above, Continuous Assessment was introduced into Nigerian school system to allow teachers the opportunity of being involved in the final assessment of the candidates whom they have prepared for external examinations. Ojerinde and Falayajo (1984) argue that it is reasonable that the teacher should be involved in the final assessment of pupils he or she has taught. They also contended that an assessment procedure which takes into account the learner's performance throughout the entire period of schooling is likely to be more valid and more indicative of the learner's overall ability than a single examination. Thus, in the opinion of Emeke (1994), CA by its nature, gives the teacher greater input into the overall assessment of his/her students, as he can better plan his ... teaching to meet the needs of his students through flexibility and innovations.

Finally, the primary aim of CA is not to grade a child, or to decide whether he/she “passed” or “failed”. It is to help the child in personal development by highlighting his/her strengths and weaknesses and suggesting where he/she needs to put more effort and in what areas he/she is most likely to excel (Okonkwo, 2004).

#### **2.9.4 Problems of Continuous Assessment Practices**

Scholars like Ojerinde and Falayajo (1984), Okonkwo (2004), Osunde and Ughamadu (2004), and Mgbor and Mgbor (2003) have identified the following problems facing Continuous Assessment in Nigerian schools.

- (1) **Incomprehensiveness:** Comprehensive feature of Continuous Assessment ensures that it covers the three domains of learning. But today, only the cognitive aspect of learning is emphasized in Continuous Assessment as teachers predominantly use test which is a cognitive based instrument, to conduct Continuous Assessment (Okonkwo, 2004). This practice is a problem to Continuous Assessment because it puts the affective and psychomotor domains at a disadvantage or rather it ignores them.
- (2) **Comparability of scores:** It is likely that Continuous Assessment scores generated by two different teachers or even the same teacher in two different tests may not be directly comparable. This problem arises from the fact that the quality of test and other assessment instruments may vary from school to school; procedures of scoring the instruments used to gather data for Continuous Assessment may also vary from school to school and from teacher to teacher (Okonkwo, 2004; Ojerinde and Falayajo, 1984). Hence there is need for SSCE examining bodies to find a way of standardizing Continuous Assessment scores from schools before taking certification decisions on them.
- (3) **Record Keeping and Continuity of Records:** For Continuous Assessment to be meaningful, it has to be a meticulous keeping of accurate records by teachers on each student. It is therefore difficult for different teachers to keep accurate records of each learner from class to class, year to year on all subjects (Osunde and Ughamadu; Mgbor and Mgbor, 2003; Ojerinde and Falayajo, 1984). This situation is compounded by the general poor record keeping apathy prevalent in the larger Nigerian society.
- (4) **Problems in Allocation of Marks:** Mgbor and Mgbor (2004) reports that there are problems in allocating marks in Continuous Assessment practices in Nigerian schools. While some schools allocate as low as 20%, others allocate as high as 50% marks to Continuous Assessment in a term. This is wrong and there is no justifiable reason for this. The ideal percentage for Continuous Assessment in a term should be 30 i.e. 10% to each domain of learning.
- (5) **Lack of Professionally Qualified Teachers:** There are many untrained teachers in Nigerian classrooms today who can neither implement nor interpret Continuous Assessment scores simply because they lack assessment knowledge (Mgbor and

Mgbor, 2004). This is further compounded by the fact that Continuous Assessment as a topic in Measurement and Evaluation (or test and measurement as the name is called in various schools) are hardly covered by the lecturers who teach them, may be because the topic is usually towards the end of the course content and there is no time to teach it or they do not understand its concept and principles. It is, thus, overdue for a full course on Continuous Assessment with reasonable credit units to be introduced in Teacher Education programmes in Nigeria.

**Table 2.3: Instruments for Conducting Continuous Assessment in various Domains of Learning**

S/N	Evaluation Tools	Cognitive	Affective	Psychomotor
1.	Tests	✓		
2.	Projects	✓	✓	✓
3.	Assignments	✓	✓	✓
4.	Interviews	✓	✓	
5.	Rating scales		✓	✓
6.	Observation		✓	✓
7.	Questionnaire		✓	
8.	Anecdotal Records		✓	
9.	Sociometric		✓	

SOURCE: Ughamadu, K.A. (1991) in Osunde and Ughamadu (2003).

### 2.10 Factors Affecting English Language Teaching and Learning

As stated earlier in this study, English Language is not just a global language, but also a compulsory subject offered by all students in Nigerian schools and in the school systems of most countries of the world. Commenting on the importance of English Language in Nigeria, Soyinka (2007) asserts that:

*The heterogeneous Linguistic situation in Nigeria made and still makes English Language indispensable in formal and official settings such as politics, law, corporate business, international trade, journalism, administration and of course, education, where the importance is more stressed.pg.22.*

Soyinka notes that priority was put on the teaching of English Language in the Secondary schools and that a pass in English was a pre-requisite for obtaining a certificate in all examinations, especially Senior School Certificate Examinations. He further revealed that English Language came with Western/missionary education to Nigeria and that 'Model' institutions were established with emphasis on the learning and use of English Language. For example, at King's College, Lagos and Hope Waddell Institute, Calabar, students underwent compulsory courses in English Language and History. Even the National Policy on Education (FGN, 2004) labels English Language as a compulsory core subject for the Nigerian Secondary School system.

However, it appears that performance of students in English Language in Nigerian schools have not been encouraging. To this end, several studies have been conducted to find out the factors that affect the teaching and learning of the subject in Nigerian schools. Thus, Olaniyan (2001) in Soyinka (2007) investigated the factors affecting students' performance in Essay writing in secondary schools in Oluyole Local Government Area of Oyo State. The study revealed that poor motivation of students, poor encouragement from home and poor teaching techniques contribute to students' poor performance in English Language.

Also the 2004, 2005 and 2007 WAEC Chief Examiners' Report identified wrong amalgamation of ideas, interchangeable use of phonetically similar words, arbitrary insertion/omission of apostrophe, wrong grammar, wrong concord and tense usage, choice of essay topics they could not develop points on, poor expression of ideas, poor vocabulary, wrong use of punctuation marks, and so on as factors that contribute to candidates poor performance in senior school certificate examination English Language.

### **2.11 Factors Affecting Mathematics Teaching and Learning**

Like English Language, Mathematics is another subject that is compulsorily offered by all students in Nigerian schools. Despite, its importance to individual and national development Erin (2012) notes that Mathematics is a subject that is often disliked by many students. According to Erin, various researchers have attributed this to many factors ranging from:

- (i) Teachers' attitudes and beliefs (Unsimaki and Nason, 2004; Beswick, 2006; Wilkins and Braud, 2004; Swan, Bell, Philip and Shannon, 2000);
- (ii) Teaching styles and behaviours (Chesebro, 2003; Wanzer and McCrosky, 1998);
- (iii) Teaching techniques (Anderson, 2005; Whitin, 2007);

- (iv) Achievement (in the subject by previous students) (Hannula, 2002; Tapia and Marsh, 2001);
- (v) Assessment problems and
- (vi) Parents' attitude and beliefs.

Miheso (2012) also found teaching method to be a principal factors that affects secondary school students' performance in Mathematics in Nairobi province of Kenya. On his part, Cardenas (2011) reports that language abilities and social pressures from home and community affects students learning of mathematics in California, United States. While Mae (2008) reports that students' home background especially the size of their family, affect their performance in mathematics in the Philippines. Jedida (2008) reports that teacher child ratio, teaching/instructional materials, teachers' experience and age affects students' performance in mathematics.

Furthermore, Mang'ula (2008) investigated psychological, school based, socio-economic and cultural factors that affected the mathematics performance of visually impaired girls in Thika High School for the blind, Kenya. The result of the study showed that aspirations, confidence, interest and attitude influenced girls' performance in mathematics. The study reports negative attitude and lack of interest as major psychological factors that affected performance in mathematics; inadequate/inappropriate resources, lack of role models, teachers not trained in special needs education, over populated classrooms and time for mathematics lessons as school based factors that affected performance in mathematics; while parents' level of education, income and occupation are socio-economic and cultural factors that affected performance in mathematics.

Equally, the WAEC Chief Examiners' Report (2004, 2005 and 2007) reports that poor coverage of syllabus, non-adherence to instructions and rules, lack of knowledge of basic mathematics principles, poor preparation for examination, over-dependence on calculators, inability to use mathematics tables, incoherent presentation of ideas etc. are factors that affect candidates' performance in mathematics in the West African Senior School Certificate Examination in Nigeria.

Based on the identified factors that affect performance in mathematics, Erin (2012) posits that there is an overlapping relationship between teachers' characteristics, teaching

characteristics, assessment methods and previous achievements in the subject on students' performance in mathematics. Specifically, he pointed out that:

- (i) Teaching characteristics like clarity of explanations influence students understanding of mathematics and hence, their attitude towards mathematics;
- ii) Devoting more time to explain, especially outside the classroom, after school, during break, before schools' morning devotion etc. matters a lot;
- (ii) Multiple explanations and representations e.g. graphically and algebraically influences students' learning of mathematics;
- (iii) Explanations and examples used in class should highlight the usefulness of mathematics for students to pay greater attention to learning the subject;
- (iv) Collaborative learning and spacing of instruction should be emphasized;
- (v) Students' attitude to mathematics improves as their success in it improves.

Erin emphasized that students wants a nice, approachable and devoted teacher who respects them and makes time for each student. He called on teachers to always ensure that their examples are challenging, interesting and useful to real life as well as maintain a clear and frequent assessment.

Akinbolati (2003) identified poor academic background of mathematics teachers' inadequate training exercise for mathematics teachers and lack of human qualities like perseverance, responsibility, initiative, self-control, modesty, consistency, orderliness, dressing etc. as teacher factors that have strong influence on students' success in school certificate mathematics. He further noted disorderliness in the classroom, inefficiency of problem solving strategies, teachers' attitude profile towards teaching of difficult topics in mathematics, class control, discipline, poor supervision and marking of class work among others as classroom factors that affect students' achievement in mathematics. Imperatively, it can be concluded that if factors identified by Akinbolati and other researchers are properly taken care of students' academic achievement in mathematics will definitely improve.

Finally, Vande and Tarwel (1994) came up with the following characteristics of teaching and learning situations in mathematics.

- (i) Learners of different abilities are instructed together by the same teacher in mathematics classes.
- (ii) Within the same classes, learners work together in small heterogeneous groups of two



or four (number subject to class size and at teachers' discretion). This is a kind of peer-tutoring.

- (iii) Mathematics practiced on lower levels becomes mathematics observed at higher levels. If learners reflect on and apply the little mathematics knowledge in class to everyday life, they are likely to achieve greatly in life.
- (iv) Learners must be made to realize that mathematics can be related to other aspects of the world, to other disciplines and techniques.

## **2.12 Theories of Learning**

Illeris (2004) and Onmrod (1999) have defined learning as a process that brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing or making changes in ones' knowledge, skills, values and world views. Burns (1995) equally conceives of learning as a relatively permanent change in behaviour, with behaviour including both observable activity and internal processes such as thinking, attitudes, and emotions. From the above definitions, learning is a holistic process that involves environmental influences and experiences on the behaviour of learners which can be observed as they interact both within and outside the classroom settings.

Learning theories are elaborative hypothesis that describes how learning occurs. Hill and Rita (2008) notes that learning theories provide a conceptual framework for interpreting examples that are observed as well as suggest where to look for solutions to practical problems that occur in education. Hill concludes that learning theories do not give solutions to instructional problems, but direct the attention of stakeholders to those variables that are crucial in finding solutions to the problems. Thus, several theories have been propounded by educationists and psychologists to facilitate teaching and learning in the classroom. They include:

### **2.12.1 The Mastery Learning Theory**

The concept was introduced into American schools in the 1920s in the Winkta Plan Programme. The programme flourished during that decade and diminished because of lack of technology to sustain it. However, it was revived in the form of programmed instructions in the late 1950s in an attempt to provide students with instructional materials that would allow them to move at their pace and receive constant feedback on their learning progress. In the

1960s, Benjamin Bloom's learning for mastery focused new attention on the philosophy of mastery learning. Bloom's 1968 work is now generally recognized as the classical theoretical formulation of mastery learning model. He is widely viewed as the major theoretician and promulgator of the mastery learning theory.

The philosophy of mastery learning, according to Bloom (1974) is that virtually all students can learn excellently well *if* instructions are approached / presented systematically (i.e. from known to unknown and simple to complex), *if* students are helped where and when they have difficulties learning, *if* they are given sufficient time to attain mastery, and *if* there are some clear criteria of what constitutes mastery.

Bloom observed that teachers who teach for mastery must organize curriculum content into units and then check on students' progress at the end of each unit. These checks on learning progress, he reasoned, should be used as part of the teaching and learning process to provide feedback on students' individual learning difficulties and then to prescribe specific remediation activities. It is, therefore, expected that teachers should define mastery, plan for mastery, teaching for mastery and grade for mastery. To define mastery means stating objectives on behaviours to be exhibited by students before mastery is reached. Planning for mastery involves breaking down topics, selection of appropriate teaching methods, suitable instructional materials and evaluation procedures. The teacher must also evaluate each instructional material to determine their suitability for realizing the instructional objectives. Teaching for mastery requires the teacher to bear the age of learners and the class being taught in mind while presenting lessons. Grading and assessment of students should be done with the stated objectives on mind so as to know when critical mass is attained.

It is believed that nearly all students (or at least 90% will attain 80% success), when provided with more favourable learning conditions of mastery learning, could truly master academic content (Bloom, 1974; Guskey, 2009). A large body of research has proved that when compared with students in traditionally taught classes, students in well-implemented mastery learning classes consistently reach higher levels of achievement and develop greater confidence in their ability to learn and in themselves as learners (Anderson, 2005; Guskey & Gates, 1986).

Therefore, if stakeholders (teachers, parents, examining bodies, government) meet all the *ifs* in preparing students for senior school certificate examinations in Nigeria, there is no doubt that candidates will achieve higher in the examination.

### 2.12.2 Behavioural Theory of Learning

The word 'behaviourism' was coined by John Watson, who lived from 1878-1959. However, behaviourism as a learning theory was developed by B. F. Skinner, a psychologist. The basic assumptions of behaviourism are (1) Learning is manifested by a change in behaviour; (2) The environment shapes behaviour; (3) The principle of contiguity (i.e. how close in time two events must be for a bond to be formed) and reinforcement (i.e. any means of increasing the likelihood that an event will be repeated) are central in explaining the learning process. Behaviourists believe that learning is the acquisition of new behaviours through conditioning. Skinner believes that the learner will repeat a desired behaviour if positive reinforcement follows the behaviour.

### 2.12.3 Cognitive Learning Theory

Cognitive theory of learning grew out of Gestalt psychology. Yount (1996) notes that gestalt is roughly translated as configuration or pattern and emphasizes the whole of human experiences. Some of the proponents of the cognitive theory of learning were Max Wertheimer (1886-1943) and Kurt Koffka (1886-1841). Wertheimer, who is the proponent of cognitive theory, believes that true learning is achieved through understanding and insight of the problem at stake. Iroegbu et al (2002) reports Wertheimer as insisting that teachers must ensure understanding through the arrangement of learning materials in such a way that can enable students to see the whole and not just series of unrelated parts. The cognitivists stress *thinking* and *understanding*. They opine that learning occurs by insight and that insights arise from attempts to solve problems. Thus, students should be given tasks to perform both within and outside the classroom so that they can gain insight as they attempt to solve the task.

Cognitive theory of Learning is associated with (i) discovery learning, where students are given little or no assistance as they attempt to solve a problem. They are expected to take initiative and solve a problem. (ii) Insightful learning which occurs as a result of sudden awareness or perception of essential relationships in learning situations i.e. in insightful learning, solutions to tasks comes by a flash or through initiative in an attempt to understand the learning situation. Cognitive theorists believe in whole learning, noting that it is superior to part learning. They argue that the teacher should give students general picture of what s/he

wants to teach before breaking it into parts. It is their view that anything to be understood should be understood in full and not in parts.

There are two key assumptions of cognitive learning: (i) that the memory system is an actively organized process of information, and (ii) that prior knowledge plays an important role in learning. According to Lilienfeld, Lynn, Namy and Woolf (2010) cognitive theory look beyond behaviour to explain brain-based learning. Cognitivists consider how human memory works to promote learning.

### **2.13. Conceptual Framework**

From literature and personal experience, it has been established that study habit affects test anxiety, students' attendance to classes, and coverage of prescribed syllabus for examination i. e. a good study habit will eliminate test anxiety and enhance students' coverage of the examination syllabus. If a student attends classes regularly, his/her handwriting is likely to improve. This is because other students who copy their notes and the teachers who mark their exercise books would comment on the need to write more clearly and legibly. While a legible writing will affect achievement in WASSCE as examiners will not have difficulty reading through what the candidates have written. Candidates' adherence to examination instruction can equally determine their academic achievement because following the instruction will enable them to answer all the required questions from every section of the question paper.

Age is another factor that determines candidates' achievement in WASSCE. It affects study habit, test anxiety, and coverage of syllabus i.e. candidates do better in school when they are more matured than when they less are matured. The number of examinations written by candidates within the same period of WASSCE also determines their achievement in the examination. Preparation for these examinations often leads to fatigue and loss of interest in studying and thus endangers ones achievement in the examinations.

Provision of continuous assessment feedback to students equally improve their study habit and enhance their coverage of examination syllabus, thus leading to high achievement in examinations and vice versa. Also, being an SSCE examiner, years of teaching experience and shortage of teachers all affect teachers' coverage of prescribed WASSCE syllabus which determines candidates' achievement in the examination. Research from literature has also shown that the type, location and available teaching and learning resources in the school significantly determine academic achievement of students. This is represented in fig 2.2.

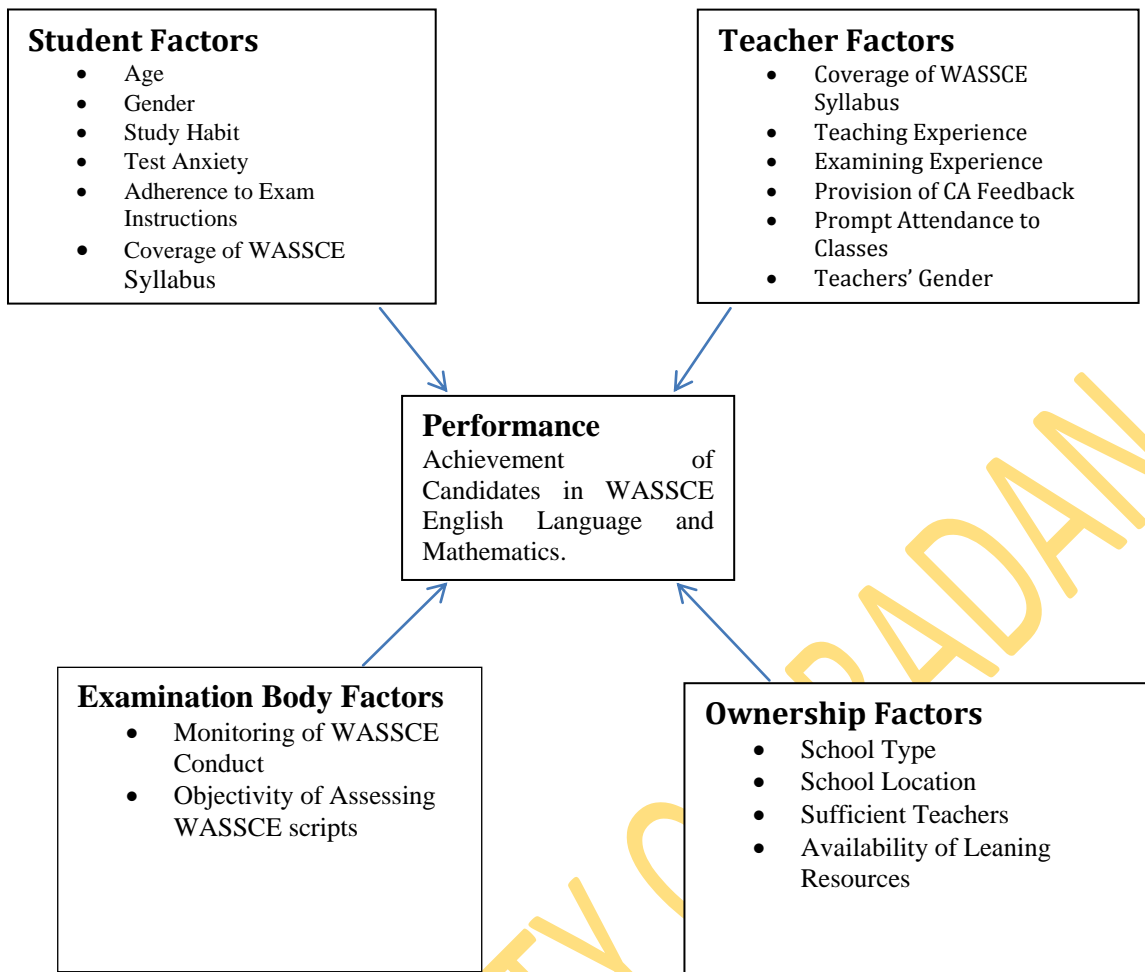


Fig. 2.1 Conceptual Framework of some determinants of candidates' performance in WASSCE English Language and Mathematics. (Source: Developed by the researcher)

#### 2.14 Gaps to be filled by this study

Many studies have been conducted to find out the factors that may be responsible for low performance of candidates in West African Senior School Certificate Examination (WASSCE) in Nigeria. The findings of such studies blame the poor performance in WASSCE on Assessment Quality (Adelakun and Adewale, 2011; Addae-Mensa, 2006); Age at which learners sit for the exam (Akanbi, 2007; Oparaku, 2010); Students' self-concept, study habit, attitude (Aremu, 2011; Adetoro, 2012; Markman, 2012; Ogbodo, 2010; Harry & Herbert, 1997); Test Anxiety (Zeidner, 1998; Saland, 2012; Cassady, 2010); Poor Quality Instructional Facilities (Orubu, 2010; Solomon, 2012; Taylor, 2010; Alimi, Ehinola & Alabi, 2012; Cynthia and Megan, 2008); Teacher Shortage (Odede, 2010; Kimberly & Paul, 2009; Commonwealth, 2008); Teacher Personality traits (Uba, 2012; Adepoju, 2012; James & Jonathan, 2010); Coverage of Syllabus (Shikuku, 2012; Amadalo, Shikuku & Wasike, 2012);

School Type (Ibode and Oparaku, 2007; Oke, 2010; Okwilagwe, 2005); School Location (Isiugo-Abanihe and Labo-Popoola, 2004; David and Kathleen, 2006); Feedback on continuous assessment (Osoba and Bakare, 2008; Falaye, 1995) among other factors.

From literature, all the researchers used students of senior secondary schools i.e. students who are preparing for the West African Senior School Certificate Examination, mainly SS2 and SS3 students as participants in their studies. None used candidates that have attempted WASSCE as subjects of their studies. This study, therefore, involved past WASSCE candidates who reported on the factors that accounted for/affected their performance in WASSCE.

Also, scholars are yet to consider the influence of WASSCE, number of examinations written by candidates within the same period, perceived Legibility of handwriting, adherence to examination instructions and the external monitoring of WASSCE by The West African Examinations Council (WAEC). These were the gaps that this study filled in addition to further investigating the other factors listed above.

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Introduction

This chapter deals with the Research Design, Variables in the study, Population, Sampling procedure and Sample, Instrumentation, Method of Data Collection, Method of Data Analysis, Methodological Challenges and so on.

#### 3.2 Research Design

This study is a tracer survey research. According to Kerlinger and Lee (2000), survey research studies large and small populations by selecting and studying samples chosen from the population to discover the relative incidence, distribution and interactions of sociological and psychological variables.

#### 3.3 Variables in the study

The variables in this study are:

##### a) Independent

- i) Learner Factors (age, gender, study habit, test anxiety, perceived adherence to exam instruction, perceived legibility of handwriting, coverage of exam syllabus).
- ii) Teacher Factors (provision of CA feedback to students, prompt attendance at classes, coverage of syllabus, teaching/examining experience, qualification, gender).
- iii) Ownership Factors (school type, school location, sufficient teachers and availability of learning resources).
- iv) Examining Body Factors (Monitoring of WASSCE conduct, Objectivity of WASSCE assessment).

- b) **Dependent:** Performance (result) of candidates in WASSCE English Language and Mathematics in Imo State.

### **3.4 Population**

The target population for this study comprised Senior Secondary School Principals, English Language and Mathematics teachers and past WASSCE candidates in continuing education centres within Imo state such as Busy-Brain Academy, Eastern Institute of Continuing Education, Sam Njemanze Institute etc. and undergraduates in their first year from Imo State University, Owerri; Imo State Polytechnic, Umuagwo and Alvan Ikoku College of Education, Owerri who sat for the WASSCE between 2010 and 2013 in Imo State, Nigeria.

#### **3.5.1 Sampling Procedure**

This study adopted a multi-stage sampling technique. The researcher purposively selected Imo State from the existing cluster of five states in South-East geo-political zone for the study because the researcher is experienced in the culture and language of the environment. Hence, the following steps were taken: a) To identify the participants from continuing education centres, (i) the researcher did a mapping of these centres in the state; (ii) the researcher requested for the enrolment records of students from the managers. When it was not made available, he interacted with them to find out students who to the centres due to their inability to obtain credit pass in English Language and Mathematics during their May/June attempt as well as the time the students usually come to attend classes; (iii) the researcher also interacted with the identified students and acquainted them with the purpose of the study; (iv) during the interaction, the researcher collected the names of the students, assigned numbers to them and agreed on a date the instruments will be administered on them. b) To identify undergraduate participants, the researcher sort approval from the heads of departments, who then introduced the researcher to the Course Leaders of the first year students. With the assistance of the Course Leaders, the researcher was able to interact with the students to identify those who were admitted without credit pass in either English Language or Mathematics. The instruments were then administered on the identified students. c) To identify the team leaders, researcher went to WAEC office at Aladinma to collect the names and phone numbers of their examiners who were of the rank of team leaders. With the phone numbers, the researcher contacted the team leaders and booked appointments for interview with them on the procedure of assessment and personnel involved at each stage of assessment. d) To trace the teachers and principals of the students, i) the researcher used the name of the schools provided by candidates of the research instruments (School names were removed from this thesis because of confidentiality); ii) The researcher and his assistants went to the



schools with the lists of the names of students obtained during the informal interaction with the students at the continuing education centres and higher institutions involved in the study; iii) The researcher and his assistants interviewed the teachers orally to ascertain if they could identify the affected students. Majority of the teacher were able to identify the affected students while some could not. The teachers who were unable to remember some of the affected students were removed from the study. Hence the reduction in the original sample size of the study from six hundred (600) to four hundred and eighteen (418).

**Selection criteria:** Only candidates who wrote the examination between 2010 and 2013 and did not make credit pass in English Language and Mathematics were purposively selected for the study.

**Reason:** The choice of 2010-2013 was to ensure that a reasonable number of the teachers were still in the secondary schools where the candidates sat for WASSCE and that the candidates could still remember what happened when they were in senior secondary school, especially during their final year. Tertiary Institutions were chosen because some students have deficiency in their O' Level results. **Note:** Most Tertiary Institutions do not insist on credit passes in English Language and Mathematics for all courses. Some make credit in Mathematics compulsory for science related courses and English Language compulsory for art related courses. So, students in the sampled institutions who do not have credit passes in English Language and Mathematics were sort to explain the reasons why they did not obtain credit pass in the subjects. The reason is to make the study robust.

### 3.5.2 Sample

The sample for the study comprised Senior Secondary School Principals and their English Language and Mathematics teachers in Imo State. It also involved past WASSCE candidates in extra-mural centres and higher institutions within Imo State as well as English Language and Mathematics WASSCE Examiners who are of Team Leader rank. The total sample size is shown on table 3.1.

**Table 3.1: Sample and Sampling Frame**

S/N	RESPONDENTS	NUMBER
1	Principals	53
2	Teachers	109
3	Past WASSCE Candidates	300
	1. Extra-Mural Centres	
	2. First Year Undergraduates	118
4	Team Leaders	6
	<b>TOTAL</b>	<b>586</b>

**Table 3.2 Educational Zones in Imo State and number of schools covered in each zone**

Educational Zones	No. of Schools in each Educational Zone		No. of Schools Covered in the Study	No. of students traced to their schools.
	SEMB	WAEC		
<b>Okigwe 1</b> Isiala-Mbano LGA Okigwe LGA Onuimo LGA	30	56	6	41
<b>Okigwe 2</b> Ehime-Mbano LGA Ihitte-Uboma LGA Obowo LGA	34	51	8	66
<b>Orlu 1</b> Ideato North LGA Ideato South LGA Isu LGA Njaba LGA Nkwere LGA Nwagele LGA Orlu LGA Orsu LGA	61	75	6	49
<b>Orlu 2</b> Oguta LGA Ohaji/Egbema LGA Oru-East LGA Oru-West LGA	37	45	5	37
<b>Owerri 1</b> Ikeduru LGA Mbaitoli LGA Owerri Municipal Owerri-North LGA Owerri-West LGA	67	74	24	194
<b>Owerri 2</b> Aboh-Mbaise LGA Ahiazu-Mbaise LGA Ezinihitte-Mbaise LGA Ngor-Opkala LGA	35	53	4	31
<b>Total</b>	<b>264</b>	<b>369</b>	<b>53</b>	<b>418</b>

**NB:** The figures under SEMB represent number of public schools in Imo State while those figure under WAEC represent the number of both public and private schools in the State.

### **3.6 Instrumentation**

Ten research instruments were used to collect data for this study. They are:

- 1) Study Habit Questionnaire
- 2) Test Anxiety Scale
- 3) Coverage of Syllabus Questionnaire
- 4) Perceived Legibility of Handwriting Questionnaire
- 5) Perceived Adherence to Examination Instructions Questionnaire
- 6) Availability and Use of Learning Resources Checklist
- 7) Number of Examination and Candidates' Perception of Objectivity of Assessment Questionnaire.
- 8) Teachers' Questionnaire (T.Q.)
- 9) Principals' Questionnaire (P.Q.)
- 10) Interview Schedule for Examiners.

#### **3.6.1 Study Habit Questionnaire**

This instrument was adapted from Virginia Gordon University's Survey: A Guidebook and Readings for new students. It was used for past WASSCE candidates in this study. It has two sections. Section A solicits background information of the respondents. Section B has thirteen items which required the respondents to recall and rate their study habits during their preparation for WASSCE. The instrument has a four point response format of Always, Sometimes, Rarely and Never. The instrument was given to lecturers in the Department of Guidance and Counselling, University of Ibadan who made useful corrections before it was trial-tested on an equivalent sample numbering seventy. It has a psychometric value of 0.72.

#### **3.6.2 Test Anxiety Scale**

This instrument was adapted from Nist and Dieli (1990) for past WASSCE candidates. The original reliability of the instrument is 0.96. It has two sections. Section A solicits background information of the respondents while section B has twenty items on test anxiety. It has a five point response format of Always, Often, Sometimes, Rarely, and Never. The instrument was given to lecturers in the department of Guidance and Counselling, University of Ibadan who made useful corrections before it was trial-tested on an equivalent sample numbering seventy. It has a psychometric value of 0.69.

### **3.6.3 Coverage of Syllabus Questionnaire**

This instrument was developed by the researcher for past WASSCE candidates in this study. It has two sections: A & B. Section A solicits background information from the respondents while section B has twelve items where respondents reported the extent to which they covered their termly scheme of work and prescribed syllabus for WASSCE. It has a four point response format of Always, Sometimes, Rarely and Never. The instrument was given to research fellows and research students in the Institute of Education, University of Ibadan for face and content validity. After trial-testing the instrument on an equivalent sample numbering seventy, it produced a psychometric value of 0.86.

### **3.6.4 Perceived Legibility of Handwriting Questionnaire**

This instrument was developed by the researcher for past WASSCE candidates in this study. It has two sections: A & B. Section A solicits background information from the respondents while section B has eight items where they reported the legibility of their handwriting in secondary school. The response format is Very True of Me, Sometimes True of Me and Not True of Me. The instrument was given to research fellows and research students in the Institute of Education, University of Ibadan for face and content validity. After trial-testing the instrument on an equivalent sample numbering seventy, it produced a psychometric value of 0.87.

### **3.6.5 Perceived Adherence to Examination Instruction Questionnaire**

This instrument was developed by the researcher for past WASSCE candidates in this study. It has two sections A & B. Section A solicits background information from the respondents while section B has six items for respondents to report on their adherence to examination instructions in a Very True of Me, Sometimes True of Me and Not True of Me format. The instrument was given to research fellows and research students in the Institute of Education, University of Ibadan for face and content validity. After trial-testing the instrument on an equivalent sample numbering seventy, it produced a psychometric value of 0.87.

### **3.6.6 Availability and Use of Learning Resources Checklist**

This instrument was developed by the researcher for past WASSCE candidates in this study. It has four sections. Section A solicits background information from the respondents. Section B has one item in a three by six matrix requiring respondents to recall and report the availability and frequency of use of instructional facilities in their various secondary schools

while they were preparing for WASSCE. The instrument was given to research fellows and research students in the Institute of Education, University of Ibadan for face and content validity. After trial-testing the instrument on an equivalent sample numbering seventy, it produced a psychometric value of 0.83.

**Note:** Imo State Government under Governor Rochas Okorocha runs a free education programme where the government provides learning resources for students up to secondary school level. This instrument is designed to find out the availability and utilisation of such educational facilities as contained in the instrument in the schools.

### **3.6.7 Number of Examination and Candidates' Perception of Objectivity of Assessment Questionnaire**

This instrument was developed by the researcher for past WASSCE candidates in this study. It has three sections: A & B. Section A solicits background information from the respondents. Section B has one item where the candidates reported on whether writing other examinations alongside affected their achievement in WASSCE. Section C has only one item on the perceived objectivity of assessment of candidates' scripts by WAEC examiners. It has a dichotomous response format of Very Objective and Not Objective. The instrument was given to research fellows and research students in the Institute of Education, University of Ibadan for face and content validity. After trial-testing the instrument on an equivalent sample, it produced a psychometric value of 0.79.

### **3.6.8 Teachers' Questionnaire on factors that influence achievement in WASSCE**

This instrument was developed by the researcher for Senior Secondary School English Language and Mathematics Teachers in this study. It contains seven sections, with a total of thirty-six items. Section A solicits background information from the respondents. Section B contains eight items where the teachers rated some student factors that affect performance in WASSCE. It has a four point response format of Very High, High, Low and Very Low. Section C has only one item on the perceived objectivity of assessment of candidates' scripts by WAEC examiners. It has a dichotomous response format of Very Objective and Not Objective. Section D has two items on the perceived impact of external monitoring of WASSCE by WAEC. It has a four point rating of Very High, High, Low and Very Low. Section E has ten items on Teachers' coverage of WASSCE syllabus. It has a four point response format of Always, Sometimes, Rarely and Never. Section F has eight items on Teachers Attendance to Classes. It has a three point response format of Very True of Me,

Sometimes True of Me and Not True of Me. While Section G has seven items on Teachers' Provision of CA Feedback to students and Continuous Assessment practices. It has the same response format as section E. The instrument was given to research fellows and research students in the Institute of Education, University of Ibadan for face and content validity. After trial-testing the instrument on an equivalent sample numbering seventy, it produced a psychometric value of 0.61.

### **3.6.9 Principals' Questionnaire on factors that influence achievement in WASSCE**

This instrument was developed by the researcher for school principals in this study. It has twenty-four items in five sections. Section A solicits information from the respondents on the quantity of WASSCE teachers in the respondents' school i.e. whether they have sufficient English Language and Mathematics teachers to prepare students for the subjects in WASSCE. Section B has eight items which required the principals to rate some teacher factors that affect performance in WASSCE. The response format is four point of Very High, High, Low and Very Low. Section C has eight items which solicited principals' view on some student factors that affect performance in WASSCE. It has the same response format with section B. Section D has only one item on the perceived objectivity of assessment of candidates' scripts by WAEC examiners. It has a dichotomous response format of Very Objective and Not Objective. Section E has two items on the perceived impact of external monitoring of WASSCE by WAEC. Section E (a) has a four point response format of Very High, High, Low and Very Low while F (b) has three point response format of Yes, No and Undecided. The instrument was given to research fellows and research students in the Institute of Education, University of Ibadan for face and content validity. After trial-testing the instrument on an equivalent sample, it produced a psychometric value of 0.84.

### **3.6.10 Interview Schedule for Team Leaders**

This instrument was developed by the researcher. The researcher personally used it to interact with English Language and Mathematics chief team leaders in charge of both WAEC co-ordination and marking centres in Owerri while two research assistants to interact with team leaders in Okigwe and Orlu respectively. It has a total of six items for team leaders on the application of the marking scheme in the assessment of WASSCE scripts. The interview helped to establish and clarify the objectivity in the assessment of WASSCE scripts by WAEC examiners.

### 3.6.11 Dependent Variable

This instrument was developed by the researcher for past WASSCE candidates in this study. It has two sections: A & B. Section A solicits background information from the respondents. Section B required candidates to provide their WASSCE results in English Language and Mathematics. The results were verified by their principals and used as an index of achievement.

**Table 3.3 Grades allocated by WAEC indicating level of pass and their point values**

S/N	Grades	Point Values
1	A1	9 Points
2	B2	8 Points
3	B3	7 Points
4	C4	6 Points
5	C5	5 Points
6	C6	4 Points
7	D7	3 Points
8	E8	2 Points
9	F9	1 Point

Table 3.3 shows the point values assigned to the grades of past WASSCE candidates that participated in this study. From the table, A1 has the highest value of nine points; followed by B2: eight points; B3: seven points; C4: six points; C5: five points; C6: four points; D7: three points; E8: two points, and F9: one point. F9 is given one point because having F9 does not mean that a candidate have absolute zero score in the examination. However, it means that the candidate's score is not up to the stated pass mark in the examination.

**Table 3.4 Gender of Past WASSCE Candidates that participated in the study**

S/N	Gender	Number	Percentage
1	Male	175	41.87
2	Female	243	58.13
<b>Total</b>		<b>418</b>	<b>100</b>

Table 3.4 shows the distribution of past WASSCE candidates that participated in this study by their gender. From the table, 175 (41.87%) were males, while 243 (58.13%) were females.

**Table 3.5 Year of examination and number that participated in this study**

S/N	Year of Exam	Number	Percentage
1	2010	110	26.32
2	2011	103	24.64
3	2012	121	28.95
4	2013	84	20.24
<b>Total</b>		<b>418</b>	<b>100</b>

Table 3.5 shows the distribution of past WASSCE candidates that participated in this study according to the year they wrote the examination. According to the table, 110 (26.32%) wrote the examination in 2010; 103 (24.64%) wrote the examination in 2011; 121 (28.95%) wrote the examination in 2012, while 84 (20.24%) wrote the examination in 2013.

**Table 3.6 Grades in English Language and Number that obtained each grade**

S/N	Grades	Number	Percentage	Point Value
1	A1	49	11.72	441
2	B2	23	5.50	184
3	B3	117	28	819
4	C4	59	14.11	354
5	C5	22	5.26	110
6	C6	116	27.75	464
7	D7	9	2.15	27
8	E8	9	2.15	18
9	F9	14	3.35	14
<b>Total</b>		<b>418</b>	<b>100</b>	<b>Mean5.82</b>

Table 3.6 shows the grade, number and percentage of that obtained each grade in English Language. From the table 49 (11.72%) made A1 in English Language; 23 (5.50%) made B2; 117 (28%) made B3; 59 (14.11%) made C4; 22 (5.26%) made C5; 116 (27.75%)



made C6; 9 (2.15%) made D7; 9 (2.15%) also made E8, while 14 (3.35%) made F9 in the subject. To get the mean score of English Language, we multiplied the number of candidates that got a particular grade by the point value assigned to that grade.

**Table 3.7 Grades in Mathematics and Number that obtained each grade**

S/N	Grades	Number	Percentage	Point Value
1	A1	42	10.05	378
2	B2	12	2.87	96
3	B3	95	22.73	665
4	C4	61	14.60	366
5	C5	21	5.02	105
6	C6	99	23.68	396
7	D7	42	10.05	126
8	E8	29	6.94	58
9	F9	17	4.07	17
<b>Total</b>		<b>418</b>	<b>100</b>	<b>Mean 5.28</b>

Table 3.7 shows the grade, number and percentage of that obtained each grade in Mathematics. From the table 42 (10.05%) made A1 in Mathematics; 12 (2.87%) made B2; 95 (22.73%) made B3; 61 (14.60%) made C4; 21 (5.02%) made C5; 99 (23.68%) made C6; 42 (10.05%) made D7; 29 (6.94%) made E8, while 17 (4.07%) made F9 in the subject. To get the mean score of Mathematics, we multiplied the number of candidates that got a particular grade by the point value assigned to that grade.

### **3.8 Method of Data Collection**

The researcher collected a letter of introduction from the Head of ICEE and presented it to managers of the continuing education centres for access to their students and also to authorities of higher institutions for access to their first year students. The letter was equally shown to the principals of participating secondary schools before the instruments were administered on their English Language and Mathematics teachers. Also, eleven research assistants were recruited and trained on how to administer the instruments, especially on the type of response which each section elicits from the participants. This training enabled the research assistants to answer questions that emanated from the participants in the process of

responding to the items on the instruments. No instrument was sent by post. They were administered directly on, especially the past candidates and collected from them immediately. To get the Team Leaders, we went to WAEC office in Owerri where we were given the names and phone numbers of some team leaders. With the phone numbers, we contacted them and booked appointment for interview on the procedure and personnel involved in WASSCE assessment procedure. The Chief Team Leader for Mathematics, for instance, a retired Director of Education, was interviewed in his house at Ikenegbe on a Saturday morning, while the Chief Team leader for English Language, a retired Vice Principal, was interviewed at Federal Government Girls College, Owerri. Finally, the twenty-seven Local Government Areas in the State were put into nine clusters of three local governments each based on their proximity. But the three Local Government Areas in Owerri were handled by three research assistants because there were students from more secondary schools in the area that participated in the study. One research assistant traced school principals and teachers whose past WASSCE candidates met the conditions (as listed under sample and sampling procedure) for participating in the study in one Local Government Area. The data for this study was collected for a period of three weeks: two weeks was used to look for past WASSCE candidates and one week was used to trace their Principals, English Language and Mathematics teachers to report on the factors that affect the candidates' achievement in WASSCE. The Principals, English Language and Mathematics teachers were chosen to get their opinion on the identified factors since they are the managers of the system.

### 3.9 Method of Data Analysis

The data for this study were subjected to various statistical analyses. Each research question was subjected to appropriate statistic. This is shown in Table 3.8.

**Table 3.8: Research Questions and Statistical methods used**

S/N	Research Questions	Statistics
1.	1, 2, 3, 4a.	Descriptive
2.	5, 6, 7.	Multiple Regression
3.	4b	Qualitative

Research question 4b was analysed with two qualitative analytical approaches: The Thematic Analytical Approach (Braun and Clarke, 2006) and the Grounded Theory. The Grounded

Theory method (GT) is a systematic methodology of conducting qualitative research which involves the generation of theory from the data analysed. It was developed by Barney Glaser and Anselm Strauss in 1967 in their book titled “The Discovery of the Grounded Theory”. The method helps to close the gap between theory and empirical research. It requires the researcher to review collected data to extract repeated ideas and tag such ideas as *codes*. While Thematic Analysis emphasizes identifying and examining themes within data. According to Daly and Gliksman (1997), themes are patterns across data sets that are important to the description of a phenomenon under investigation. The identified themes then become the basis of taking decisions on the phenomenon being investigated.

Wood (2011) adds that the thematic analytical approach is a process of coding qualitative information. The approach requires the researcher to tease out and identify themes from the responses of the interviewees and put such into codes for logical presentation of the data. The Grounded Theory follows a sequential method to present the data, specifying what is done at each stage of the matter (variable) under investigation. Robinson (2009) used the thematic approach to study the experiences of patients when training for Home-haemodialysis at Massey University School of Health in New Zealand. While Wood (2011) used the grounded theory to study how nurses develop professional moral values in the same University. These qualitative analytical approaches are adapted in presenting the interview data generated to answer research question 4b as presented in figure 4.1.

### **3.10 Methodological Challenges**

Some first year students of higher institutions were not easily accessible because they were struggling to settle for higher education (such as registration, securing accommodation, locating the classrooms among others), and because of the fact that the prolonged ASUU strike was just called off at the time of our visit. Secondly, some secondary school heads did not want their staff members to respond to the instrument on the spot. They saw it as disrupting their planned academic/school programmes. But we pleaded with them and waited on them to attend to us even after school. Thirdly, it was not easy moving from one continuing education centre to another in search of past WASSCE candidates and thereafter trace their schools for their Principals, English Language and Mathematics teachers to respond to instruments on their behalf. Several visits were made to many of such centres. At some visits, we got as little as two to five past WASSCE candidates who were willing to respond to the instrument. Initially, we were discouraged, but we persevered. Finally, we met a lot of new teachers and principals in the schools visited. Here, we tried to find out if there

were other English Language and Mathematics teachers in the school who taught the students and who have been in the school within the same time and knows the students as well. Generally, we made attempt to provide explanations where these and other challenges arose, while assuring the authorities of the confidentiality of the information provided.

UNIVERSITY OF IBADAN

## CHAPTER FOUR

### RESULTS AND DISCUSSION

This chapter presents the results and discussions derived from analysis of data obtained from the respondents who participated in this investigation. The results are presented and discussed with respect to the research questions raised in chapter one.

**Research Question One:** Does over-load of candidates (writing many examinations within the same period of WASSCE) affect performance in WASSCE English Language and Mathematics in Imo State?

1a) Which of the following examinations did you write in your final year of your secondary school along with WASSCE?

**Table 4.1.1 Other Examinations written by candidates alongside WASSCE in the final year of their secondary education**

Examination	Number That Sat	Percentage
No Response	15	3.61
NECO SSCE	227	54.57
MOCK	373	89.66
JAMB (UTME)	4	0.96
IB	-	-
IGCSE	3	0.72

From the table 4.1.1, 15 (3.61%) did not respond to the question. Two hundred and twenty-seven (54.57%) wrote NECO SSCE the same year they wrote WASSCE. Three hundred and seventy-three (89.66%) wrote MOCK examination before their WASSCE the same year. Four (0.96%) wrote UTME while they were preparing to write their WASSCE. None of the candidates wrote IB while 3 (0.72%) wrote IGCSE the same year they wrote WASSCE. From the table, we find that IB is not known in Imo State schools, IGCSE is not popular in the State, while candidates want to be sure of their WASSCE result before they attempt the UTME. The result also reveals that candidates in Imo State write many examinations such as WASSCE, NECO SSCE and MOCK in the final year of their secondary education.

1b) Did your preparing for many examinations during your final year in secondary school affect your performance in WASSCE?

**Table 4.1.2 Response of candidates on the effect of writing too many examinations alongside WASSCE**

Response	Frequency	Percentage
Yes	90	20.5
No	328	79.5
<b>Total</b>	<b>418</b>	<b>100</b>

Table 4.1.2 reveals the response of candidates on whether their preparation for and writing many examinations alongside their WASSCE affected their performance in the examination. Ninety (20.5%) of the candidates said preparing for several examinations (Mock, UTME and NECO SSCE) within the period of their WASSCE affected their performance in the examination while 328 (79.5%) were of the opinion that preparing for many examinations at the same period did not affect their performance in WASSCE.

### **Discussion**

The findings of research question one revealed that students in Imo State write many examinations in the final year of their secondary education. On the average, each student writes the school based Mock which is of comparable standard with the Senior School Certificate Examination, alongside SSCE conducted by the West African Examination Council (WAEC) and the National Examination Council (NECO) in Nigeria, the Unified Tertiary Matriculation Examination (UTME) conducted by the Joint Admissions and Matriculations Board (JAMB) to qualify them for admission in September of the same year. This finding is in line with the opinion of Obanya (2012) who noted that Nigerian students are being over-examined in the final year of their secondary schooling. Although 349 (79.5%) of the candidates were of the opinion that writing many examinations did not affect their performance in WASSCE while 90 (20.5%) said it affected their performance in the examination.

However, despite the fact that many of the candidates said writing many examinations did not affect their performance in WASSCE, there is urgent need to

consciously reduce the number of examinations that candidates write in the final year of their secondary education. As a researcher, I feel that the 90 respondents who said that writing many examinations in the final year of their secondary education affected their performance in WASSCE were more objective in their response than those who said it did not affect their performance in the examination. From personal experience as a teacher, writing many examinations successively, with some of the examinations taking place simultaneously, leads to fatigue and redundancy in preparing for the examinations. The confusion that arises from the situation often result in some candidates mistaking and writing their identification number for one examination in another examination.

**Research Question Two:** What is the perception of principals and teachers on the impact of external monitoring of WASSCE by WAEC on the conduct and performance of candidates in English Language and Mathematics in Imo State?

**Table 4.2.1 Principals’ and Teachers’ perception of impact of external monitoring of WASSCE**

Response	Principals			Teachers		
	Freq.	Percentage	Cumulative	Freq.	Percentage	Cumulative
Very High	7	13.46	51.92	12	11.32	45.28
High	20	38.46		36	33.96	
Low	11	21.15	48.07	34	32.08	54.72
Very Low	14	26.92		24	22.64	
Total	<b>52</b>	<b>100</b>	<b>100</b>	<b>106</b>	<b>100</b>	<b>100</b>

Table 4.2.1 reveals the perception of principals on the impact of external monitoring of WASSCE on the conduct and performance of candidates in the examination in Imo State. 27 (51.92%) of the principals were of the opinion the WAEC monitoring of WASSCE has a positive impact on the conduct and performance of candidates in examination while 25 (48.08%) feel the monitoring is not strong and does not affect the conduct and performance of candidates in the examination in Imo State. The table also reveals that 48 (45.28%) of the teachers were of the opinion that WAEC monitoring of WASSCE has a positive impact on the conduct and performance of candidates in examination while 58 (54.72%) feel the

monitoring is not strong and does not affect the conduct and performance of candidates in the examination in Imo State.

**Table 4.2.2: Would you advocate for External Monitoring of each WASSCE paper?**

Response	Principals		Teachers	
	Frequency	Percentage	Frequency	Percentage
Yes	49	92.46	87	79.82
No	4	7.54	7	6.42
Undecided	-	-	15	13.76
<b>Total</b>	<b>53</b>	<b>100</b>	<b>109</b>	<b>100</b>

Table 4.2.2 reveals that 49 (92.46%) of the principals wants WAEC to monitor each WASSCE paper in Imo State while 4 (7.54%) do not advocate for external monitoring of each WASSCE paper. The table also reveals that 87 (79.82%) of the teachers who responded to the questionnaire wants WAEC to monitor each WASSCE paper while 7 (6.42%) do not want external monitoring to be extended to each WASSCE paper. However, 15 (13.76%) did not give their opinion on monitoring of each WASSCE paper.

### **Discussion**

Findings from analysing research question two revealed that many principals 27 (51.92%) and a reasonable number of teachers 48 (45.28%) were of the opinion that external monitoring of WASSCE by WAEC has a significant impact on the conduct and performance of candidates in the examination. While a few principals 25 (48.07%) and more teachers 58 (54.72%) said that the monitoring does not have any impact on the conduct and performance in WASSCE. Owing to the division among the principals and teachers on the impact of monitoring on the conduct and performance in WASSCE in Imo State, it is important to reinforce the external monitoring of WASSCE. It is believed that reinforcing the monitoring of WASSCE by WAEC will significantly impact on the quality of the examination in terms of its conduct and performance of candidates. It also helps the examination body (WAEC) to ensure that all activities of the examination process are carried out by the right people and on schedule (Phil, 2007). Thus, almost all the principals 49 (92.46%) and the teachers 87 (79.82%) want regular and effective monitoring of each WASSCE paper in Imo State and by implication the entire country. Extending thorough monitoring to each paper may increase the quality of the examination in terms of its conduct and general performance of candidates.



**Research Question Three:** a) What is the principals' and teachers' rating of student factors that affect performance in WASSCE?

**Table 4.3.1: Principals and Teachers rating of student factors that affect performance in WASSCE**

S/N	Student Factors	Principals		Teachers	
		High	Low	High	Low
1	Age	45 (84.91%)	8 (15.09%)	71 (65.14%)	38 (43.86%)
2	Gender	22 (41.51%)	38 (58.09%)	57 (52.78%)	51 (47.22%)
3	Study Habit	33 (62.27%)	20 (37.74%)	76 (70.37%)	32 (29.62%)
4	Test Anxiety	23 (43.89%)	30 (56.6%)	65 (59.63%)	44 (40.37%)
5	Exam Instructions	35 (66.04%)	18 (33.96%)	68 (62.38%)	41 (37.83%)
6	Legibility of Handwriting	36 (67.92%)	17 (32.08%)	54 (50%)	54 (50%)
7	Coverage of Syllabus	37 (69.81%)	16 (30.19%)	70 (64.81%)	38 (35.19%)

Table 4.3.1 displays principals and teachers rating of student factors that affect candidates' achievement in WASSCE. From the table, 45 (84.91%) of the principals and 71 (65.14%) of the teachers rated age of candidates as having a high impact on achievement in WASSCE, while 8 (15.09%) of the principal and 38 (34.86%) of the teachers rated the variable low in determining achievement in the examination. Twenty-two (41.51%) of the principals and 57 (52.78%) of the teachers rated gender of candidates as having a high impact on achievement in WASSCE, while 38 (58.09%) of the principal and 51 (47.22%) of the teachers rated the variable low in determining achievement in the examination. Thirty-three (62.27%) of the principals and 76 (70.37%) of the teachers rated candidates' study habit as having a high impact on achievement in WASSCE, while 20 (37.74%) of the principal and 32 (29.62%) of the teachers rated the variable low in determining achievement in the

examination. 23 (43.89%) of the principals and 65 (59.63%) of the teachers rated test anxiety as having a high impact on achievement in WASSCE, while 30 (56.6%) of the principal and 44 (40.37%) of the teachers rated the variable low in determining achievement in the examination. 35 (66.04%) of the principals and 68 (62.38%) of the teachers rated candidates' following of examination instructions as having a high impact on achievement in WASSCE, while 18 (33.96%) of the principal and 41 (37.83%) of the teachers rated the variable low in determining achievement in the examination. Thirty-six (67.92%) of the principals and 54 (50%) of the teachers rated legibility of candidates handwriting as having a high impact on achievement in WASSCE, while 17 (32.08%) of the principal and 54 (50%) of the teachers rated the variable low in determining achievement in the examination. Thirty-seven (69.81%) of the principals and 70 (64.81%) of the teachers rated candidates' coverage of prescribed syllabus as having a high impact on achievement in WASSCE, while 16 (30.19%) of the principal and 38 (35.19%) of the teachers rated the variable low in determining achievement in the examination.

b) What is the principals' rating of teacher factors that affect performance in WASSCE?

**Table 4.3.2 Principals' rating of Teacher factors that affect performance in WASSCE**

S/N	Teacher Factors	High	Low
1	Teachers' Gender	37 (69.81%)	16 (30.19%)
2	Teaching Experience	47 (88.68%)	6 (11.32%)
3	Teachers' Qualification	47 (88.68%)	6 (11.32%)
4	CA Feedback	48 (90.57%)	5 (9.43%)
5	Attendance to Classes	44 (83.02%)	9 (16.98%)
6	Coverage of Syllabus	37 (69.81%)	16 (30.19%)
7	SSCE Examining Experience	46 (86.79%)	7 (13.21%)

Table 4.3.2 displays principals' rating of teacher factors that affect candidates' achievement in WASSCE. The table shows that 37 (69.81%) rated teacher gender as being a high determinant of candidates' achievement in WASSCE English Language and Mathematics, while 16 (30.19%) rated the variable low in determining candidates' achievement in the examination. Forty-seven (88.68%) rated years teaching experience as being a high determinant of candidates' achievement in WASSCE English Language and Mathematics, while 6 (11.32%) rated the variable low in determining candidates'

achievement in the examination. Forty-seven (88.68%) rated teacher qualification as being a high determinant of candidates' achievement in WASSCE English Language and Mathematics, while 6 (11.32%) rated the variable low in determining candidates' achievement in the examination. Forty-eight (90.57%) rated teacher provision of continuous assessment feedback to students as being a high determinant of candidates' achievement in WASSCE English Language and Mathematics, while 5 (9.43%) rated the variable low in determining candidates' achievement in the examination. Forty-four (83.02%) rated teacher prompt attendance to class as being a high determinant of candidates' achievement in WASSCE English Language and Mathematics, while 9 (16.98%) rated the variable low in determining candidates' achievement in the examination. Thirty-six (69.92%) rated teacher coverage of syllabus as being a high determinant of candidates' achievement in WASSCE English Language and Mathematics, while 16 (30.19%) rated the variable low in determining candidates' achievement in the examination. Forty-six (86.79%) rated teacher SSCE examining experience as being a high determinant of candidates' achievement in WASSCE English Language and Mathematics, while 7 (13.21%) rated the variable low in determining candidates' achievement in the examination.

## **Discussion**

The result of analysing research question three shows that majority of the principals and teachers agreed that the age at which candidates sit for WASSCE greatly affects their achievement in the examination. This is true because age affects study habit which the principals and teachers also rated as having a high impact on candidates' academic achievement. Thus, older students tend to study more independently and by extension cover their termly scheme of work and the syllabus than the younger ones. Many teachers equally rated test anxiety as being a high determinant of candidates' achievement in WASSCE English Language and Mathematics. This implies that candidates who have good study habit would be more confident in examination situations than those who do not have good study habits.

Equally, many of the principals and the teachers rated candidates' following of examination instruction as having high impact on their achievement in WASSCE English language and Mathematics. This rating agrees with Uduh (2010) who observed that candidates who do not read examination instructions may not answer all the questions required of them and thus lose vital marks that would have led to better achievement in the examination. Many principals and teachers rated candidates' coverage of syllabus high in

determining achievement in WASSCE English language and Mathematics. This is in line with Shikuku et al (2012) who reported that non-coverage of syllabus affects achievement of candidates in the Kenya Certificate of Secondary Education Examination. Majority of the principals rated teacher professional and academic qualifications as a high determinant of candidates' achievement in WASSCE English language and Mathematics. Based on this, school owners should endeavour to train and re-train their teachers regularly since such trainings improve academic achievement.

Majority of the principals (90.56%) rated teacher provision of continuous assessment to students, teacher prompt attendance to class, teacher coverage of the prescribed syllabus and teacher SSCE examining experience as being a high determinants of candidates' achievement in WASSCE English language and Mathematics. Therefore, teachers are advised to regularly inform students of their (students') achievement in school based assessment, go for their classes early so they can cover the prescribed syllabus as well as participate in WAEC coordination for WASSCE assessment so they can improve the quality of their teaching instruction.

**Research Question Four:** a) What is the perception of Principals, Teachers and Candidates on Examiners' objectivity in assessing WASSCE scripts in English Language and Mathematics in Imo State?

**Table 4.4.1: Perception of Principals, Teachers and Candidates on Examiners' Objectivity (Thoroughness) in assessing WASSCE scripts.**

Question	Principals				Teachers				Candidates			
	VO	%	NO	%	VO	%	NO	%	VO	%	NO	%
To what extent are examiners objective in assessing WASSCE scripts?	47	88.68	6	11.32	98	92.45	8	7.55	130	29.6	309	70.9

**Key:** VO: Very Objective; NO: Not Objective

Table 4.4.1 shows the perception of principals, teachers and candidates on examiners' objectivity in assessing WASSCE scripts in English Language and Mathematics in Imo State. From the table, 47 (88.68%) of the principals were of the opinion that examiners are very objective in assessing WASSCE scripts while 6 (11.32%) feel they are not objective. Ninety-

eight (92.45%) of the teachers said that examiners were very objective in assessing candidates' scripts in WASSCE English Language and Mathematics in Imo State while 8 (7.55%) of the teachers said they WAEC examiners not objective in assessing candidates' WASSCE scripts. One hundred and thirty (29.6%) of the candidates are of the opinion that examiners were very objective in assessing their scripts while 309 (70.4%) said examiners were not objective in assessing their scripts in WASSCE English Language and Mathematics.

b)Is WAEC objective in assessing candidates' scripts in WASSCE English Language and Mathematics in Imo State in terms of the procedure and using the right personnel?

**Table 4.4.2 Interview with WAEC Team Leaders in Imo State**

S/N	Questions	ENGLISH LANGUAGE AND MATHEMATICS TEAM LEADERS RESPONSES	THEMES
1.	What is Co-ordination and who is involved?	<p><b>English Team Leader in-charge (Owerri):</b> Coordination is bringing all categories of examiners together to study the marking scheme and apply it in their marking. The same dummies are used all over the federation during the coordination to ensure standardization of marking. The same dummies used for the coordination of Chief Examiners are also used to coordinate both the team leaders and assistant examiners. The Chief Examiners coordinate team leaders for one day and the team leaders coordinate the assistant examiners for up to three days to ensure the assistant examiners master and apply the marking scheme in assessing candidates' scripts. So the Chief Examiners, Team Leaders and Assistant Examiners are involved in Coordination.</p> <p><b>Okigwe:</b> Co-ordination is an activity where examiners are assembled for WAEC to give them information about the making of candidates' scripts.</p> <p><b>Orlu:</b> Co-ordination is the coming together of examiners in order to deliberate on and adapt the marking scheme by marking some dummies.</p> <p><b>Mathematics Team Leader in-charge (Owerri):</b> Co-ordination is the harmonization of individual knowledge of</p>	Studying the Marking Scheme for Uniform marking of scripts.

		<p>examiners with the marking scheme. It involves Chief Examiners, Team Leaders and Assistant Examiners. The Chief Examiners first holds a session with the Team Leaders where they read the marking scheme and agree on modalities. Questions are asked here and answers given.</p> <p><b>Okigwe:</b> Co-ordination is a situation where the examiners come together in order to receive instructions on the marking skill and the team leaders are involve in giving the instructions.</p> <p><b>Orlu:</b> Co-ordination involves organizing certain individuals or group of people for the purpose of marking exam scripts.</p>	
2.	<p>What are the processes/stages involved in marking in your subject area?</p>	<p><b>English Team Leader in-charge (Owerri):</b> English Language coordination usually takes four days. The extra day is an extended coordination day where we do conference marking. During the conference marking, examiners mark five live scripts and show their team leaders for vetting. After the vetting of five scripts, the assistant examiners can then carry their packs home for marking. All examiners are expected to mark package by package, while the team leaders are required to vet 10% of the scripts in each package.</p> <p><b>Okigwe:</b> The examiner has a copy of each of the question and marking scheme which will guide the examiner as he or she marks. He/she has to follow the scheme strictly. If the examiner discovers any malpractice, he/she has to inform the team leader immediately.</p> <p><b>Orlu:</b> The chief examiners co-ordinates the team leaders who in turn co-ordinates the assistant examiners. The assistant examiners do a conference marking of dummies before marking the live scripts.</p> <p><b>Mathematics Team Leader in-charge (Owerri):</b> After the co-ordination of team leaders and assistant examiners, some assistant Examiners may be recruited if there are insufficient examiners. Whoever is</p>	<p><b>Eng.</b></p> <ol style="list-style-type: none"> <li>1) One Day extended co-ordination for marking of five live scripts which is vetted before packs are taken away.</li> <li>2) Ten percent of scripts in each pack are vetted.</li> </ol> <p><b>Maths.</b></p> <ol style="list-style-type: none"> <li>1) Only examiners who participated in co-ordination are allowed to mark scripts.</li> <li>2) Assistant Examiners retire to a place with their Team Leaders to agree marking modalities.</li> </ol>

		<p>not co-ordinated will not be allowed to mark irrespective of his/her qualification. Examiners must have read Mathematics in the University either B.Sc. or B.Sc. Ed. The original certificates must be sited and copies taken to the examination body's subject officer in the marking centre for approval before they can be given scripts to mark. In the marking proper, examiners are divided into teams and each team is headed by a team leader. When the assistant examiners claim their scripts, they retire with their team leader to a convenient place and agree on what to do.</p> <p><b>Okigwe:</b> The examiners will be given question paper packs each and also the marking schemes to enable them mark the scripts without mistakes.</p> <p><b>Orlu:</b> The stages involved in marking are: collection of scripts, the examiners, marking scheme, recording sheets etc.</p>	
3.	How do team leaders ensure that examiners under them follow the marking scheme in assessing scripts?	<p><b>English Team Leader in-charge (Owerri):</b> Team leaders in English Language ensure that examiners under them follow the marking scheme through 1) the extended day for conference marking and vetting of five initial scripts 2) random vetting 10% of scripts in each pack 3) examiners are asked to effect corrections arising from vetting 4) examiners may be asked to remark scripts where necessary.</p> <p><b>Okigwe:</b> The team leader will ensure that each examiner submits his or her marked scripts which would be submitted at the given period for the team leader to pick a few scripts and go through what the examiner has marked.</p> <p><b>Orlu:</b> The team leader ensures that the marked scripts are collected from the examiners and makes corrections.</p> <p><b>Mathematics Team Leader in-charge (Owerri):</b> When examiners retire to a convenient place, the team leaders usually ask the assistant examiners to mark twenty (20) scripts from one pack first. The scripts</p>	<p><b>Eng.</b></p> <ol style="list-style-type: none"> <li>1) One day extended co-ordination.</li> <li>2) Random vetting 10% of scripts in each pack.</li> <li>3) Corrections on vetted scripts must be effected.</li> <li>4) Scripts may be remarked.</li> </ol> <p><b>Maths.</b> Team Leaders insist that Assistant Examiners mark 20 live scripts from a pack before taking their scripts away.</p>

		<p>are then vetted. If the Team leader is satisfied, the examiner is requested to go ahead and complete the entire pack. After marking the whole pack, the assistant examiners must also return the pack for the team leader to vet. This is progressively until the last pack is marked.</p> <p><b>Okigwe:</b> It is the duty of the team leader to ensure that examiners submit their marked scripts in order to check what the examiners has marked and make some corrections.</p> <p><b>Orlu:</b> The team leader supervises the examiners. He monitors and instructs them very well on how to mark.</p>	
4.	What do team leaders do when they identify errors by assistant examiners?	<p><b>English Team Leader in-charge (Owerri):</b> If Team leaders in English identify errors in marking, they can ask examiners to remark scripts if the errors are grievous. The team leader then alerts the Chief Examiner or Team Leader in-charge so that no team leader will append his/her signature on the pack except it is remarked and all corrections thoroughly effected.</p> <p><b>Okigwe:</b> If the team leader notices any errors in marking, he/she draws the attention of the examiner and makes necessary corrections so that the examiner will not go back doing the wrong thing.</p> <p><b>Orlu:</b> The team leaders make corrections immediately and ensure that more mistakes will not be made.</p> <p><b>Mathematics Team Leader in-charge:</b> When the team leader identifies errors in marking, they ask the examiner to remark and the remarking must be done to the satisfaction of the team leader. If the examiner refuses to remark, the team leader may report to the Chief examiner who usually insists that the scripts be remarked. If the examiner still refuses, the chief examiner will report to the centre co-coordinator and all the packed retrieved from the examiner and given to another examiner. The first examiner will not be paid at all. He/she may be blacklisted from marking for the exam body. The remuneration for the scripts is given to the examiner that remarked.</p>	<ol style="list-style-type: none"> <li>1) If Team Leaders identifies errors, they draw the attention of the Assistant Examiner for corrections.</li> <li>2) If the error is serious, the Chief Team Leader is alerted and the scripts may be remarked.</li> <li>3) If scripts are remarked, remuneration is given to whoever remarked the scripts.</li> <li>4) The initial Assistant Examiner may be blacklisted from further examining.</li> </ol>



		<p><b>Okigwe:</b> If the team leader notices any error by the examiner, he or she will call the attention of the examiner and make necessary corrections and also ensure that examiners follow the marking scheme strictly to avoid further errors.</p> <p><b>Orlu:</b> The team leader calls the attention of the examiner, shows him the error the he or she has made and ensures that corrections are made.</p>	
5.	In the case of remarking, who does the re-marking: the same examiner, another examiner or the team leader?	<p><b>English Team Leader in-charge (Owerri):</b> If the errors are minimal, the same examiner is asked to remark. But a situation where the examiner is found to be incompetent, the scripts are retrieved with the permission of the exam body and given to a competent fast examiner to remark. The team leader also vets the remarked scripts.</p> <p><b>Okigwe:</b> The team leaders do the remarking and also give the final grading.</p> <p><b>Orlu:</b> The team leader does the remarking.</p> <p><b>Mathematics Team Leader in-charge (Owerri):</b> The same examiner remarks his/her scripts. If after remarking and the team leader is yet satisfied, the scripts are retrieved and given to another examiner to remark. Once scripts are retrieved, the examiner loses all the entitlements. The team leader also vets the remarked scripts.</p> <p><b>Okigwe:</b> It is the team leader who does the remarking.</p> <p><b>Orlu:</b> It is the team leader that is responsible for remarking of any scripts and also makes conclusion.</p>	<p>1) The same Assistant Examiners usually remarks.</p> <p>2) All remarked scripts are compulsorily revetted.</p>
6.	How do team leaders guard against errors in recording scores of candidates?	<p><b>English Team Leader in-charge (Owerri):</b> The exam body recruits <i>checkers</i> who cross checks the scripts one-by-one to ensure that the scores are properly added. If they discover errors, they alert the exam body and the errors are corrected before the scores are imputed into the computer.</p> <p><b>Okigwe:</b> The team leader has the right to</p>	<p>Team Leaders go through the marked scripts with the transcript of scores while the Checkers cross-check the scripts one-by-one to ensure that scores are correctly calculated as</p>

		<p>add scores recorded by the examiners to ensure correct calculation in scoring.</p> <p><b>Orlu:</b> It is the responsibility of team leader to ensure that the scores are being recorded correctly.</p> <p><b>Mathematics Team Leader in-charge (Owerri):</b> Team leaders go through the marked scripts question-by-question, looking at the transcripts of the marks. The team leaders go through script-by-script to ensure that marks are appropriately recorded. The Chief examiners do same to the scripts marked by team leaders to ensure checks and balances in marking. The examiners mark in red ink while the team leaders vets in green ink. On the other hand, the team leaders mark all their scripts with green ink while the chief examiner vets their script with red ink.</p> <p><b>Okigwe:</b> The team leader will ensure that they check the scores recorded by the examiner and make sure that the scores are carefully calculated.</p> <p><b>Orlu:</b> The team leaders guard against errors in recording scores of candidates by ensuring that the necessary tools for marking and recording scores are being made available.</p>	<p>recorded.</p>
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The thematic analytical approach and Grounded theory are applied to explain the interview data and provide answer to research question 4b.

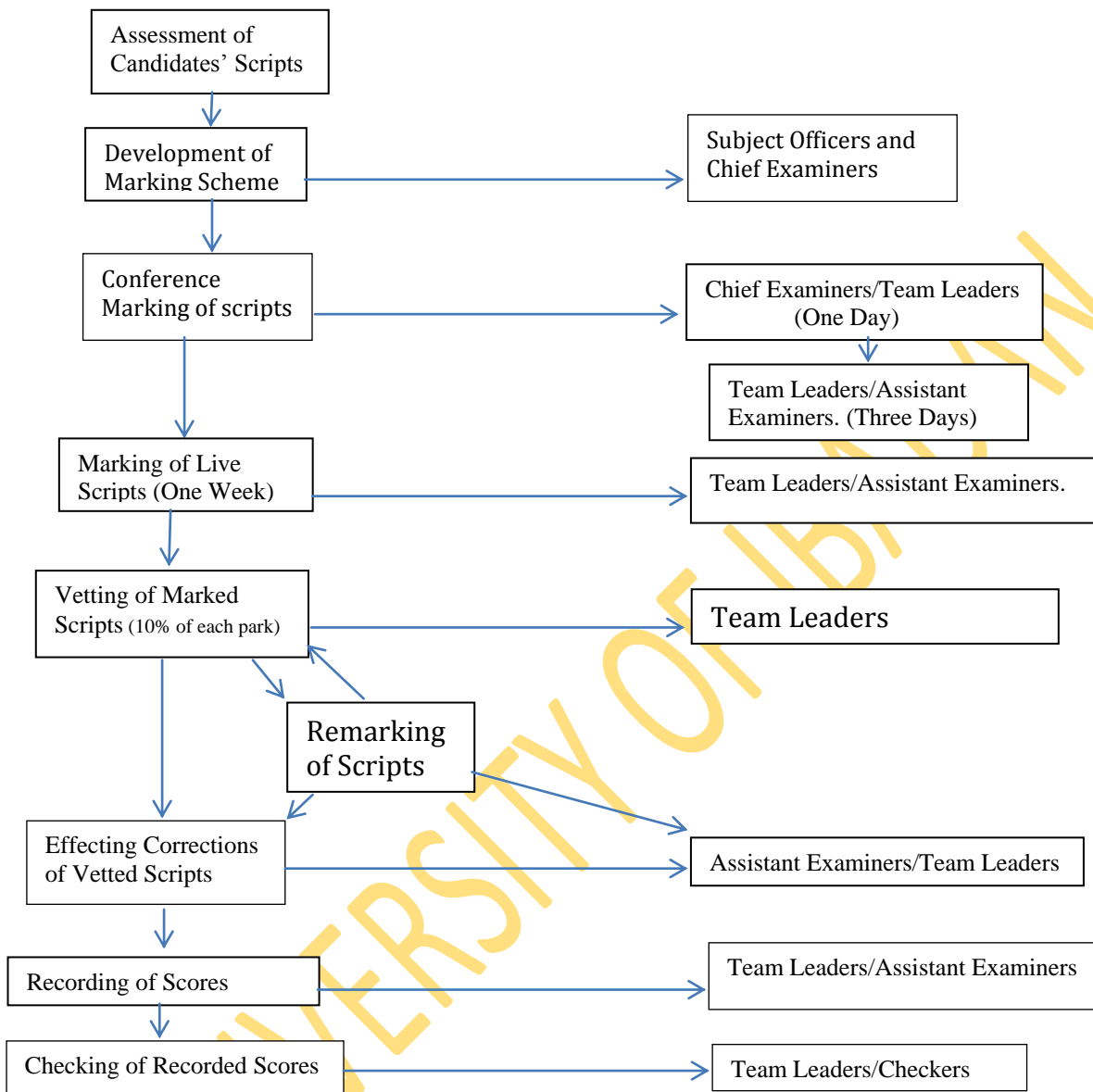


Fig 4.1: Thematic Analytical Approach of WASSCE marking/assessment procedure.

This is generated by the researcher from interview with WAEC Team Leaders in Imo State

### Applying the Grounded Theory

- 1) Subject Officers and Chief Examiners meet to produce the marking scheme.
- 2) Chief Examiners use the marking scheme to co-ordinate the Team Leaders for One Day.
- 3) Team Leaders use the same marking scheme and dummies to co-ordinate the Assistant Examiners for three days where they do conference marking of the dummies

to ensure uniformity and standardised marking of the scripts. English Language examiners in Owerri do one day extended co-ordination to mark some scripts together before departing to continue marking individually.

- 4) After co-ordination, Assistant Examiners are put into groups under Team Leaders and they mark at least five scripts each for the team leaders to vet before they carry their scripts for marking. (Mathematics Team Leaders in Imo State insist that Assistant Examiners mark at least 20 scripts from one park and show it to the Team Leader before they carry their scripts away).
- 5) Team Leaders vet 10% of the scripts in each park.
- 6) After vetting, Assistant Examiners effect corrections of vetted scripts.
- 7) If serious errors are discovered from vetting, the Chief Team Leader and the centre manager are notified and the Assistant Examiner(s) in question is ordered to re-mark. If the assistant examiner is very incompetent, another assistant examiner or the team leader may re-mark the scripts.
- 8) Remarked scripts are also re-vetted by team leaders before the scores are recorded.
- 9) Checkers cross-check the scores on each script to ensure they are accurately calculated as recorded.
- 10) **Conclusion:** Looking at the perception of principals and teachers who understand and perhaps manage the system compared with the procedure of assessment revealed by the team leaders interviewed, it may be concluded that examiners are objective (thorough) in assessing candidates' scripts in WASSCE English Language and Mathematics in Imo State.

### **Discussion**

Examiners were equally found to be objective and thorough in assessing candidates' scripts in the West African Senior School Certificate Examination's English Language and Mathematics in Imo State. This contradicts the earlier findings of Addae-Mensa (2006) who reported that examiners were not accurate in assessment of candidates' WASSCE papers in Ghana. However, since assessment here is at summative level, Evelyn and Joseph (2009) notes that it serves as a guide to improving curriculum to better match the interests and needs of the learners. To Meyers (2008), summative assessment provides an account of students' progress at a particular point in time. He added that it is a measurement that describes where each student stands with regards to some sort of standard such as curriculum outcomes. Popham (1999) observed that summative assessment provides *late* information about

students' achievement in specific academic programmes. The information provided is late in the sense that it cannot be used to remediate difficulties in the learning of the students who were assessed. Summative assessment is also a high stake assessment as stakeholders in education invest and expect so much from it. This is because the outcome of the assessment is used as a benchmark for measuring educational standards, school quality, as well as determines whether candidates go beyond secondary education or not, hence the thorough procedure adopted in assessing WASSCE in Imo State.

**Research Question Five:** Does the obtained regression equation resulting from a set of seven student predictor variables (age, gender, study habit, test anxiety, perceived legibility of handwriting, perceived adherence to exam instructions, and coverage of prescribed syllabus) reliably predict candidates' performance in (i) WASSCE English Language in Imo State? (ii) WASSCE Mathematics in Imo State?

**Table 4.5.1 Correlation Matrix of Variables for achievement in English Language**

	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>
X <sub>1</sub>	1.000							
X <sub>2</sub>	-.048	1.000						
X <sub>3</sub>	.021	-.097*	1.000					
X <sub>4</sub>	.015	-.035	-.105*	1.000				
X <sub>5</sub>	.052	-.009	-.039	.013	1.000			
X <sub>6</sub>	-.043	-.047	-.038	-.064	.067	1.000		
X <sub>7</sub>	.040	.134**	-.012	.023	-.034	.024	1.000	
X <sub>8</sub>	-.073	.031	-.157**	.688**	.105*	.166**	.122*	1.000
Mean	4.95	2.25	1.47	38.5577	58.7067	14.8582	11.5361	34.9663
SD	2.28	.81	.50	7.9471	12.3936	2.6200	2.8025	8.2371

X<sub>1</sub>: Achievement in English Language; X<sub>2</sub>: Age; X<sub>3</sub>: Gender; X<sub>4</sub>: Study Habit; X<sub>5</sub>: Test Anxiety; X<sub>6</sub>: Adherence to Exam Instruction; X<sub>7</sub>: Legibility of Handwriting; X<sub>8</sub>: Coverage of Syllabus. Sig. (2-tailed). \*Sig. at p<0.05.

Table 4.5.1 displays the correlation matrix of the predictors and the criterion. It shows that there was no significant correlation between any predictors and the criterion. However, it

reveals a significant negative correlation between Age and Gender (-.097), meaning that there is a strong relationship between Age and Gender in predicting achievement in English Language; Gender and Study Habit (-.105), meaning that there is a strong relationship between Gender and Study Habit in predicting achievement in English Language; Gender and Coverage of Syllabus (-.157), meaning that there is a strong relationship between Gender and Coverage of Syllabus in predicting achievement in English Language. Also, there is a significant positive correlation between Test Anxiety and Coverage of Syllabus (.105), meaning that there is a strong relationship between Test Anxiety and Coverage of Syllabus in predicting achievement in English Language; and Legibility of Handwriting and Coverage of Syllabus (.122), meaning that there is a strong relationship between Legibility of Handwriting and Coverage of Syllabus in predicting achievement in English Language; Age and Legibility of Handwriting (.134), meaning that there is a strong relationship between Age and Legibility of Handwriting in predicting of achievement in English Language; Study Habit and Coverage of Syllabus (.688), meaning that there is a strong relationship between Study Habit and Coverage of Syllabus in predicting achievement in English Language; Coverage of Syllabus (.166), meaning that there is a strong relationship between Study Habit and Coverage of Syllabus in predicting achievement in English Language.

**Table 4.5.2 ANOVA table for achievement in English Language**

Model	Sum of Square	Df	Mean Square	F	Sig.
1 Regression	104.045	8	13.006	2.566	.010 <sup>a</sup>
Residual	2057.946	406	5.069		
<b>Total</b>	<b>2161,990</b>	<b>414</b>			
Model Summary					
Model	1				
R	.219 <sup>a</sup>				
<b>R. Squared</b>	<b>.048</b>				
Adjusted R. Square	.029				
Std. Error of the Estimate	2.25				

Dependent Variable: Achievement in English Language Sig. =0.05

Table 4.5.2 shows the ANOVA and model summary of the combined effects of the predictors on candidates' achievement in WASSCE English Language. The model shows a positive correlation of the predictors on the criterion ( $r=.219$ ). It reveals an R. Square of .048, which means that 4.8% of the variance observed in the criterion is accounted for by all the

predictors. The ANOVA shows that all the predictors significantly predicted achievement of candidates in WASSCE English Language in Imo State ( $F_{8, 406}=2.566, P<.010$ ).

**Table 4.5.3 Table of Coefficients for achievement in English Language**

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.012	1.400		1.437	.152
Age	-6.212E-02	.140	-.022	-.442	.659
Gender	-4.543E-04	.226	.000	-.002	.998
Study Habit	2.529E-02	.020	.088	1.261	.208
Test Anxiety	1.617E-02	.099	.088	1.779	.076
Exam Instruction	-4.734E-02	.044	-.054	-1.066	.287
Handwriting	4.105E-02	.040	.050	1.017	.310
Syllabus	-2.523E-02	.020	-.091	-1.272	.204

Dependent Variable: Achievement in English Language Sig. =0.05

Table 4.5.3 reveals the coefficients and descriptive statistics of the analysed data. It reveals the relative contributions of each predictor to candidates' achievement in WASSCE English Language in Imo State. The table reveals that none of the predictors made a unique significant contribution in predicting candidates' achievement in WASSCE English Language because their significant values are all greater than 0.05. However, the Beta weights reveals that Coverage of Syllabus (-.091), Study Habit (.088) and Test Anxiety (.088) made the highest contributions to the prediction.

**Table 4.5.4 Correlation Matrix of Variables for achievement in Mathematics**

	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>
X <sub>1</sub>	1.000							
X <sub>2</sub>	-.070	1.000						
X <sub>3</sub>	-.166	-.097*	1.000					
X <sub>4</sub>	.117*	-.035	-.105*	1.000				
X <sub>5</sub>	.154**	-.009	-.039	.013	1.000			
X <sub>6</sub>	-.007	-.047	-.038	-.064	.067	1.000		
X <sub>7</sub>	-.029	.134**	-.012	.023	-.034	.024	1.000	
X <sub>8</sub>	.174	.031	-.157**	.688**	.105*	.166**	.122*	1.000
Mean	4.59	2.25	1.47	38.5577	58.7067	14.8582	11.5361	34.9663
SD	2.59	.81	.50	7.9471	12.3936	2.6200	2.8025	8.2371

X<sub>1</sub>: Achievement in Mathematics; X<sub>2</sub>: Age; X<sub>3</sub>: Gender; X<sub>4</sub>: Study Habit; X<sub>5</sub>: Test Anxiety; X<sub>6</sub>: Adherence to Exam Instruction; X<sub>7</sub>: Legibility of Handwriting; X<sub>8</sub>: Coverage of Syllabus. Sig. (2-tailed). \*Sig. at p<0.05.

Table 4.5.4 displays the correlation matrix of the predictors and the criterion. It shows a significant positive correlation between Study Habit and Achievement in WASSCE Mathematics. The table reveals a significant negative correlation between Age and Gender (-.097), meaning that there is a strong relationship between Age and Gender in predicting achievement in Mathematics; Gender and Study Habit (-.105), meaning that there is a strong relationship between Gender and Study Habit in predicting achievement in Mathematics; Gender and Coverage of Syllabus (-.157), meaning that there is a strong relationship between Gender and Coverage of Syllabus in predicting achievement in Mathematics. Also, there is a significant positive correlation between Test Anxiety and Coverage of Syllabus (.105), meaning that there is a strong relationship between Test Anxiety and Coverage of Syllabus in predicting achievement in Mathematics; and Legibility of Handwriting and Coverage of Syllabus (.122), meaning that there is a strong relationship between Legibility of Handwriting and Coverage of Syllabus in predicting achievement in Mathematics; Test Anxiety and Achievement in Mathematics (.154); Age and Legibility of Handwriting (.134), meaning that there is a strong relationship between Age and Legibility of Handwriting in



predicting achievement in Mathematics; Study Habit and Coverage of Syllabus (.688); meaning that there is a strong relationship between Study Habit and Coverage of Syllabus in predicting achievement in Mathematics; Coverage of Syllabus and Following Exam Instruction (.166), meaning that there is a strong relationship between Coverage of Syllabus and Following of Exam Instruction in predicting achievement in Mathematics.

**Table 4.5.5 ANOVA table for achievement in Mathematics**

Model	Sum of Square	Df	Mean Square	F	Sig.
1 Regression	276.035	8	34.504	5.590	.000 <sup>a</sup>
Residual	25067.096	406	6.173		
<b>Total</b>	<b>2782.103</b>	<b>414</b>			
Model Summary					
Model		1			
R		.315 <sup>a</sup>			
R. Squared	<b>.099</b>				
Adjusted R. Square.		.081			
Std. Error of the Estimate		2.48			

Dependent Variable: Achievement in Mathematics Sig. P<0.05

Table 4.5.5 shows the ANOVA and model summary of the combined effects of the predictors on the achievement of candidates' in WASSCE Mathematics in Imo State. The table reveals a positive correlation of all the predictors on the criterion ( $r=.315$ ). The model shows an R. Square of .099, meaning that 9.9% of the variance observed in the criterion is accounted for by all the predictors. The ANOVA shows that all the predictors significantly accounted for candidates' achievement in WASSCE mathematics in Imo State ( $F_{8, 406}=5.590, P<.000$ ).

**Table 4.5.6 Table Coefficients for achievement in Mathematics**

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	5.146	1.545		3.330	.001
Age	.133	.155	.042	.857	.392
Gender	-.994	.249	-.192	3.990	<b>.000</b>
Study Habit	-2.342E-03	.022	-.007	-.106	.916
Test Anxiety	2.588E-02	.010	.124	2.579	<b>.010</b>
Exam Instruction	-4.427E02	.049	-.045	-.903	.367
Handwriting	-4.362E.02	.045	-.047	-.979	.328
Syllabus	4.434E-02	.022	.141	2.025	<b>.043</b>

Dependent Variable: Achievement in Mathematics Sig. =0.05

Table 4.5.6 shows the coefficients and descriptive statistics of the analysed data. It table reveals the relative contribution of each predictor to candidates' achievement in WASSCE Mathematics in Imo State. From the table, Gender ( $\beta=-.192$ ,  $t_{(416)}=3.990$ ,  $P=.000$ ); Test Anxiety ( $\beta=.124$ ,  $t_{(416)}=2.579$ ,  $P=.010$ ) and Coverage of Syllabus ( $\beta=.141$ ,  $t_{(416)}=2.025$ ,  $P=.043$ ) were most significant in predicting candidates' achievement in WASSCE Mathematics. The result on the table also shows that Age, Study Habit, Adherence to Examination Instructions, Legibility of Handwriting did not make unique significant contributions to candidates' achievement in Mathematics because significant values were greater than 0.05. The table also indicates that Study Habit made the least contribution to the model with a beta weight of  $-.007$ . This is closely followed by Age (.042) and Examination Instruction ( $-.045$ ) respectively.

### Discussion

Among the student predictors, it was discovered that Test Anxiety is a key determinant of candidates' achievement in WASSCE English Language and Mathematics. This finding corroborates Bimbola (2004) who reported a significant effect of test anxiety on academic achievement of secondary school students, and the opinion of Saland (2012) who noted that test anxiety can drastically hinder an individual's ability to perform well in school

as well as negatively affect achievement in examinations. While Donna (2011) added that test anxiety can lead to poorer grades and lower scores on standardised tests (WASSCE being one of such).

It was equally found that Gender is a significant determinant of achievement in WASSCE English Language and Mathematics. This is in line with Martins (2004) who reported that schools with high proportion of boys achieved better in WASSCE than those with high proportion of girls in Edo State, and Adeleke (2012) who found that male students achieved better than female students in some aspects of mathematics in Oyo State. This finding is also in line with Maltem and Serap (2004) who found that female students achieved better than their male counterparts at the University of Turkey. This finding is also consistent with the CCL (2007) which reported that in 2000, 2003 and 2006, girls scored an average 32 points higher than boys in reading, while boys have more difficulty in Language than girls in Canada. It also supports Smith and Wilhelm's (2002) assertion that boys take longer time to read than girls and that girls tend to comprehend narrative texts and most expository texts significantly better than boys, among other assertions. An attempt to interpret these assertions would mean that boys are easily distracted during English (Reading) lessons. Given this interpretation, Spence (2008) posits that 'igniting the writing of boys is our goal, achieving it depend, at least in part, on our understanding and working at the challenges it presents to boys from their (boys) perspective'. Spence intends that teachers should aim at eliminating all impediments to boys' learning and engage male students in problem-solving activities that will arouse and sustain their attention and interest during English lessons.

The correlation between Age and Gender, Gender and achievement in WASSCE English Language and Mathematics agrees with the findings of Jost, Rude-Parkins and Gittens (2012) who also found a relationship between Age and Gender on students' academic achievement in Kentucky, USA. Study Habit was also found to be a major determinant of achievement in WASSCE. This result agrees with Ossai (2012) who found a significant difference in the study habit of students on the basis of their age and gender, and reported that study habit improved with age and that female students had better study habit than male students in Delta State, Nigeria. Also, Harry and Herbert (1997) reported that students who studied more had higher achievement scores than those who studied less in Pennsylvania, USA. Hence, Ogbodo (2010) advised that students should prepare personal reading time table, attend all classes, take note during lessons and consult their teachers in order to improve their study habit.

This study also found a positive correlation between Age and Legibility of Handwriting. This supports earlier findings by Steve, Virginia, Naomi and Williams (1998) who found that improvement in handwriting legibility on three writing skills was primarily limited to intermediate grades. They also reported that girls' handwriting was more legible than that of boys, and that girls wrote faster than boys in grades in 1, 6 and 7 in Lusiana, USA. This can be interpreted to mean that the older a learner, the more legible and readable the writing becomes.

Another factor found to be an important determinant of candidates' achievement in WASSCE English Language and Mathematics is Coverage of the prescribed Syllabus by both students and their teachers. This supports earlier findings by Shikuku (2012) who observed that coverage of syllabus had a significant effect on candidates' achievement in the Kenyan Certificate of Secondary Education (KCSEE) between 2003 and 2007. She observed that students in schools where the syllabus was covered one hundred per cent achieved far better than those in schools that did not cover the syllabus fully. Amadalo, Shikuku and Wasike (2012) also found a positive relationship between coverage of syllabus and achievement in national examinations, especially in mathematics.

**Research Question Six:** Does the obtained regression equation resulting from a set of six teacher predictor variables (Provision of CA Feed Back to Students, Coverage of Syllabus, teaching experience, examining experience, qualification and gender) reliably predict candidates' achievement in WASSCE (i) English Language (ii) Mathematics in Imo State?

**Table 4.6.1 Correlation Matrix of Variables for achievement in English Language**

	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>
X <sub>1</sub>	1.000							
X <sub>2</sub>	.076	1.000						
X <sub>3</sub>	-.118	-.082	1.000					
X <sub>4</sub>	-.193	.036	.142	1.000				
X <sub>5</sub>	-.280*	-.228	.068	.375	1.000			
X <sub>6</sub>	-.341*	-.212	-.085	.201	.475**	1.000		
X <sub>7</sub>	.068	-.014	-.014	.492**	.570**	.354**	1.000	
X <sub>8</sub>	-.0208	.068	.064	.223	.454**	.386**	.308*	1.000
Mean	4.7170	1.47	2.11	3.38	3.19	3.43	3.09	3.42
SD	2.5599	.50	.85	.60	.62	.69	.93	.53

X<sub>1</sub>: Achievement in English Language; X<sub>2</sub>: Gender; X<sub>3</sub>: Years Teaching Experience; X<sub>4</sub>: Qualification; X<sub>5</sub>: Feed Back on C.A.; X<sub>6</sub>: Prompt Attendance to Classes X<sub>7</sub>Coverage of Syllabus; X<sub>8</sub>: SSCE Examining Experience Sig. (2-tailed). \*Sig. at p<0.05.

Table 4.6.1 displays the correlation matrix of the teacher predictors and the criterion. It shows that there is a negative significant correlation between Teachers' Provision of CA Feedback and candidates' achievement in WASSCE English Language in Imo State (-.280), meaning that there is a relationship between Teachers' Provision of CA Feedback and candidates' achievement in WASSCE English Language; Teachers' Prompt Attendance to Classes and Achievement in English Language (-.341), meaning that there is a relationship between Teacher Prompt Attendance to Classes and candidates' achievement in WASSCE English Language. It also shows a positive correlation between SSEC Examining Experience and Teachers' Coverage of Syllabus (.308), meaning that there is a strong relationship between SSCE Examining Experience and Teachers' Coverage of WASSCE Syllabus in predicting achievement in WASSCE English Language; Teachers' Qualification and Provision of CA Feedback (.375), meaning that there is a strong relationship between Teachers' Qualification and Provision of CA Feedback in predicting candidates' achievement in English Language; Teachers' Qualification and Teachers' Coverage of Syllabus (.492),

meaning that there is a relationship between Teachers' Qualification and Teachers' Coverage of Syllabus in predicting candidates' achievement in English Language; Provision of CA Feedback and Teachers' Coverage of Syllabus (.570), meaning that there is a strong relationship between Provision of CA Feedback and Teachers' Coverage of Syllabus in predicting candidates' achievement in English Language; Provision of CA Feedback and SSCE Examining Experience (.454), meaning that there is a strong relationship between Provision of CA Feedback and SSCE Examining Experience in predicting candidates' achievement in English Language in Imo State.

**Table 4.6.2 ANOVA table for achievement in English Language**

Model	Sum of Square	Df	Mean Square	F	Sig.
1 Regression	96.690	7	13.813	2.547	.027 <sup>a</sup>
Residual	244.064	102	2.393		
Total	<b>340.9755</b>	<b>109</b>			
Model Summary					
Model	1				
R	.533 <sup>a</sup>				
R. Squared	<b>.284</b>				
Adjusted R. Square	.172				
Std. Error of the Estimate	2.3289				

Dependent Variable: Achievement in English Language. Sig. =0.05

Table 4.6.2 shows the ANOVA and model summary of the regression analysis of the six teacher predictor variables on candidates' achievement in English Language in Imo State. It reveals that the predictors had a joint positive correlation on the criterion ( $r=.533$ ). The model shows an R Square of .284, meaning that all the predictors accounted for 28.4% of the variance observed in the criterion. Also, the model shows that all the predictors had a joint significant effect on candidates' achievement in English Language ( $F_{7, 102}=2.547, P<.027$ ).

**Table 4.6.3 Table of Coefficients for achievement in English Language**

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	12.788	3.061		4.178	.000
Gender	.128	.679	.025	.189	.851
Teaching Experience	-.242	.395	-.080	-.614	.543
Qualification	-1.023	.649	-.238	-1.577	.112
CA Feed Back	-1.158	.714	-.281	-1.621	.112
Prompt Attendance to Classes	-1.152	.554	-.312	-2.080	<b>.043</b>
Coverage of Syllabus	1.309	.465	.473	2.811	<b>.007</b>
SSCE Examining Experience	-.203	.698	-.042	-.290	.773

Dependent Variable: Achievement in English Language Sig. =0.05

Table 4.6.3 shows the relative contributions of each of the predictors and their significant values. It reveals that Teachers' Coverage of Syllabus ( $\beta=.473$ ,  $t_{(45)}=2.811$ ,  $P=.007$ ) and Prompt Attendance to Classes ( $\beta=.312$ ,  $t_{(45)}=2.080$ ,  $P=.043$ ) made unique significant contributions to candidates' achievement in WASSCE English Language. The other teacher related predictors did not make unique significant contributions to the prediction because their significant values are greater than 0.05. However, their beta weights reveal that Teachers' Coverage of Syllabus was most prominent in predicting achievement in English Language (.473); closely followed by Provision of CA Feedback (-.281), Teachers' Qualification (-.281), and Teaching Experience (-.085), while SSCE Examining Experience (-.042) and Teachers' Gender (.025) made the least contributions to the prediction.

**Table 4.6.4 Correlation Matrix of Variables for achievement in Mathematics**

	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>
X <sub>1</sub>	1.000							
X <sub>2</sub>	-.080	1.000						
X <sub>3</sub>	.180	-.082	1.000					
X <sub>4</sub>	.006	.036	.124	1.000				
X <sub>5</sub>	.013	-.228	.068	.375**	1.000			
X <sub>6</sub>	.083	-.212	-.085	.201	.474**	1.000		
X <sub>7</sub>	.054	-.180	-.014	.492**	.570**	.354**	1.000	
X <sub>8</sub>	.110	.170	.064	.223	.454**	.386**	.308*	1.000
Mean	3.1698	1.47	2.11	3.38	3.19	3.43	3.09	3.42
SD	3.0239	.50	.85	.60	.62	.69	.93	.53

X<sub>1</sub>: Achievement in Mathematics; X<sub>2</sub>: Gender; X<sub>3</sub>: Years Teaching Experience; X<sub>4</sub>: Qualification; X<sub>5</sub>: Feed Back on C.A.; X<sub>6</sub>: Coverage of Syllabus; X<sub>7</sub>: SSCE Examining Experience Sig. (2-tailed). \*Sig. at p<0.05.

Table 4.6.4 displays the correlation matrix of the teacher predictors and the criterion. It reveals that there is no significant correlation between the predictors and the criterion. It also shows a positive correlation between Teachers' Coverage of Syllabus and SSCE Examining Experience (.308), meaning that there is a strong relationship between Teachers' Coverage of Syllabus and SSCE Examining Experience in predicting candidates' achievement in Mathematics; Teachers' Qualification and Provision of CA Feedback (.375), meaning that there is a strong relationship between Teachers' Qualification and Provision of CA Feedback in predicting candidates' achievement in Mathematics; Teachers' Qualification and Teachers' Coverage of Syllabus (.492), meaning that there is a relationship between Teachers' Qualification and Teachers' Coverage of Syllabus in predicting candidates' achievement Mathematics; Provision of CA Feedback and Teachers' Coverage of Syllabus (.570), meaning that there is a strong relationship between Provision of CA Feedback and Teachers' Coverage of Syllabus in predicting candidates' achievement in Mathematics; Provision of CA Feedback and SSCE Examining Experience (.454), meaning that there is a



strong relationship between Provision of CA Feedback and SSCE Examining Experience in predicting candidates' achievement in Mathematics in Imo State.

**Table 4.6.5 ANOVA table for achievement in Mathematics**

Model	Sum of Square	df	Mean Square	F	Sig.
1 Regression	40.181	7	5.740	.593	.758 <sup>a</sup>
Residual	435.291	102	4.268		
<b>Total</b>	<b>475.472</b>	<b>109</b>			
Model Summary					
Model	1				
R	.291 <sup>a</sup>				
R. Square	<b>.085</b>				
Adjusted R. Square	-.058				
Std. Error of the Estimate	3.1102				

Dependent Variable: Achievement in Mathematics Sig. =0.05

Table 4.6.5 shows the ANOVA and model summary of the six teacher predictors on candidates' achievement in WASSCE mathematics in Imo State. The table shows that all the predictors had a positive correlation on the criterion ( $r=.291$ ). The model shows an R. Square of .085, meaning that 8.5% of the variance observed on the criterion is accounted for by all the predictors. However, the ANOVA shows that all the six predictors had a joint significant effect on candidates' achievement in Mathematics ( $F_{7, 102} = .593, P < .758$ ).

**Table 4.6.6 Table of Coefficients for achievement in Mathematics**

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.857	4.088		4.54	.652
Gender	-1.013	.907	-.169	-1.117	.270
Teaching Experience	.592	.527	.166	1.123	.267
Qualification	.176	.866	.035	.204	.840
CA Feed Back	-.325	.954	-.067	-.341	.735
Prompt Attendance to Classes	.407	.740	.093	.550	.585
Coverage of Syllabus	-.404	.622	-.123	-.649	.520
SSCE Examining Experience	.540	.933	.095	.579	.566

Dependent Variable: Achievement in Mathematics Sig. =0.05

Table 4.6.6 shows the coefficient and descriptive statistics of the relative contributions of each teacher predictor to candidates' achievement in WASSCE English Language and Mathematics in Imo State. The table reveals that none of the teacher predictors made unique significant contribution to candidates' achievement in Mathematics. This is because all the significant values of predictors were greater than 0.05. However, their beta weights indicate that Teachers' Gender (-.169), Teaching Experience (.166), and Teachers' Coverage of Syllabus (-.123) contributed to the prediction more than other variables, while SSCE Examining Experience (.095), Teachers' Provision of CA Feedback (-.067) and Teachers' Qualification (.035) made the least contributions to the prediction.

### Discussion

It was also found in this study that Provision of CA Feedback to students is another major determinant of achievement in WASSCE. Since continuous assessment plays a key role in formative evaluation and preparation of candidates towards better achievement in WASSCE. This result agrees with those of Osoba and Bakare (2008) and Falaye (1995). These researchers reported that delayed feedback on continuous assessment led to test

anxiousness while immediate feedback on continuous assessment outcomes resulted in improved performance of students in subsequent academic endeavours.

Furthermore, it was equally found that SSCE Examining Experience and Teacher Qualification have higher mean scores than other teacher predictors in this study. This is consistent with Meul (2005) who found a correlation between years of teaching experience and students' academic gains in Florida but that years of teaching experience did not predict total academic gains in Mathematics in particular. While Hanushek and Rivkin (2006) found a relationship between teachers' possession of master degree and students' academic achievement in English Language in Florida. They noted that teachers are better in their second and third years of teaching than they are in their first year. This is supported by Rice (2010) who observed that teachers show the greatest productivity on academic gains during their first few years on the job, after which their performance tends to level off i.e. the impact of experience on students' academic achievement, is strongest during the first few years of teaching. This observation underscores the need for school owners to always inject new blood in their schools by recruiting new and young teachers to boost the achievement of their students, especially in English Language and Mathematics.

The study also reveals a positive correlation between SSCE Examining Experience and Coverage of Syllabus among other positive correlations. This finding aligns with those of Uba (2012) who reported teacher qualification and years of teaching experience as positive contributors of leaning outcomes in English Language and Mathematics and other secondary school subjects in Cross River State. While Uwadiae (2007) advised teachers to always participate in WAEC co-ordination and marking to be acquainted with current trends in their chosen profession. It is not doubtful that attending co-ordination exposes teachers to the rubrics of testing, demands of questions and thus equips them to teach better so as to cover the prescribed syllabus. We also found a correlation between teacher prompt attendance to classes and their coverage of the SSCE syllabus as well as with candidates' achievement in English Language. This result shows that if the teachers go early and regularly to their classes and take their lessons promptly, they would cover the prescribed syllabus for WASSCE and candidates will perform better in subjects in the examination. But if they skip or always go to classes late, they would never cover the syllabus. According to WAEC Chief Examiners Report (2004, 2005 & 2007), non-coverage of the prescribed syllabus is a major cause of poor performance and low achievement in WASSCE.

However, this study did not find a significant correlation between teachers' gender and achievement in English Language and Mathematics. This is at variance with the findings

of Elia and Philip (2007) who found that male students performed slightly better in college introductory courses with male instructors than they did with female instructors, while instructor gender did not matter in the performance of female students. Also, Thomas (2006) contends that having a female teacher instead of a male teacher raised the achievement of girls and lowered that of boys on science (including Mathematics), Social Studies and English Language in the Philippines, while boys do better with male teachers. Linda (2012) also observed that one year with a male English Language teacher would eliminate nearly a third of the gender gap in reading performance among 13 year olds and improved performance of boys while a female teacher would close the gender gap in science achievement and eliminate achievement gaps in Mathematics. Linda concluded that differences in academic development arise from the fact that male and female teachers have the tendency to treat boys and girls differently in the classroom. Amita and Vyjayanthi (2008) reports that being in a female teachers' classroom is advantageous for language learning while teachers' gender has no effect on Mathematics learning. Their findings support a UNESCO (2006) report which argues in favour of hiring more female teachers in developing countries. The report noted that the presence of female teachers will lead to improvement in both girls' enrolment and girls' learning outcome.

**Research Question Seven:** Does the obtained regression equation resulting from a set of four ownership predictor variables (school Type, School Location, Sufficient Teachers and Availability of Learning Resources) reliably predict candidates' achievement in WASSCE (i) English Language (ii) Mathematics in Imo State?

**Table 4.7.1 Table of Correlation Matrix of Variables for achievement English Language**

	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>
X <sub>1</sub>	1.000				
X <sub>2</sub>	.011	1.000			
X <sub>3</sub>	.075	.042	1.000		
X <sub>4</sub>	-.021	.030	-.069	1.000	
X <sub>5</sub>	-.010	.004	.054	.030	1.000
Mean	4.59	1.60	1.44	24.6394	1.16
SD	2.2854	.49	.50	5.3445	.37

X<sub>1</sub>: Achievement in English Language; X<sub>2</sub>: School Type; X<sub>3</sub>: School Location; X<sub>4</sub>: Learning Resources; X<sub>5</sub>: Availability of Teachers. \*Sig. at p>0.05.

Table 4.7.1 shows the correlation matrix between the predictors. The table reveals that there is no significant correlation between the four ownership predictors and the criterion, and among the predictors themselves.

**Table 4.7.2 ANOVA table for achievement in English Language**

Model	Sum of Square	df	Mean Square	F	Sig.
1 Regression	13.137	4	3.284	.628	.643 <sup>a</sup>
Residual	2149.206	411	5.229		
Total	<b>2162.344</b>	<b>415</b>			
Model Summary					
Model	1				
R	.078 <sup>a</sup>				
R. Square	<b>.006</b>				
Adjusted R. Square	-.004				
Std. Error of the Estimate	2.29				

Dependent Variable: Achievement in English Language Sig. =0.05

Table 4.7.2 shows the ANOVA and model summary of the regression analysis of the four ownership predictors on candidates' achievement in WASSCE English Language. The model reveals that the ownership predictors had a low correlation on candidates' achievement in WASSCE English Language in Imo State. It indicates an adjusted R. Square of .006, meaning that about 0.6% of the variance observed on the criterion is accounted for by the four

ownership predictors. However, all the predictors did not make a unique joint significant effect on candidates' achievement in WASSCE English Language ( $F_{4, 411} = .628, P > .643$ ).

**Table 4.7.3 Table of Coefficients for achievement in English Language**

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	4.297	.783		.5486	.000
School Type	3.963E-02	.229	.009	.173	.863
School Location	.339	.227	.074	1.495	.136
Sufficient Teachers	-9.751E-02	.304	-.016	-.321	.749
Learning Resources	-5.819E-03	.021	-.014	-.276	.782

Dependent Variable: Achievement in English Language Sig. = 0.05.

Table 4.7.3 shows the co-efficient and descriptive statistics of the data on ownership predictors on candidates' achievement in WASSCE English Language in Imo State. It reveals that none of the predictors made a unique significant contribution to candidates' achievement in WASSCE English Language in Imo State. This is because all the significant values of the predictors were greater than 0.05. However, their beta weights indicates that School Location (.074) contributed more to the prediction more than Insufficient Teachers (-.016), Learning Resources (-.014) and School Type (.009).

**Table 4.7.4 Table of Correlation Matrix of Variables for achievement in Mathematics**

	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>
X <sub>1</sub>	1.000				
X <sub>2</sub>	.028	1.000			
X <sub>3</sub>	-.058	.042	1.000		
X <sub>4</sub>	-.110*	.030	-.069	1.000	
X <sub>5</sub>	.022	.004	.054	.030	1.000
Mean	4.95	1.60	1.44	24.6394	1.16
SD	2.59	.49	.50	5.3445	.37

X<sub>1</sub>: Achievement in Mathematics; X<sub>2</sub>: School Type; X<sub>3</sub>: School Location; X<sub>4</sub>: Learning Resources; X<sub>5</sub>: Availability if Teachers Sig. (2-tailed). \*Sig. at  $p < 0.05$ .

Table 4.7.4 displays the correlation matrix of the ownership predictors and the criterion. The table shows that there is a negative correlation between Availability of Teaching and Learning Resources and candidates' achievement in Mathematics (-.110), meaning that Teaching and Learning Resources accounts for 11% of the variance observed in candidates' achievement in WASSCE Mathematics in Imo State. It also shows that there was no significant correlation among the predictors in explaining candidates' achievement in Mathematics.

**Table 4.7.5 ANOVA table for achievement in Mathematics**

Model	Sum of Square	df	Mean Square	F	Sig.
1 Regression	51.370	4	12.842	1.932	.104 <sup>a</sup>
Residual	2731.669	411	6.646		
Total	<b>2783.038</b>	<b>415</b>			
Model Summary					
Model	1				
R	.136 <sup>a</sup>				
R. Squared	<b>.018</b>				
Adjusted R. Square	.009				
Std. Error of the Estimate	2.58				

Dependent Variable: Achievement in Mathematics Sig. =0.05

Table 4.7.5 shows the ANOVA and model summary of the regression analysis of the four ownership predictors on candidates' achievement in WASSCE mathematics. The model shows that the ownership predictors have a high correlation on candidates' achievement in WASSCE mathematics in Imo State ( $r=.136$ ). It indicates an adjusted R. Square of .018, meaning that about 1.8% of the variance observed in candidates' achievement in mathematics is accounted for by all the four ownership predictor variables. However, all the ownership predictors did not make a unique joint significant effect on candidates' achievement in WASSCE Mathematics ( $F_{4, 411}=1.932, P>.104$ ).

**Table 4.7.6 Table of Coefficients for achievement in Mathematics**

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	5.782	.883		6.547	.000
School Type	.183	.258	-.035	.710	.478
School Location	-.360	.256	-.069	-1.409	.160
Sufficient Teachers	-.815	.343	-.117	-2.377	<b>.018</b>
Learning Resources	1.404E-02	.024	.029	.592	.554

Dependent Variable: Achievement in Mathematics Sig. =0.05.

Table 4.7.6 shows the co-efficient and descriptive statistics of the data on ownership predictors on candidates' achievement in WASSCE Mathematics in Imo State. It reveals that only Insufficient Teachers made a unique significant contribution to candidates' achievement in WASSCE Mathematics in Imo State ( $\beta=-.117$ ,  $t_{(109)}=-2.377$ ,  $P=.018$ ). Other ownership predictors did not make unique significant contributions to candidates' achievement in WASSCE Mathematics because all the significant values were greater than 0.05. However, their beta weights indicate that Insufficient Teachers (.117) contributed to the prediction more than School Location (.026), School Type (.035) and Learning Resources (.029).

## Discussion

Analysis of research question seven reveals that ownership predictors jointly accounted for some variance observed in candidates' achievement in WASSCE English Language and Mathematics in Imo State with none making a unique significant effect on candidates' achievement in the subjects. However, the mean scores show that School Type and Insufficient Teachers contributed to the prediction more than School Location and Learning Resources. This is similar to the findings of earlier studies by Isiugo-Abanihe and Labo-Popola (2004), Okwilagwe (2005), Ibode and Oparaku (2007) and Oke (2010) all of whom reported that private schools did better than government owned school in various public examinations they studied. It also agrees with Obanya (2012) who observed that the teacher situation in Nigeria (Africa) is characterised by quantitative insufficiency (i.e. general lack of teachers) and qualitative inadequacy (i.e. only few of the available teachers are qualified); and Kimberly and Paul (2009) who noted that African countries need to recruit up



to four million teachers to meet the Education For All (EFA) goals and the Universal Primary Education by 2015. However, the highest mean scores recorded by Availability of Learning Resources corresponds with the findings of Ola-Gbadamosi (2009) and Taylor (2010) who reported positive relationship between availability of learning resources in schools and students' academic achievement in separate studies. In fact, Taylor (2010) observes that a well-equipped class with space and the least amount of distraction will usually help students, especially those with learning disabilities, to focus on instructions. He also added that a teachers' skill, expertise and willingness can help students to learn. Hence there is need for training and retraining of teachers to position them to enhance students' academic achievement in school subjects.

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**CHAPTER FIVE**  
**SUMMARY OF FINDINGS, RECOMMENDATIONS, SUGGESTIONS FOR**  
**FURTHER STUDIES AND CONCLUSION**

In this chapter, a summary of the findings discussed in the previous chapter, the recommendations for improvement and suggestions for further research and conclusion are presented.

**5.1 Summary of Findings**

The major findings of this investigation are summarised as follows:

- 1) All the student predictor variables correlated very high and significantly accounted for candidates' achievement in WASSCE English Language.
- 2) All the student predictor variables correlated very high and significantly accounted for candidates' achievement in WASSCE Mathematics.
- 3) Age, Study Habit, Candidates' following of Examination Instruction, Legibility of Candidates' Handwriting and Candidates' Coverage of WASSCE Syllabus did not make unique significant contributions to the prediction on achievement in WASSCE English Language and Mathematics.
- 4) From the means, Test Anxiety, Study Habit and Coverage of WASSCE Syllabus are very critical to candidates' achievement in WASSCE English Language and Mathematics while Age and Gender were least.
- 5) Positive correlation exists between Gender, Study Habit, Test Anxiety, Coverage of Syllabus and candidates' achievement in WASSCE English Language and Mathematics.
- 6) Negative correlation exists between Candidates' Following of Examination Instruction, Legibility of Handwriting and Candidates' achievement in WASSCE English Language and Mathematics.
- 7) Positive correlation exists between Age and Gender, Age and Legibility of Handwriting, Gender and Study Habit, Gender and Coverage of Syllabus, Study Habit and Coverage of Syllabus, Test Anxiety and Coverage of Syllabus, Adherence to Exam Instruction and Coverage of Syllabus, Legibility of Handwriting and Coverage of Syllabus.
- 8) All the student predictor variables correlated very high and but did not significantly affect candidates' achievement in WASSCE English Language and Mathematics.

- 9) All the student predictor variables correlated very high and significantly accounted for candidates' achievement in WASSCE English Language.
- 10) All the student predictor variables correlated very high and but did not make significant joint effect on candidates' achievement in WASSCE Mathematics.
- 11) The teacher predictors did make a unique joint significant contribution to the prediction on candidates' achievement in WASSCE English Language and Mathematics.
- 12) Teachers' Prompt attendance to class made a unique contribution to candidates' achievement in WASSCE English Language ( $P < .043$ ).
- 13) Teachers' coverage of syllabus made a unique contribution to candidates' achievement in WASSCE English Language ( $P < .007$ ).
- 14) The same teacher predictors that correlated in predicting achievement in English Language also correlated in predicting achievement in Mathematics.
- 15) From the Beta weights, Teachers' Provision of CA Feedback to Students and Coverage of WASSCE Syllabus contributed more to the prediction while their Teaching Experience and SSCE Examining Experience made the least contributions to the prediction.
- 16) From the means, SSCE Examining Experience, Teachers' Qualification, Provision of CA Feedback and Coverage of WASSCE Syllabus are key teacher factors that determines of candidates, achievement in WASSCE English Language and Mathematics.
- 17) There is positive correlation between Teachers' Qualification, their Provision of CA Feedback to Students and candidates' achievement in WASSCE English Language and Mathematics.
- 18) There is positive correlation between Gender and Provision of CA Feedback to students in predicting candidates' achievement in WASSCE English Language and Mathematics.
- 19) There is positive correlation between Gender and Coverage of Syllabus in predicting candidates' achievement in WASSCE English Language and Mathematics.
- 20) There is positive correlation between Gender and SSCE Examining Experience in predicting candidates' achievement in WASSCE English Language and Mathematics.
- 21) There is positive correlation between Teaching Experience and Teacher Qualification in predicting candidates' achievement in WASSCE English Language and Mathematics.

- 22) There is positive correlation between Teacher Qualification and Provision of CA Feedback to Students in predicting candidates' achievement in WASSCE English Language and Mathematics.
- 23) There is positive correlation between Teacher Qualification and Coverage of Syllabus in predicting candidates' achievement in WASSCE English Language and Mathematics.
- 24) There is positive correlation between Teacher Qualification and SSCE Examining Experience in predicting candidates' achievement in WASSCE English Language and Mathematics.
- 25) There is positive correlation between Provision of CA Feedback to Students and Coverage of Syllabus in predicting candidates' achievement in WASSCE English Language and Mathematics.
- 26) There is correlation between Provision of CA Feedback to Students and SSCE Examining Experience in predicting candidates' achievement in WASSCE English Language and Mathematics.
- 27) There is correlation between Coverage of Syllabus and SSCE Examining Experience in predicting candidates' achievement in WASSCE English Language and Mathematics.
- 28) All the ownership predictors correlated very high but did not have a unique joint significant effect on candidates' achievement in WASSCE English Language and Mathematics.
- 29) All the ownership predictors had a low correlation but did not have a unique joint significant effect on candidates' achievement in WASSCE English Language.
- 30) All the ownership predictors correlated very high but did not make a unique joint significant effect on candidates' achievement in WASSCE English Language and Mathematics.
- 31) None of the ownership predictors made a Unique significant contribution to the prediction because all their significant values were greater than 0.05.
- 32) From the Beta weights, School Type and Insufficient Teachers contributed more to the prediction than Availability of Learning Resources and School Location.
- 33) From the means, Insufficient English Language and Mathematics Teachers is a critical determinant of candidates' achievement in the subjects.

- 34) There was no positive correlation between any ownership predictor and candidates' achievement in WASSCE English Language and Mathematics as well as among the predictors in predicting candidates' achievement in the subjects.
- 35) Candidates wrote an average of two to three examinations in the same year they wrote WASSCE.
- 36) France's International Baccalaureate (IB) is not offered by schools in Imo State, Nigeria.
- 37) There is low enrolment for Britain's International General Certificate of Secondary Education (IGCSE) in Imo State schools.
- 38) Preparing and writing several examinations alongside WASSCE affects many candidates' achievement in WASSCE English Language and Mathematics.
- 39) More principals (51.92%) believe that external monitoring of WASSCE has a positive impact on the conduct and achievement in the examination while many teachers (54.72%) were of the view that the external monitoring of WASSCE by WAEC has a low impact on the conduct and achievement in the examination.
- 40) Majority of the principals and teachers called for effective monitoring of each WASSCE paper. They believe that the effective monitoring will improve the conduct and achievement in the subjects.
- 41) Many principals and teachers believe that examiners are very thorough in examining candidates' scripts in WASSCE English Language and Mathematics, while many candidates are of the opinion that examiners were not thorough in examining their WASSCE papers.
- 42) Interview results show that WASSCE examiners are very thorough in examining candidates' scripts.
- 43) It was also found that student predictors were most influential determinants of candidates' achievement in WASSCE English Language and Mathematics. This is followed by teacher factors while ownership factors were least.
- 44) Majority of the principals (84.91%) and the teachers (65.14%) rated age of candidates as a high determinant of their achievement in WASSCE.
- 45) Majority of the principals (62.91%) and teachers (70.37%) rated study habit of candidates as a high determinant of their achievement in WASSCE English Language and Mathematics.

- 46) Many teachers (59.63%) and fewer principals (43.39%) rated test anxiety high in determining candidates' achievement in WASSCE English Language and Mathematics.
- 47) Many teachers (52.78%) and fewer principals (41.51%) rated candidates' gender as a high determinant of their achievement in WASSCE English language and Mathematics.
- 48) Many principals (66.04%) and teachers (62.38%) rated candidates' following of examination instructions as having high impact on their achievement in WASSCE English language and Mathematics.
- 49) More principals (67.92%) rated legibility of handwriting high in determining candidates' achievement in WASSCE English language and Mathematics, while the teachers were divided on the effect of the variable achievement in the examination.
- 50) More principals (69.81%) and more teachers (64.81%) rated candidates' coverage of syllabus high in determining achievement in WASSCE English language and Mathematics.
- 51) The principals (69.81%) rated teacher gender as a high determinant of candidates' achievement in WASSCE English language and Mathematics.
- 52) Majority of the principals (88.8%) rated teacher experience as a high determinant of candidates' achievement in WASSCE English language and Mathematics.
- 53) Majority of the principals (88.8%) rated teacher professional and academic qualifications as a high determinant of candidates' achievement in WASSCE English language and Mathematics.
- 54) Majority of the principals (90.56%) rated teacher provision of continuous assessment to students as being a high determinant of candidates' achievement in WASSCE English language and Mathematics.
- 55) Majority of the principals (83.02%) rated teacher prompt attendance to class as being a high determinant of candidates' achievement in WASSCE English language and Mathematics.
- 56) Majority of the principals (67.92%) rated teacher coverage of the prescribed syllabus as being a high determinant of candidates' achievement in WASSCE English language and Mathematics.
- 57) Majority of the principals (86.79%) rated teacher SSCE examining experience as being a high determinant of candidates' achievement in WASSCE English language and Mathematics.

## 5.2 Recommendations

The following recommendations are made based on the findings summarised above:

### Student:

- 1) Since Test Anxiety, Study Habit and Coverage of WASSCE Syllabus are critical students' determinants of achievement in English Language and Mathematics, there should be regular counselling and orientation programmes in secondary schools to enlighten students on the need to study harder and to cover the prescribed syllabus so as to build their confidence and reduce anxiety during WASSCE.
- 2) They ensure that they write legibly.
- 3) They should endeavour read and understand instructions before attempting examination questions.

### Teachers:

- 4) Attend all classes so that they would cover the prescribed syllabus for WASSCE.
- 5) Attend WAEC coordination regularly so that they will be acquainted with current trends in teaching and learning.
- 6) Provide regular feedback to students on their performance in continuous assessments so students would know areas they need to improve and/or sustain.

### Government/School Owners:

- 7) Government and privately owned secondary schools should they recruit qualified English Language and Mathematics teachers whenever they need to. Besides, they should institute a programme of continuous professional development for their English Language and Mathematics teachers as well as for teachers of other subjects.
- 8) They should also ensure that teaching and learning facilities are available in their schools.

### WAEC:

- 9) The West African Examinations Council (WAEC) should be more thorough and proactive in their monitoring of WASSCE so that its conduct and achievement of candidates in it can improve.

## 5.3 Suggestions for Further Studies

Based on the limitations and findings of this study, subsequent researchers and researches can focus on the following areas:

- 1) Developing a counselling programme that will cushion the effect of test anxiousness among candidates in public examinations.

- 2) Since there was no correlation among the ownership variables in this study, an experimental research would be beneficial to finding how the four ownership predictors in this study determine achievement in school-based examinations.
- 3) The study also showed that student predictors had significant influence on achievement in WASSCE; further experimental studies can focus on strengthening the student variables to see how they can improve on achievement in academic endeavours.
- 4) Subsequent researchers can replicate the study with especial focus on legibility of handwriting, coverage of syllabus and following examination instructions in an experimental study.
- 5) The study can equally be made a national study by taking sample states from each geo-political zone in Nigeria.
- 6) The study can equally be replicated in other member countries of the West African Examinations Council.

#### **5.4 Contributions to Knowledge**

- 1) This has been able to get WASSCE past candidates and their teachers to report in the factors that affected and determined their achievement in the examination. This is a deviation from the tradition of using SS2 students in studies to determine factors that affect academic achievement.
- 2) In this study, we also investigated and establish legibility of handwriting and adherence to examination instruction as predictors of candidates' achievement in WASSCE English Language and Mathematics.
- 3) We also developed and validated research instruments for collecting data on academic achievement of candidates in WASSCE.
- 4) We were equally able to establish WAEC objectivity in assessing candidates' scripts in WASSCE English Language and Mathematics using the Thematic and Grounded Theory qualitative analytical approaches.

#### **5.5 Conclusion**

The findings arising from this study may serve to rekindle some new thinking with regard to the need to take a closer look at the factors that determine candidates' achievement in the West African Senior School Certificate Examination (WASSCE) and other public examinations in Nigeria. The findings showed that test anxiety in candidates significantly



determines their achievement in academic endeavours. Test Anxiety in candidates occurs as a result of the importance attached to WASSCE as it is used for both certification and higher education. Hence, WASSCE has been described as a high stake examination because parents are expectant of high achievement from their children writing the examination, school authorities expect their students to do well in the examination as they use the result as a measure of quality, teachers also expect students to do well in their specific subjects as the teachers' promotion in most schools, especially those that are privately owned, is often tied to the performance of students in public examinations, while the government expects high achievement from candidates to justify the huge sums they invest in education. As a result, candidates become very anxious of their performance. Thus, their anxiousness often leads to them making serious mistakes that ultimately have a negative effect on their achievement in WASSCE.

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UNIVERSITY OF IBADAN

**APPENDIX 1**

**INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION  
INSTITUTE OF EDUCATION  
UNIVERSITY OF IBADAN,  
IBADAN, NIGERIA.**

**STUDY HABIT QUESTIONNAIRE**

Dear Respondent,

I am working on Determinants of Candidates' Performance in Senior School Certificate Examinations in Imo State. You are among the chosen participants to make this study a success. Kindly contribute your quota by filling out this questionnaire. Thank You. OPARAKU, D.D.

**INSTRUCTION:** Kindly respond to this instrument by providing information on the teaching and learning activities as you were preparing for the West African Senior School Certificate Examination. Your kind response will be of tremendous assistance towards the completion of this study and will be treated with utmost confidentiality. Thank You.

**DID YOU HAVE ENGLISH LANGUAGE AND MATHEMATICS TEACHERS TO PREPARE YOU FORSSCE?YES(    ); NO(    ). IF NO, WHICH DID YOU LACK?**

.....

**SECTION A: BIO DATA:** GENDER: Male (    ); Female (    ). YEAR OF SSCE.....  
AGE AT THE TIME OF WRITING SSCE: 15-16 (    ); 17-18 (    ); 19-20 (    ); 21&above (    ).  
SCHOOL TYPE: Private (    ) Public (    ). SCHOOL LOCATION: Urban (    ) Rural (    )

**SECTION B: STUDENTS' STUDY HABIT:** Please rate your study habit when you were in Senior Secondary School. KEY=A= Always; B= Sometimes; C= Rarely; D= Never

S/N	STUDY HABIT	A	B	C	D
B1	Did you make reading schedule for each term?				
B2	Did you follow your reading schedule strictly?				
B3	Did you get assignment done on time?				
B4	Did you regularly attend classes?				
B5	Did you study at a regular time daily?				
B6	Did you have a particular place for studying?				
B7	Did you use your time between classes to study?				
B8	Was your study location free from noise and distractions?				
B9	Did you have all your reading materials near you when you study?				
B10	Did you study for at least half an hour without getting up, touching phones etc.?				
B11	Did you avoid friends when you want to do personal study?				
B12	Did you turn down offers for social activities when you have home work to do or test to study for?				
B13	Was your time evenly distributed among your subjects?				

**APPENDIX 2**

**INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION  
INSTITUTE OF EDUCATION  
UNIVERSITY OF IBADAN,  
IBADAN, NIGERIA.**

**TEST ANXIETY SCALE**

Dear Respondent,

I am working on Determinants of Candidates' Performance in Senior School Certificate Examinations in Imo State. You are among the chosen participants to make this study a success. Kindly contribute your quota by filling out this questionnaire. Thank You.  
OPARAKU, D.D.

**INSTRUCTION:** Kindly respond to this instrument by providing information on the teaching and learning activities as you were preparing for the West African Senior School Certificate Examination. Your kind response will be of tremendous assistance towards the completion of this study and will be treated with utmost confidentiality. Thank You.

**SECTION A: BIODATA**

**GENDER:** Male (  ); Female (  ). **YEAR OF SSCE**.....

**AGE AT THE TIME OF WRITING SSCE:** 15-16 (  ); 17-18 (  ); 19-20 (  ); above 21 (  ).

**SCHOOL TYPE:** Private (  ) Public (  ). **SCHOOL LOCATION:** Urban (  ) Rural (  )

**SECTION B: STUDENTS' TEST ANXIETY:** Please rate your emotional state during WASSCE

**KEY:** 1=Always; 2=Often; 3=Sometimes; 4=Rarely; 5=Never

S/N	TEST ANXIETY	1	2	3	4	5
B1	I had visible signs of nervousness such as wet palms and shaky hands during my WASSCE examinations.					
B2	I had visible signs of nervousness such as wet palms and shaky hands before my WASSCE examinations.					
B3	I felt like vomiting before my WASSCE examinations.					
B4	I felt like vomiting before my WASSCE examinations.					
B5	After reading through exam questions, I felt I did not have clue to the answer(s).					
B6	I panicked before my WASSCE examinations.					
B7	I panicked before my WASSCE examinations.					
B8	My mind sometimes went blank during my WASSCE examination.					
B9	I had trouble sleeping at night before each WASSCE examination.					
B10	I made mistakes during my WASSCE examination.					
B11	I mistakes on easy questions during my WASSCE examination.					
B12	I misplaced answers to questions during my WASSCE examination.					
B13	I had difficulty choosing questions during my WASSCE examination.					
B14	I was afraid of going for my WASSCE results.					
B15	I sweated during my WASSCE examination.					
B16	I felt like urinating during most WASSCE papers.					
B17	I felt depressed before each WASSCE papers.					
B18	I felt depressed during each WASSCE paper.					
B19	I felt depressed after each WASSCE paper.					
B20	After my WASSCE exam, I worried about my performance.					



### APPENDIX 3

**INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION  
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IBADAN, NIGERIA.**

#### **COVERAGE OF SYLLABUS QUESTIONNAIRE**

Dear Respondent,

I am working on Determinants of Candidates' Performance in Senior School Certificate Examinations in Imo State. You are among the chosen participants to make this study a success. Kindly contribute your quota by filling out this questionnaire. Thank You. OPARAKU, D.D.

**INSTRUCTION:** Kindly respond to this instrument by providing information on the teaching and learning activities as you were preparing for the West African Senior School Certificate Examination. Your kind response will be of tremendous assistance towards the completion of this study and will be treated with utmost confidentiality. Thank You.

#### **SECTION A: BIODATA**

**GENDER:** Male (  ); Female (  ). **YEAR OF SSCE:**.....

**AGE AT THE TIME OF WRITING SSCE:** 15-16 (  ); 17-18 (  ); 19-20 (  ); 21&above (  ).

**SCHOOL TYPE:** Private (  ) Public (  ). **SCHOOL LOCATION:** Urban (  ) Rural (  )

**SECTION B: STUDENTS' COVERAGE OF THE SYLLABUS:** Please rate your coverage of the scheme of work and syllabus for SSCE. **KEY=A= Always; B= Sometimes; C= Rarely; D= Never**

S/N	COVERAGE OF SYLLABUS	A	B	C	D
B1	Did you request for the scheme of work at the beginning of the term?				
B2	Did you make effort to cover the topics you map out for the day?				
B3	Did you make effort to cover the topics in the scheme of work for the week?				
B4	Did you make effort to cover your scheme of work per term?				
B5	Did you make effort to cover your scheme of work per class before going to a new class?				
B6	Did you make effort to cover the WASSCE syllabus?				
B7	Did you use the scheme of work when you read?				
B8	Did you cross check facts with textbooks when you read?				
B9	Did you call the attention of the teacher to the areas not yet taught?				
B10	Did you write down important facts when you read?				
B11	Did you review the points before your exams?				
B12	Did you consult your teachers on points you do not understand after teaching or when you read?				

**APPENDIX 4**

**INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION  
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UNIVERSITY OF IBADAN,  
IBADAN, NIGERIA.**

**PERCEIVED LEGIBILITY OF HANDWRITING QUESTIONNAIRE**

Dear Respondent,

I am working on Determinants of Candidates' Performance in Senior School Certificate Examinations in Imo State. You are among the chosen participants to make this study a success. Kindly contribute your quota by filling out this questionnaire. Thank You. OPARAKU, D.D.

**INSTRUCTION:** Kindly respond to this instrument by providing information on the teaching and learning activities as you were preparing for the West African Senior School Certificate Examination. Your kind response will be of tremendous assistance towards the completion of this study and will be treated with utmost confidentiality. Thank You.

**SECTION A: BIODATA**

**GENDER:** Male (  ); Female (  ). **YEAR OF SSCE**.....

**AGE AT THE TIME OF WRITING SSCE:** 15-16 (  ); 17-18 (  ); 19-20 (  ); 21&above (  ).

**SCHOOL TYPE:** Private (  ) Public (  ). **SCHOOL LOCATION:** Urban (  ) Rural (  )

**SECTION B: PERCEIVED LEGIBILITY OF STUDENTS' HANDWRITING:** Please rate the clarity of your handwriting during your secondary school days.

S/N	CLARITY OF HAND WRITING	Very True of Me	Sometimes True of Me	Not True of Me
B1	My teachers sometimes complained of my handwriting			
B2	My fellow students had difficulty copying from my notebook			
B3	My teachers corrected my writing of specific alphabets			
B4	I easily read what I have written after a while			
B5	I once failed exam or test as a result of my handwriting			
B6	I found it difficult to read what I had written when I was in Senior Secondary School.			
B7	I could not write specific alphabets clearly before my Senior Secondary School Examination.			
B8	I could not write specific numbers clearly before my Senior Secondary School Examination.			

## APPENDIX 5

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION  
INSTITUTE OF EDUCATION  
UNIVERSITY OF IBADAN,  
IBADAN, NIGERIA.

### PERCEIVED ADHERENCE TO EXAMINATION INSTRUCTION QUESTIONNAIRE

Dear Respondent,

I am working on Determinants of Candidates' Performance in Senior School Certificate Examinations in Imo State. You are among the chosen participants to make this study a success. Kindly contribute your quota by filling out this questionnaire. Thank You. OPARAKU, D.D.

**INSTRUCTION:** Kindly respond to this instrument by providing information on the teaching and learning activities as you were preparing for the West African Senior School Certificate Examination. Your kind response will be of tremendous assistance towards the completion of this study and will be treated with utmost confidentiality. Thank You.

#### **SECTION A: BIODATA**

**GENDER:** Male (  ); Female (  ). **YEAR OF SSCE**.....

**AGE AT THE TIME OF WRITING SSCE:** 15-16 (  ); 17-18 (  ); 19-20 (  ); 21&above (  ).

**SCHOOL TYPE:** Private (  ) Public (  ). **SCHOOL LOCATION:** Urban (  ) Rural (  )

**SECTION B: STUDENTS' ADHERENCE TO EXAM INSTRUCTIONS:** Please rate adherence to examination instructions while you were writing WASSCE.

S/N	ADHERENCE TO INSTRUCTION	Very True of Me	Sometimes True of Me	Not True of Me
B1	I always read exam instructions, especially during SSCE.			
B2	I tried to understand instructions before starting SSCE exams.			
B3	I asked my teachers to explain SSCE instructions to me.			
B4	I followed instructions strictly throughout my SSCE exam.			
B5	I read instructions for each section of each SSCE paper.			
B6	Whenever I am confused, I read SSCE instructions again.			

**APPENDIX 6**

**INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION  
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UNIVERSITY OF IBADAN,  
IBADAN, NIGERIA.**

**AVAILABILITY AND USE OF LEARNING RESOURCES CHECKLIST**

Dear Respondent,

I am working on Determinants of Candidates' Performance in Senior School Certificate Examinations in Imo State. You are among the chosen participants to make this study a success. Kindly contribute your quota by filling out this questionnaire. Thank You. OPARAKU, D.D.

**INSTRUCTION:** Kindly respond to this instrument by providing information on the teaching and learning activities as you were preparing for the West African Senior School Certificate Examination. Your kind response will be of tremendous assistance towards the completion of this study and will be treated with utmost confidentiality. Thank You.

**SECTION A: BIODATA**

**GENDER:** Male (  ); Female (  ). **YEAR OF SSCE**.....

**AGE AT THE TIME OF WRITING SSCE:** 15-16 (  ); 17-18 (  ); 19-20 (  ); 21&above (  ).

**SCHOOL TYPE:** Private (  ) Public (  ). **SCHOOL LOCATION:** Urban (  ) Rural (  )

**SECTION B: AVAILABILITY AND USE OF LEARNING MATERIALS AND FACILITIES:**

Please rate the availability and frequency of usage of the following instructional facilities while you were in secondary school. If any of the facilities is not available, tick NOT AVAILABLE and stop. But if it is available, state its adequacy and usage per week.

LEARNING RESOURCES	Not Available	Available	Adequate	Not Adequate	FREQUENCY OF USAGE PER WEEK			
					Once	Twice	Trice	Four Times
Library								
English Laboratories								
Mathematics Laboratory								
Approved Text Books.								
Charts.								
Mathematical Set								

**APPENDIX 7**

**INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION  
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IBADAN, NIGERIA.**

**NUMBER OF EXAMINATION AND PAST CANDIDATES' PERCEPTION OF  
OBJECTIVITY OF ASSESSMENT QUESTIONNAIRE**

Dear Respondent,

I am working on Determinants of Candidates' Performance in Senior School Certificate Examinations in Imo State. You are among the chosen participants to make this study a success. Kindly contribute your quota by filling out this questionnaire. Thank You.  
OPARAKU, D.D.

**INSTRUCTION:** Kindly respond to this instrument by providing information on the teaching and learning activities as you were preparing for the West African Senior School Certificate Examination. Your kind response will be of tremendous assistance towards the completion of this study and will be treated with utmost confidentiality. Thank You.

**SECTION A: BIODATA**

**GENDER:** Male (  ); Female (  ). **YEAR OF SSCE**.....

**AGE AT THE TIME OF WRITING SSCE:** 15-16 (  ); 17-18 (  ); 19-20 (  ); above 21( ).

**SCHOOL TYPE:** Private (  ) Public (  ). **SCHOOL LOCATION:** Urban (  ) Rural (  )

**SECTION B: NUMBER OF EXAMS WRITTEN BY CANDIDATES**

Please tick the exams you wrote in the final year of secondary school.

	MOCK	NECO SSCE	IGCSE	IB	UTME	SAT
WASSCE with						

S/N	ITEMS	YES	NO
B1	Did your preparation for several examinations the same year negatively affect your performance in WAEC or NECO SSCE?		

**KEY:**

**UTME:** Unified Tertiary Matriculation Examination.

**IB:** International Baccalaureate (France).

**SAT:** Scholastic Aptitude Test (USA)

**IGCSE:** International General Certificate of Secondary Education (UK)

**SECTION C: STUDENTS PERCEPTION OF OBJECTIVITY OF WASSCE**

**ASSESSMENT**

		Very Objective	Not Objective
C1	To what extent were examiners objective in assessing WASSCE scripts?		

UNIVERSITY OF IBADAN

APPENDIX 8

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION  
INSTITUTE OF EDUCATION  
UNIVERSITY OF IBADAN,  
IBADAN, NIGERIA.

**TEACHERS' QUESTIONNAIRE ON FACTORS THAT INFLUENCE  
ACHIEVEMENT IN WASSCE**

Dear Respondent,

I am working on Determinants of Candidates' Performance in Senior School Certificate Examinations in Nigeria. You are among the chosen participants to make this study a success. Kindly contribute your quota by filling out this questionnaire. Thank You.  
OPARAKU, D.D.

**SECTION A: BIO-DATA:** Please tick whichever is applicable to you.

**Gender:** Male (  ); Female (  ) **Age:** 20-30 (  ); 31-40 (  ); 41-50 (  ); 51-60 (  )

**QUALIFICATION:** NCE (  ); HND (  ); B.Sc./B.A (  ); HND/PGDE (  );

B.Ed./B.Sc.Ed./B.A.Ed (  ); B.Sc./PGDE (  ); M.Ed./M.Sc./M.A (  ); PhD (  ).

**Subject Area:** .....

**Subject taught at SSCE Level:** .....

**Years of Teaching Experience:** 1-5 (  ); 6-10 (  ); 11-15 (  ); 16-20 (  ); above 21 (  )

**Do you examine WASSCE?** Yes (  ) No (  ).

**If Yes, how long?** 1-3 (  ), 4-6 (  ), 7 & Above (  )

**SECTION B: STUDENT FACTORS AND PERFORMANCE IN WASSCE:** Please recall and rate the extent to which the following student factors contribute to the achievement of candidates in WASSCE.

S/N	STUDENT FACTORS	V.H.	H.	L.	V.L.
B1	Age as at time of writing WASSCE				
B2	Gender				
B3	Study Habit				
B4	Test Anxiety Level				
B5	Adherence to instructions during WASSCE				
B6	Legibility of Hand Writing				
B7	Coverage of Prescribed WASSCE Syllabus				
B8	Ownership & use of Recommended Textbooks				

**KEY:** V.H.=Very High=; H= High; L= Low; V.L.= Very Low

**SECTION C: PERCEIVED OBJECTIVITY OF WASSCE ASSESSMENT**

		Very Objective	Not Objective
C9	To what extent are examiners objective in assessing candidates' scripts in WASSCE in your subject area?		

**SECTION D: PERCEIVED IMPACT OF EXTERNAL MONITORING: KEY:** V.H. =Very; H=High; L= Low; V.L. =Very Low

		V.H.	H.	L.	V.L.
D10	How would you rate the impact of External Monitoring of WASSCE in Nigeria on the performance of candidates in the exam?				

S/N		YES	NO	UNDECIDED
D11	Would You advocate for External Monitoring of Each WASSCE Paper			

**SECTION E: TEACHERS' COVERAGE OF THE SYLLABUS:** Please rate your coverage of the scheme of work and syllabus for WASSCE in your subject area.



S/N	COVERAGE OF SYLLABUS	A	B	C	D
E12	I give the scheme of work to students at the beginning of the term.				
E13	I make effort to cover the topics planned for each lesson.				
E14	I make effort to cover the topics in the scheme of work for the week.				
E15	I make effort to cover my scheme of work per term.				
E16	I make effort to cover my scheme of work per session before students go to a new class.				
E17	I make effort to cover the WASSCE syllabus.				
E18	I cross check facts with textbooks after preparing my lessons.				
E19	I call the attention of students to the areas I could not cover.				
E20	I do revision with students before their WASSCE.				

**KEY**=A= Always; B= Sometimes; C= Rarely; D= Never

**SECTION F: TEACHERS' PROMPT ATTENDANCE TO CLASSES:** Please rate the extent to attend class promptly and regularly.

S/N		Very True of Me	Sometimes True of Me	Not True of Me
F22	I always go to class on time.			
F23	I get worried whenever I miss any class.			
F24	I always get to class before my lesson commences.			
F25	Whenever I miss class, I always find time to make it up.			
F26	I swap class with other teachers whenever I am busy with other academic activities.			
F27	I always do thorough preparation before each class.			
F28	I hate being called by students to class.			
F29	I always set alarm to remind me of my classes.			

**SECTION G: PROVISION OF CONTINUOUS ASSESSMENT FEEDBACK:** Please rate the extent to which you provide students with feedback on the outcome of their continuous assessment in your subject area.

S/N	Provision of CA Feedback	A	B	C	D
G30	Do you tell students to prepare for CA?				
G31	Do you communicate the nature of the CA to students before time?				
G32	Do you assess students' endeavour in CA in their presence?				
G33	Do you communicate students' result in CA immediately their result is ready?				
G34	Do you try to explain the implication of the CA result to students?				
G35	Do you follow up on students that did not do well to ensure they do well subsequently?				
G36	Do you follow up on the students that did well to ensure that they sustain and even surpass their CA result?				

**KEY=A= Always; B= Sometimes; C= Rarely; D= Never**

## APPENDIX 9

**INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION  
INSTITUTE OF EDUCATION  
UNIVERSITY OF IBADAN,  
IBADAN, NIGERIA.**

**PRINCIPALS' QUESTIONNAIRE ON FACYTORS THAT INFLUENCE  
ACHIEVEMENT IN WASSCE**

Dear Respondent,

I am working on Determinants of Candidates' Performance in Senior School Certificate Examinations in Nigeria. You are among the chosen participants to make this study a success. Kindly contribute your quota by filling out this questionnaire. Thank You. OPARAKU, D.D.

**SECTION A: DO YOU HAVE ENGLISH LANGUAGE AND MATHEMATICS TEACHERS TO PREPARE STUDENTS FOR WASSCE? YES ( ); NO ( ).IF NO, WHICH DO YOU NEED URGENTLY.....**

**SECTION B: Teacher Factors and Performance in WASSCE**

Please recall and rate the extent to which the following teacher factors affected performance of candidates in WASSCE.

S/N	TEACHER VARIABLES	V.H.	H.	L.	V.L.
B1	Teachers' Gender				
B2	Years of Teaching Experience				
B3	Academic and Professional Qualifications				
B4	Provision of Feedback on Continuous Assessment				
B5	Prompt attendance to Classes				
B6	Knowledge of Curriculum Content				
B7	Coverage of Syllabus				
B8	SSCE Examining Experience				

**KEY:** V.H=Very High; H=High; L=Low; V.L.=Very Low

**SECTION C: STUDENT FACTORS AND PERFORMANCE IN WASSCE:** Please recall and rate the extent to which the following student factors contribute to the achievement of candidates in WASSCE.

S/N	STUDENT FACTORS	V.L.	H.	L.	V.L.
C9	Age as at time of writing WASSCE				
C10	Gender				
C11	Study Habit				
C12	Test Anxiety				
C13	Adherence to instructions during WASSCE				
C14	Legibility of Hand Writing				
C15	Coverage of Prescribed Syllabus				
C16	Ownership & use of Recommended Textbooks				

**KEY:** V.H=Very High=; H= High; L= Low; V.L=Very Low.

**SECTION D: PERCEIVED OBJECTIVITY OF WASSCE ASSESSMENT**

		Very Objective	Not Objective
D17	To what extent are examiners objective in assessing candidates' scripts in WASSCE in your subject area?		

**SECTION E: PERCEIVED IMPACT OF EXTERNAL MONITORING:** Please rate your perception of the impact of external monitoring of WASSCE

		V.H.	H.	L.	V.L.
E18	How would you rate the impact of External Monitoring of WASSCE in Nigeria on the performance of candidates in the exam?				

S/N		YES	NO	UNDECIDED
F19	Would You advocate for External Monitoring of Each SSCE Paper			

**KEY:** V.H. =Very; H=High; L= Low; V.L. =Very Low

**APPENDIX 10**  
**INTERVIEW SCHEDULE**

**Questions for English Language and Mathematics Team Leaders**

- 1) What is Co-ordination and who is involved?
- 2) What are the processes/stages involved in marking in your subject area?
- 3) How do team leaders ensure that examiners under them follow the marking scheme in assessing scripts?
- 4) What do team leaders do when they identify errors by examiners?
- 5) In the case of remarking, who does the re-marking: the same examiner, another examiner or the team leader?
- 6) How do team leaders guard against errors in recording scores of candidates?

**APPENDIX 11**

**INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION  
INSTITUTE OF EDUCATION  
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IBADAN, NIGERIA.**

**CRITERION MEASURE**

Dear Respondent,

I am working on Determinants of Candidates' Performance in Senior School Certificate Examinations in Imo State. You are among the chosen participants to make this study a success. Kindly contribute your quota by filling out this questionnaire. Thank You.  
OPARAKU, D.D.

**SECTION A: BIODATA**

**GENDER:** Male (  ); Female (  ). **YEAR OF SSCE**.....

**AGE AT THE TIME OF WRITING SSCE:** 15-16 (  ); 17-18 (  ); 19-20 (  ); above 21( ).

**SCHOOL TYPE:** Private (  ) Public (  ). **SCHOOL LOCATION:** Urban (  ) Rural (  )

**INSTRUCTION:** Kindly respond to this instrument by providing information on the teaching and learning activities as you were preparing for the West African Senior School Certificate Examination. Your kind response will be of tremendous assistance towards the completion of this study and will be treated with utmost confidentiality. Thank You.

**NAME OF SCHOOL:**.....

**LGA OF SCHOOL:**.....

**SECTION B: SSCE RESULT:** Please Write Down Your WASSCE Result Below.

<b>WASSCE</b>		
<b>S/ N</b>	<b>SUBJECTS</b>	<b>GRADES</b>
<b>1</b>	English language	
<b>2</b>	Mathematics	

**THANK YOU.**